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FUNDAMENTALS OF STRATEGIC FINANCE

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CHAPTER 1

AN OVERVIEW OF STRATEGIC FINANCE

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Managing a company's finances strategically involves doing so with the purpose of success, i.e., achieving the company's long-term goals and objectives and maximizing shareholder value over time. The goal of strategic financial management is to achieve long-term corporate profitability. For stakeholders, it aims to optimize return on investment. Comparatively, tactical management seeks to take advantage of short-term possibilities. A strategic financial strategy prioritizes long-term benefit. Every organization, sector, and industry has a different approach to strategic financial planning. The goal of strategic financial management is to increase revenue for the company and provide a respectable return on investment (ROI). Financial management is achieved via the creation of corporate financial planning, the implementation of financial controls, and the making of financial decisions.

A corporation must first clearly define its objectives, identify and quantify its current and prospective resources, and develop a strategy for how it will utilize its money and other capital resources to achieve its objectives before it can manage itself strategically. Along with knowing and effectively managing a business's assets and liabilities, strategic management also include keeping an eye on operational finance elements including expenses, sales, receivables and accounts payable, working capital, and profitability. Additionally, strategic financial management include ongoing planning, reviewing, and modifying to keep the business on course and focused on long-term objectives.

When a business manages strategically, it responds with short-term problems when they arise in a manner that doesn't interfere with its long-term goals. To secure a company's long-term solvency, strategic financial management also involves analyzing and controlling its capital structure, or the ratio of stock to debt financing used. Identifying and establishing goals, defining and monitoring important indicators, and putting particular plans into practice are all parts of the process of strategic financial management. To understand how current circumstances effect your company plan, start by performing in-depth research on the market and your main rivals. You may create projections using this data to anticipate different future situations, and you can create strategic plans to improve how well your business functions in each scenario. You may establish metrics for each scenario to track your progress toward important objectives so that you can gradually change your tactics.

Strategic Versus Tactical Financial Management

Financial management techniques that are geared toward long-term success are referred to be "strategic," as opposed to "tactical" management choices that are concerned with positioning in the near future. If a corporation is acting strategically rather than tactically, it bases its financial choices on what it believes will produce outcomes in the long run, or in the future, which means that in order to attain such results, a firm may sometimes have to accept losses inside the present. Therefore, abandoning or readjusting short-term goals in order to more effectively achieve the company's long-term goals may be a part of good strategic financial management. For instance, if a business had a net loss that previous year, it can decide to shrink its asset base by shutting down facilities or cutting employees, which would lower operating costs. By taking such action, the firm may incur restructuring fees or other one-time expenses that short-term adversely impact its finances even more yet position it for long-term success. With a number of stakeholders in mind, those short-term vs long-term decisions frequently have to be made. For example, shareholders of publicly traded corporations may punish management for choices that have a short-term negative impact on a company's share price, even if such choices strengthen the company's long-term viability. Although both tactical and strategic financial managers and supervisors aim to use excellent planning to accomplish financial goals, there are a number of significant differences between the two. Tactical financial management, in particular, is concerned with the company's short-term financial situation in order to decide on investment possibilities in light of the present market circumstances. Strategic financial management, in contrast, places a focus on long-term objectives and monitoring changes in the market environment to create proactive financial plans. For instance, a company developer may forego an investment that may result in an immediate benefit in favor of funding a chance that has the potential to provide long-term profits underneath a strategic financial management strategy.

Importance of Strategic Financial Management

The goal of strategic financial management would be to direct decision-making toward long-term corporate goals. Setting corporate goals with the help of strategic financial management also provides a framework for developing and implementing strategies to overcome obstacles along the way. It also entails outlining the measures that will get the company closer to its goals. Finding potential techniques that might maximize an organization's market value is the goal of strategic financial management. Additionally, it guarantees that the firm is effectively implementing the plan in order to achieve the targeted short- and long-term objectives and maximize value for the shareholders. In order to achieve its business goals, an organization's financial resources are managed via strategic financial management.

Benefits of strategic financial management

Models of strategic financial management offer several advantages. Using this form of financial management technique has the following advantages:

Establishes a common framework

The creation of a strategic financial management system establishes a framework that harmonizes the objectives of all organization members. Firm executives may design systems that support the achievement of their organization's long-term objectives by being aware of the aims

of their business. This indicates that each department's objectives are in line with the overarching strategy and are focused on meeting significant financial milestones.

Encourages buy-in

A board of trustees or even other investors are more likely to support a plan that has a defined financial strategy. Key decision-makers may be more willing to support your goals if you have a clear aim behind company actions that are consistent with a wider financial model. Well-defined plans may enhance cohesiveness within your company model and increase trust in a board of trustees or investors.

Aligns performance and management goals

Companies may integrate important performance targets with overarching management objectives using strategic finance models. Managers may build systems to boost internal performance when they understand how departmental goals fit with the organization's long-term goals. Employees' success helps departments fulfill internal goals, which in turn helps with the strategic management with long-term financial goals. It is ensured that everyone in the company is working cooperatively toward a common objective by coordinating these goals at all organizational levels, from individual performance through general management.

Elements of Strategic Financial Management

Figure 1.1 depicts the components of this kind of financial strategy. Understanding these components is crucial to applying a strategic financial management model to your company. The components of a model for strategic financial management are listed below:

Figure 1.1: Illustrates the strategic finance bring any company Tech Together.

To handle the financial strategy, planning, and forecasting, the finance team use a customized program and spreadsheets. For managing staff and processing payroll, the HR team employs

different software. For marketing automation, customer acquisition tracking, and other operations, many technologies and spreadsheets are used. The same holds true for the departments of sales, customer success, and just about every other. These tools include useful data that may be used to develop your financial plan, optimize your productivity, and make better projections. These data points provide a comprehensive picture of your company's financial situation at the present time and aid in your future planning, whether they pertain to employee wage and benefit information, marketing funnel performance, pipeline, client retention, or other metrics. Sadly, a lot of businesses lose out on this because they don't employ strategic finance. The finance staff merely utilizes the month-end figures as a starting point for financial choices (e.g., departmental expenditures, overall payroll, income from marketing and sales, etc.). As a consequence, the context of everything that took place to arrive at the month-end statistics is missed or disregarded, leaving the financial teams with only an incomplete set of facts. Additionally, collecting these data points is a laborious procedure that requires back-and-forth email correspondence and manual spreadsheet data entry. By creating a single system that all of company other tools feed into, strategic finance addresses this issue. One's financial software integrates with payroll, marketing, CRM, revenue, as well as other data sources to automatically update your actuals. Additionally, it enables finance to see data immediately rather of having to wait until the conclusion of the month. Strategic finance requires leadership even if it is a team endeavor. Depending on the size and structure of your business, a specific individual (or group) may be in charge of strategic finance. While some bigger firms may just have one person in charge, others may have a specialized strategic finance team. Here are some possibilities for those who might oversee it and prospective positions to fill if they wish to adopt strategic finance at their business.

Planning

Strategic finance requires careful planning and the establishment of long-term objectives. This component deals with accurately identifying important goals. Having clear, quantifiable objectives makes it easier to develop programs that will really assist people reach those goals. For instance, after identifying your main objectives, then may assess your available resources and begin creating a strategy for wisely allocating those resources. Viewers may allocate existing resources and make plans for obtaining new resources as they scale up your operations by planning your resource management. Company developers create their strategic financial management model using unique business ideas.

Budgeting

Business developers may improve their resource consumption with the aid of budgeting. Businesses need to budget not just for money, but also for resources like time and labor. Being aware of your available resources enables them to create tactics that make effective use of them. Maintaining a budget also enables business developers to understand where their resources are being used most often, allowing them to spot chances to improve resource management. For instance, you may discover a wholesaler for your manufacturing supplies who charges less than your present supplier, enabling you to lower your production costs.

Managing risk

Another crucial component of strategic financial management is the assessment and control of risks. Businesses must incur risks while making investments since they demand extensive

planning and resource allocation. Some investments may have a greater rate of return than some others, and more risky investments often have a bigger potential payoff than less risky ones. You may prepare for investment possibilities by analyzing and determining how much risk your organization can afford to take while taking into account how much return it needs to obtain.

Establishing and adjusting procedures

Last but not least, strategic financial management include the development of procedural frameworks for evaluating goal-achievement success and adapting procedures as necessary. Visitors may get the data you need to make important business choices by using a set technique for gathering financial statistics about your company's accomplishments. Along with a strategy for data collecting, it's critical to have a plan for how to enhance that strategy as company organization expands. So may be ready to update your procedures as company firm grows by anticipating the measurements you might need to include in your business plan.

Types of Accounting

It's crucial for business owners to monitor their company's finances. Accounting may assist in giving you the information you want, from giving you a broad picture of your company's financial health to making your yearly tax filing simpler. While financial applications may be useful for regular financial management activities like monitoring expenses, a qualified accountant can provide more in-depth information. The process of acquiring, examining, and reporting financial data is often referred to as accounting. There are several accounting methods, each with a distinct goal. Many accountants focus on only one aspect of their profession, such accounting or tax return preparation. Knowing the different accounting specialties might help you choose the right professional for your company. Accounting, broadly stated, is the process of acquiring, reviewing, and disclosing financial information. This information may be used by a firm to develop internal understanding of the financial health of the organization. They could also utilize this information to disclose to other parties like regulatory bodies, tax authorities, or possible company investors. Each kind of accounting serves a unique function. A professional who specializes in a particular area of accounting will use certain methods and equipment (such as accounting software) to complete the task at hand. Visitors may engage professionals with certain specializations as a company owner to accomplish your goals. Typical accounting forms that a firm could need:

Financial Accounting

The process of documenting, compiling, and reporting the many transactions occurring from corporate activities throughout time is known as financial accounting. It is a particular field of accounting. The creation of financial statements, such as the balance sheet, income statement, and cash flow statement, which document the operational performance of the firm over a certain time period, summarizes these transactions. Financial accountants may find employment within both the public and private sectors. The tasks of a general accountant, which works for oneself or herself but instead of directly for a firm or organization, may be different from those of a financial accountant. The framework supporting financial recordkeeping is financial accounting, and it specifies the procedures, guidelines, and benchmarks to be used. Financial accountants are employed by nonprofit organizations, companies, and small enterprises to compile their books of account and produce their financial reports. Financial statements including the balance sheet, financial statements, cash flow statements, including statement of changes throughout

shareholder equity are used in financial reporting. In contrast to management (or cost) accounting, which is used more for internal strategy planning, financial reporting is much more focused on reporting to external audiences. Financial accounting may well be done using the cash method or the accrual approach, which records costs for things that haven't been reimbursed yet (only cash transactions are recorded.

Managerial Accounting

Businesses employ the management accounting approach to acquire a deeper understanding of a company's operations. Managerial accounting is exempt from the same stringent GAAP requirements as financial accounting since its only purpose is to provide accounting information for internal usage. Instead, it concentrates on issues like cost analysis, financial analysis, and budgeting. Managerial accountants provides business owners the information they need to make wise business choices by examining historical financial data and projecting future results, such as how much a firm may save spending by switching software suppliers. Typically, strategic management, risk management, or performance appraisal are prioritized. Depending on the kind of information investors and company owners seek. Margin analysis, financing decisions, especially constraint analysis are methods that management accountants often use. It is also helpful to do a trend analysis, which finds trends in corporate spending over time. In the end, management accounting's main objective is to enhance company results by increasing profits and reducing losses.

Cost Accounting

Technically speaking, cost accounting is a branch of management accounting. The cost of doing business for a corporation is the main emphasis. This is specifically used internally to assist decide how to save expenses and raise profit margins. Cost accountants may help businesses figure out ways to simplify their entire operations. Cost accounting is very helpful in settings that include manufacturing. It accounts for a range of costs, including variable and fixed costs, commercial rent, materials prices, and labor costs. The goal is to make sure that now the cost per unit (the cost to create an item) is affordable. If not, company owners may plan ways to raise this number. There are several cost accounting methodologies, each with a distinct focus. Lean accounting, on the other hand, focuses on reducing waste while activity-based cost accounting takes into account every activity required to generate a company's products or services. While marginal cost accounting determines changes in the cost of production, standard cost accounting evaluates the actual cost of manufacturing items to the sum theoretical costs required to manufacture those things. The reporting as well as analysis of such a company's cost structure is accomplished via cost accounting. A firm's goods, services, and any additional actions that involve the business are all considered to be cost objects throughout the process of cost accounting. Cost accounting is useful because it can show how much money a business makes, where it spends it, and where it loses it. Internal cost controls but also efficiency are intended to be reported on, examined, and improved via the use of cost accounting. A method of operational analysis for administration is what cost accounting is, in essence.

Tax Accounting

Tax accounting is concerned with making sure a company, organization, or person is following by any applicable tax rules and regulations. The Internal Revenue Code (IRC), which establishes standards for tax accountants to follow, promotes equality for all American taxpayers. A tax

accountant's main concern when dealing with a firm is making sure the organization is correctly calculating and disclosing its tax obligations. The IRS audit is a time-consuming and sometimes expensive procedure that small companies wish to avoid, therefore accurate tax preparation may help a firm avoid mistakes on their tax papers. A tax accountant can assist company owners in navigating these intricate regulations since they have in-depth understanding of the appropriate tax laws, which differ at the state and federal levels. A tax accountant may assist with future tax planning by identifying strategies for minimizing unneeded tax costs. For instance, if a company owner doesn't declare all allowable costs, they are overpaying taxes. Adding more deductions will reduce the company's total earnings, lowering the tax due.

Types of Accounting

Auditing

A sort of accounting called auditing offers a neutral evaluation of a company's financial operations. Auditing makes sure that the business is adhering to the necessary laws and industry best practices by objectively monitoring and reporting all actions. Auditors are never engaged in the organizations they examine in a direct way. They examine financial documents and then provide a thorough audit report outlining their conclusions. Internal or external audits are also possible. Internal auditors seek to evaluate the efficiency of an organization's present accounting procedures. By spotting possible resource waste, reducing the danger of fraud, and averting mismanagement, this may assist a business in improving financial planning. The formal financial statements of a corporation are examined as part of an external audit to make sure they were produced in accordance with GAAP. Additionally, the IRS may perform audits to check that a company's financial records adhere to tax regulations. In certain circumstances, proactively starting an audit might assist a business in avoiding an IRS audit. For instance, a corporation may discover executive mismanagement via investigative internal audits, which will enable it to address the issue and prevent legal repercussions.

Accounting information systems

The system through which a business gathers, stores, and processes its financial and accounting data is known as an accounting information system, or AIS. Nowadays, a lot of AIS are designed to interact with other departments, for example, by linking the HR recruiting process to the payroll function of a newly recruited employee. The manual entering of information is minimized because to this flow-through method. The management of effective accounting process improvement is handled by AIS specialists. In order to evaluate if there has been a gain in productivity over a certain period of time, workers in this sector determine the optimal periods to install new technology and monitor the development of current systems. Together with the IT division, they may decide how to maintain the consistency of technical procedures. They often help with technical assistance for AIS maintenance as well, such as setting up new accounts or resolving issues with the program.

Forensic Accounting

Investigating the financial records of people or companies uses forensic accounting. When certain financial information is missing or not accessible for inspection, accountants may need to reconstruct it. To properly and completely account for any and all transactions within financial

statements, forensic accounting aims to compile all relevant documents. These specialists often focus on litigation involving fraud, claims, and conflicts.

Public Accounting

Public accounting describes companies that provide customers accounting advice depending on their requirements. They may give legal counsel, engage in audits, help with tax returns, provide advice on how to install technology or computer applications, and consult on installation methods.

Governmental Accounting

Governmental accountants are in charge of budgetary planning and resource distribution to the many divisions of a municipal, state, or federal government.

The Governmental Accounting Rules Board (GASB), which is in charge of creating uniform accounting practices for local and state governments, has standards that need to be adhered to while doing this sort of accounting. Compliance with both the Federal Accounting Standards Advisory Board is required of federal workers (FASAB). Governmental accountants would also keep an eye on a government's budget & properly distribute resources.

Types of Costs in Cost Accounting

Although organizations might suffer a wide range of charges depending on their sector, some of the most typical expenditures associated with cost accounting are listed below.

Direct Costs

Direct costs often comprise direct costs for labor, materials, and distribution and are expenses that are directly related to the creation of a product. Examples of direct expenses include inventory, raw materials, and employee pay for industrial employees.

Indirect Costs

The power used by a factory is an example of an indirect cost that cannot be directly linked to the creation of a product.

Variable Costs

Variable costs are those that fluctuate depending on the volume of a production. The cost of the steel used in the manufacture of a firm that makes vehicles may be a variable expense.

Fixed Costs

Fixed costs are expenses required to keep a business operating that are independent of sales and production levels. Fixed expenses might include leasing a manufacturing facility or certain pieces of equipment.

Operating Costs

Operating expenses are what it costs a business to operate its regular business operations. Running costs, also known as operating expenditures, may be either constant or variable, although they are often not connected to the product being created.

Cost Accounting versus Financial Accounting

Based on their respective target audiences, financial accounting and cost accounting systems may be distinguished from one another. Those without access to internal company information, including such shareholders, lenders, and regulators, may benefit from financial accounting. Individual investors, for instance, who study financial statements, gain from a company's financial accounting. As an alternative, cost accounting is intended for internal organization personnel who are in charge of making crucial choices. Contrary to financial accounting most publicly listed companies, cost accounting is not mandated by law. Cost accounting is different and independent with general financial accounting, which will be required for the creation of financial statements and is governed by generally accepted accounting standards (GAAP). By monitoring, evaluating, and analyzing costs, cost accounting helps senior management of businesses understand how to utilize their resources more efficiently.

Users of Financial Statements

Companies prepare financial statements, which consist of a balance sheet and an income statement, to understand their financial position. These statements are examined and evaluated by a variety of people and organizations that are connected to the company or who have an interest in it, such as lending institutions, investors, management, customers, and vendors, and all these parties are referred to as users of the financial statements.

Users of financial information are individuals who read a company's financial statements because they have a direct or indirect interest in it. Internal users are the individuals who are a component of the management of a firm, including such managers as well as other professionals, while external users are those who are not a part of the companies but nevertheless have an interest in them, including such shareholders, lenders, debtors, and so on.

These users are crucial to the success of the business since without them, no firm would be able to raise capital or acquire new customers. As a result, financial statements should be made public and presented in a way that is clear to all such users. The many consumers of financial statements include:

Investors & Shareholders

As the company's owners, the investors and shareholders need the financial statements to assess the profitability of the enterprise and the overall financial status of the business throughout order to assess the return on their investment in the enterprise. Financial statements let them make decisions about whether to increase their investments in a firm if it is providing strong returns or to withdraw their assets if they believe it is not making enough money.

Lenders

The people who lend money to businesses like financial organizations like banks and NBFCs are known as lenders. Before lending money to a business, these lenders examine its financial situation to see if it will be able to pay back the money and financing fees on time.

Before making a loan disbursement to any firm, the vendors request the financials as well as the predicted financials so they may assess if their obligations are secured and the likelihood of them becoming insolvent is extremely low or nonexistent.

Vendors

Vendors are the providers that provide raw materials or other products to a business that it requires for day-to-day operations. Like lenders, vendors must also assess the repayment ability of the business to whom they are selling their wares, however they are more focused on doing so since their credit duration is months rather than years.

Customers

The individual to whom the business sells the final items is known as the client. Even clients are curious in the financial reports of the firm from which they buy the supplies necessary for running their businesses. Large businesses often want to work with suppliers that can provide products for a long time, therefore before signing a contract, they evaluate the stability of the firm. Additionally, clients choose businesses that provide credit terms, which they may determine by looking at the financial accounts.

CHAPTER 2

MANAGEMENT OF THE COMPANY

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The first users of the company's finances are those in management. If they believe their competitor's strategy is more effective than their own, they will require access to the financial statements to determine the company's profits and losses as well as cash flows as well as its liquidity position in order to make significant monetary and operational decision making for both the development of their company.

Employees

The people that are employed by the businesses are called employees, and they are compensated with wages. These individuals are curious about the company's financial standing in order to determine if their employment with the organization is secure and that wages, bonuses, and performance-based compensation will be paid on time.

Government

For taxes and other regulatory reasons, the financial status of the firm is of interest to the government entities, particularly the authorities of an income tax department. Every business is expected to pay taxes to the government authorities at a certain proportion. Therefore, following the creation of financial accounts, the tax liability due is computed.

Competitors

The entities who compete with the firm are using the financial statements of the company to assess the competitor's financial statements and understand their plan so they may adjust their tactics as necessary.

Rating Agencies

Financial statements must be seen by the credit rating agencies because they base their evaluations of the firms on these financial statements. Credit rating agencies rate companies based on their financial status.

General public

The general public, which includes analysts, academics for their education, researchers who occasionally require the data when doing surveys or any other study, etc., is also interested throughout the company's financials.

Union

Additionally, the union requires the information to determine whether the business can afford to pay the wages and other benefits owed to the union's members.

Investment Analysts

The financial accounts of the corporation are also monitored by the investment experts. They must continue to provide customers with financial advice, thus they must stay informed about the performance of the firms.

Types of Business Entities

A business entity is, in the simplest words, a group of people who get together to conduct trade, conduct business, or participate in similar activities. There are many different forms of business entities, including sole proprietorships, partnerships, LLCs, corporations, etc. The type of business entity determines both the organizational structure and the tax treatment of the firm. Choosing your company's structure, or selecting a business entity type, should be one of your first priorities when beginning a firm. This choice will have significant financial and legal repercussions for your company. Your choice of company organization will affect your tax obligations, as well as how simple it will be for business to get a small-business loan or collect capital from investors. Additionally, the form of your company's entity influences your risk exposure in the event of a lawsuit. More than a dozen various business entity kinds are recognized by U.S. state governments, but the typical small-business owner opts for one of these six: a sole proprietorship, general partnership, limited partnership, limited liability company, C corporation, or S corporation. As previously established, a business entity is really just an organization which has been created to carry out business. However, how such company is organized and taxed depends on the sort of corporation people choose for it. For instance, a sole proprietorship must, by definition, be run by a single owner. On the other hand, if your company is a partnership, this signifies that there are two or even more proprietors. Similar to this, if you start a firm as a sole proprietorship, company are considered a pass-through entity for tax reasons (the taxes are passed onto the business owner). In contrast, if visitors incorporate your firm as a corporation, it will operate apart from its owners and pay separate taxes as a result.

Sole Proprietorship

The simplest kind of corporation is a sole proprietorship, in which the company's owner and operator are one person (or a married couple). If you start a new company and but are the only owner, they are legally considered a sole proprietorship. A sole proprietorship doesn't need state registration, but depending on your sector, visitors could need municipal company licenses or permissions. However, it's also a feasible choice for more established firms, such as retail establishments, including one person at the helm. Sole proprietorship is a frequent company structure for freelancers, consultants, and other service workers. One person is running this company for their personal gain. It is the most straightforward kind of corporate structure.

Ownership is the only thing that a proprietorship has. The business ends at the owner's passing, and any liabilities related to the enterprise are the owner's personal obligations. To the extent of their assets, whether they're personally held or utilized in the firm, the owner assumes the risks of the enterprise. Professionals, service providers, and shopkeepers who are "in business with themselves" are examples of single proprietors. A sole proprietorship is indeed a separate entity primarily accounting reasons even if it is not legally distinct from its owner. The business's financial operations are kept apart from the owner's personal financial operations, such as the receiving of fees (e.g., house payment).

Partnerships–General and Limited

A stated or implicit agreement between two or more individuals who work together to conduct a commercial enterprise for profit is known as a general partnership. Each partner provides something—be it cash, assets, labor, or skills—shares in the business's gains and losses, and is personally liable in an infinite amount for its obligations. According to their investment level, limited partnerships restrict each partner's personal responsibility for the obligations of the company. A certification of limited partnership must be submitted to state authorities by the partners.

Limited Liability Company (LLC)

A mixture of a corporation and a partnership is an LLC. Members of the LLC have restricted liability risk in addition to operational freedom and income advantages comparable to those of a partnership. Although this and a limited partnership seem to be quite similar, there are important legal and regulatory distinctions. It is advised to speak with a lawyer to choose the right organization.

Corporation

A corporation is a legal person that is governed by state law and whose name and range of activities are limited by its charter. To create a company, articles of incorporation should always be submitted to the state. In addition to being immune from liability, investors who are also workers could be eligible for various tax-free perks like health insurance. A C company is subject to double taxation, first via profits-related taxes and then through shareholder dividend taxes (as capital gains). Stockholders are only subject to liabilities up to the amount they personally invested in the company. Additionally, creditors are prohibited from seizing personal property to pay off debts (although now creditors often request personal guarantees on business loans). Permanent existence: The Company remains a legitimate entity. The corporation's shares are transferable to heirs. Ease of ownership transfer: If a market exists, investors may sell their shares whenever they choose. Greater ability to obtain money via the legal selling of shares, making it easier for the business to grow. The corporation is susceptible to all state government record keeping rules that apply to corporations, as well as a corporate charter must be acquired from the state. The price of forming a company is greater. The corporate charter limits operation towards the state in which it was granted without the consent of other states. Double taxation provision absent an S-Corporation election.

Small Business Corporation (S-Corporation)

If certain IRS Code conditions are satisfied, Subchapter S-companies are special closed firms (membership is limited) designed to provide small corporations a tax benefit. In order to avoid

the "double taxation" experienced by traditional businesses, corporate taxes were waived and reported by the proprietors on their individual federal tax returns filings.

Branch Office

Foreign businesses that conduct manufacturing and commercial operations internationally are permitted to open branch offices in India. Branch Offices are permitted to outsource manufacturing tasks to an Indian company but are not permitted to do such tasks themselves. The branch office needs Reserve Bank of India clearance before it may start operating (RBI). Any kind of commercial activity is not permitted at a branch office.

Non-Government Organization (NGO)

A citizen-based organization known as a "NGO" or "Nonprofit Company" works without the involvement of the government, often with the aim of advancing some kind of social cause. These organizations operate to advance a cause or carry out development initiatives for the benefit of society, not for the purpose of making money.

Accounting Concepts of Money Measurement

According to the money measurement principle, an accounting transaction should only be recorded if it can be described in terms of money. This indicates that quantitative information, but instead of qualitative information, is the primary emphasis of accounting activities. As a result, many things never show in a firm's financial statements because they are not recorded in the accounting records of the organization. The predicted resale value of a patent, the value of an internal brand, the longevity of a product, employee skill level, employee working circumstances, and other factors are examples of things that cannot be documented as accounting transactions because they can't be stated in terms of money. The quality of field service or customer assistance, process effectiveness in administration. Due to their effects on either sales, costs, assets, or liabilities, all of the aforementioned elements have an indirect influence on a company's financial outcomes. For instance, providing excellent customer service would probably boost customer retention and the likelihood that they will do business with the firm again, which affects sales. Alternatively, bad working conditions for employees result in more staff turnover, which raises labor-related costs.

Problems with the Money Measurement Concept

The main problem with the money measurement idea is that, despite the fact that numerous elements (as previously mentioned) might cause long-term changes in a company's financial performance or financial situation, the concept forbids their disclosure in the financial statements. The disclosures that go along with the financial statements by management that explain significant matters would be the lone exception. Therefore, it is completely feasible that a company's primary competitive advantages are not acknowledged, which tends to underestimate a company's long-term capacity to earn profits. Since management is urged by the accounting rules to disclose all existing or possible liabilities in the notes to the financial statements, the opposite is often not true. In summary, the idea of money measurement might result in financial statements being published that could not accurately depict a company's potential for growth in the future. In contrast, managers might blatantly add intangible assets to the financial accounts without any justification if this idea weren't in existence. Cash is accepted as a unit of value in several accounting concepts. However, many organizations have assets that

might not have a significant numerical worth and that they might not be able to quantify in terms of money. Instead, some company features, such as the staff's skill level, management, organizational environment, brand awareness, and location, add up to a variety of advantages for the company, but they won't find them inside the accounting records because they don't have a monetary value. The money measurement approach also ignores changes in the currency's buying power since changes in the cost of products and services affect how much an organization's assets are worth. This highlights how the concept of financial measurement falls short of capturing the true worth of a firm.

Importance of Money Measurement Concept

A business keeps track of transactions including assets, commitments, losses, income, and investments using the notion of money measurement. It is helpful in producing and showing the profit and loss report and the statement of financial condition. The notion of money measurement has made firm value computations easier since they now only take into account transactions that were recorded in money units. This makes it simpler for the firm to give a price to a building, machinery bought, and equipment used by the company. By summing up all of these factors and subtracting the total liabilities, one may determine the organization's value. Many organizations record the transactions on the premise that the cash value does not often change.

Characteristics of Money Measurement Concept

On the financial account statements, some particular transactions of a corporation may be stated or quantified in terms of money. An important accounting concept is the monetary measurement concept, which stipulates that a business would only record transactions which can be quantified in terms currency account statements. Financial transaction recorders should not include any transactions that cannot be stated in monetary terms. The money measurement notion is also known as the measurability concept. Any transaction price that can be quantified quantitatively rather than qualitatively using the currency unit of a certain nation should be documented. A corporation must record any additional transactions that may be measured in terms either cash input and outflow.

Money Measurement Principle

The money measurement concept within accounting suggests that one should isolate those operations and occurrences that may be valued and assessed in terms of monetary requirements from all other transactions and events. An occurrence or transaction should never be documented inside the book of finance or other accounting records if it cannot be given a specific monetary value. To better comprehend a company's performance and financial status, you must comprehend the significance of a money measurement idea. Transactions without a monetary value should not be included in the accounting statements' supplemental notes. To prevent undue misunderstanding among sales professionals, it is done in accordance with rules.

Need Money Measurement Concept

Money is the standard unit of measurement for transactional aspects including profit, loss, income, assets, capital, as well as other obligations of a company. The value of the notion of money measurement resides in how simple it is to display and record company activities in financial statements like account balances, income statement sheets, profits and losses statements, or cash flow estimates. The fact that money is seen as a common denominator for a

company's performance assessment is one of the other elements of a money measurement idea. It only records transactions that can be expressed in terms of monetary estimates, as was previously mentioned. Presenting the company values in monetary terms facilitates communication between stakeholders including management. The transaction recording mechanism does not account for the effect of inflation.

Accounting Period

A predetermined window of time within which accounting operations are carried out, gathered, and evaluated is known as an accounting period. The length of an accounting period may be measured in weeks, months, quarters, fiscal years, or calendar years. The accounting period is helpful in investment because prospective investors may assess a company's performance by looking at its financial statements, which have been based on a set accounting period. An accounting period is indeed a length of time that is used to do certain accounting tasks; it might be a week, monthly, or quarter, for example, as well as a calendar or fiscal year. The accrual method of accounting enables consistent reporting since accounting periods are formed for reporting and analysis reasons. Revenue recognition management matching are two crucial concepts that regulate accrual accounting.

The revenue recognition concept asserts that rather than when cash is paid, income should be recorded when it is generated. According to the matching principle, a cost must be recorded during the same accounting period as that of the income it produced. In most cases, more than one accounting period is active at any one moment. Consider, for instance, that the accounting division of XYZ Company is closing the books for the month of June. Although the company may alternatively desire to aggregate accounting data every quarter (April through June), half year (January through June), or a whole fiscal year, this specifies that the accounting period is the month (June). Analysts and prospective investors benefit from accounting periods because they could use them to spot patterns in a single company's performance across time. Additionally, they may evaluate the performance of other organizations over the same period of time by using accounting periods.

Accounting Period Types

The beginning of January is when an entity starts accumulating accounting records, and the final day of December is when the accumulating of data ends, according to a calendar year in terms of accounting periods. This 12-month calendar cycle is mimicked by this yearly accounting period. Another option for reporting financial information by a company is to utilize a fiscal year. Financial data is gathered for one year starting on the date that is arbitrarily chosen as the start of an accounting period for a fiscal year. A fiscal year that began on April 1 would, for instance, terminate on March 31 of the following season. The fiscal period of the federal government seems to be from October 1 to September 30, although the fiscal year of many nonprofit organizations is from July 1 to June 30. The accounting period is stated in the headers of financial statements like the balance sheet and income statement. The revenue and costs for a company's complete accounting period are shown on the income statement. With a phrase like "...for the year ending Dec. 31, 20XX," your header will specify the time period in the heading. The balance sheets, on the other hand, provide a picture of the assets, liabilities, and equity of a firm at a certain moment in time, i.e. this same end of the accounting period. The heading will state, for instance, "as of June 30, 20XX," the last day of the accounting period.

Requirements for Accounting Periods

The revenue recognition principle as well as the matching principle are the two fundamental accounting principles that control the usage of accounting periods. These two tenets are part of the accrual system of accounting.

Accrual method of accounting

For the purpose of reporting and analysis, accounting periods are set up. Theoretically, a corporation aspires to expand consistently throughout the course of accounting periods in order to demonstrate stability and a view of long-term profitability. The accrual technique of accounting is the one that backs up this idea. Regardless of when the monetary component of an economic event happens, the accrual method of accounting mandates that an accounting entry be recorded when the event takes place. For instance, the accrual method of accounting mandates that fixed assets be depreciated over the course of their useful lives. Instead of treating a cost as a whole expense when it has been paid for, this identification of expenses across a number of accounting periods allows for relative comparability between the periods.

Revenue recognition principle

The revenue recognition principle is a key accounting theory utilized in the accrual method of accounting. According to the revenue recognition principle, income should be recorded as soon as it is generated rather than when money is transferred. A business may generate income even before receiving payment, for instance, if it permits clients to buy items on credit. The business will record revenue as well as an accounts receivable while providing a service or transferring an item to a client.

Matching principle

The matching principle is a fundamental accounting theory that pertains to the usage of an accounting period. According to the matching principle, costs must be recorded within the same accounting period as the related income. For instance, the time frame for which the cost of goods sold (COGS) is recorded will coincide with the time frame for which the revenue for the same commodities is reported. The depreciation and consequent spreading of expenses across many periods, using the depreciation example from earlier, better aligns the usage of fixed assets including its capacity to produce income. A firm would still have plenty of time to produce profits even if it expensed a costly equipment in the year of acquisition. The income and expenditure would not line up in such case. Nevertheless, by spreading the cost out across the fixed asset's useful life, it more closely matches the cost to the linked income.

End of an Accounting Period

A business will close out the period at the conclusion of an accounting period. The business will be prepared to generate its financial reports for that accounting period after all closing entries have been completed. A period may be closed out days, weeks, or perhaps even months into the following accounting period, therefore two periods may be active at the same time. Whether an accounting period was monthly, quarterly, or through fiscal year, for example, a corporation performs, gathers, and evaluates accounting activities throughout that time. Potential investors may evaluate a company's performance for investment purposes via its financial statements,

which also are based on a specific accounting period, while analysts may compare those financials to those of comparable firms within the same time period.

Advantages of accounting period concept

The accounting period notion has the following benefits: It is useful for creating financial statements that depict the company's financial situation over a certain time period. It is possible to compare the financial information from two accounting periods. By looking at the patterns of financial data over time, investors may assess the company's growth or decline.

Double-Entry Concept

Every financial transaction has equal and opposite consequences in at least two independent accounts, according to the basic principle of double entry, which underpins modern bookkeeping and accounting. To solve the accounting equation, it is employed:

Assets =Liabilities + Equity

Transactions are recorded using the double-entry approach as debits and credits. The total of all debits must equals the total of all credits that's because a debit inside one account cancels out a credit in another. The standardization of the accounting process plus increased accuracy of the financial statements produced by the double-entry method of bookkeeping enable earlier mistake identification.

Types of Accounts

A company's financial information may be measured, recorded, and shared via bookkeeping and accounting. An economic occurrence that is documented for accounting and bookkeeping reasons is referred to as a business transaction. It is, in general, a commercial contact between two or more economic entities, such clients and companies or suppliers and enterprises. These interactions are typically categorized into accounts as part of the comprehensive accounting process. All business transactions may be categorized into one of seven basic categories of accounts:

Debits and Credits

The double entry method depends on debits and credits. In accounting, an entry here on left side of such an account ledger is referred to as a debit, while an entry here on right side is referred to as a credit. A transaction must have an equal amount of debits and credits in order to be in balance. Both credits and debits may not always result in gains or declines. A debit might make one account larger while making another smaller. The basic accounting formula of Assets = Liabilities + Equity is supported, for instance, by the fact that a debit raises asset accounts while decreasing liability and equity accounts. Debits raise the balances in the expenditure and loss accounts on the income statement whereas credits lower them. While credits enhance their balances, debits reduce income and boost account balances.

The Double-Entry Accounting System

During the European mercantile age, double-entry accounting was created to assist streamline business operations and boost trade effectiveness. It also aided bankers and merchants in

understanding their expenses and revenues. Double-entry accounting has been seen as a crucial calculative innovation that contributed to the development of capitalism. The accounting equation, which serves as the cornerstone of double-entry accounting, is a succinct illustration of a notion that develops into the sophisticated, enlarged, and multi-item balance sheet display. According to the double-entry accounting method, a company's total assets were equal to its total liabilities plus its total shareholder ownership on its balance sheet. In essence, the representation equates every sources of capital (because equity capital leads towards shareholders' debt and equity financing leads to liabilities) to all uses of capital (assets). Every single business transaction would be reflected in at least one of a company's two accounts if correct accounting is practiced. For instance, if a firm borrows money from a financial institution like a bank, the amount borrowed will increase the company's assets and increase the loan debt by a corresponding amount. If a company purchases raw materials using cash, it will result in a rise in inventory (asset) and a decrease in cash capital (another asset). The accounting method is known as double-entry accounting because each transaction made by a corporation affects two or more accounts. This procedure makes sure that perhaps the accounting equation is always balanced, meaning that the values on its left and right sides are always equal. In double-entry accounting, assets are equal to liabilities plus owners' equity. Transactions are documented using the double-entry approach as debits and credits. During the European mercantile age, double-entry accounting was created to assist streamline business operations and boost trade effectiveness. Double-introduction entry's has been linked with the beginning of capitalism.

Double Account System

The Dual Aspect Concept serves as the broad foundation for the double-entry system's meaning. The foundational concepts of accounting serve as the basis for the dual aspect concept. In the book that is especially based on the accounting concept, all business-related transactions are documented. All commercial interactions, in accordance with the dual aspect concept, have a two-way or dual impact. This indicates that at least two accounts must be reported in the books for the specific entity's business transaction. The double-entry notion or system is what this idea stands for.

Single Entry System Meaning

In a single entry system, each business keeps track of all of its financial transactions in such a single-entry log. Due to its simplicity and cost-effectiveness, the single-entry system is often used by new firms and does not need any special training. The description, timestamp, transaction amount, costs, revenue, and balance are all recorded using the single entry system. This is upheld throughout every business transaction. Additionally, depending on the kind of company, income tax is included.

Advantages of Double Entry system

The double-entry approach of accounting offers a number of advantages. They are mostly mentioned below. Trial balance is made possible by the double-entry procedure, assuring accounting correctness. A trial balance is often created at the conclusion of the fiscal year or on a regular basis to ensure mathematical correctness by guaranteeing that each debit and credit are equal and equivalent. The double-entry approach enables the recording of specifics so that the general situation of profit and loss is transparent. A detailed picture of the entire profit or loss for any particular fiscal year is provided by the Trading and Profit & Loss A/c. making critical

financial choices is much easier with precise financial data. Maintaining a clean book with current transactional information is essential, whether for growth or a round of investment. Due to the transparency and orderliness of the double entry accounting method, investor trust is consistently strong. The double entry approach makes it simple to find out what is owing in fees. The firm can easily locate payments owing to lenders, suppliers, and service providers thanks to the double-entry method. The double entry approach makes it simple to identify tax liabilities. It becomes simpler for enterprises and tax authorities to compute complete revenue and collect suitable and precise taxes. The double entry approach makes it very simple to identify frauds. Frauds are also discovered early because to the double-entry techniques increased accounting system openness. It makes it simple to compare financial performance over time. A double entry method makes it simple to create trial balances and profit and loss statements, which makes it possible to undertake more in-depth analyses such year-over-year financial performance analysis.

Concept of Cost

User must assign a price to it. This is a typical expression that sometimes functions as a broad dialect. It signifies assigning worth to something. Therefore, the price is nothing more than the value that is paid to use the commodity or service. The idea of cost provides a hint as to the total amount of resources needed to get the same. As a result, cost is another crucial idea in the study of business. Without further ado, let's explore this notion.

Concept of Cost in Cost Accounting

A crucial idea in economics is the notion of cost. It speaks about the sum paid in order to get any products or services. Cost may be defined as a financial evaluation of the assets, inputs, risks, time, and expenses required to acquire products and services. The cost of producing any products or services is often referred to as the idea of opportunity cost from the perspective of an economist. Today's globe is more competitive than ever, thus businesses are under pressure to maximize earnings. The choice made by the corporation to maximize profits depends on how its expenses and revenues behave. Other cost ideas include fixed costs, explicit costs, costs to society, implicit costs, societal costs, and replacement costs in addition to opportunity cost.

Concept of Costs in terms of Treatment

Accounting costs

Accounting expenses are those that the business owner directly spends in cash to get materials needed for production. These expenses include the price of raw materials and equipment, worker pay, power prices, the cost of renting or buying a building or site, etc. Expenses are handled as accounting costs. They are included in financial statements by chartered accountants.

Economic costs

Certain expenses are disregarded by accounting expenses. These include the funds that the business owner forgoes but could have made if he had put his time, effort, and money into other endeavors. For instance, the business owner would have made money if he had offered his services to others rather opposed to concentrating on his own company. Other examples of economic costs include potential returns on the money he spent for his company rather than donating it to others, the output produced by his resources that he might have utilized to help

others, etc. Economic expenses assist the business owner in calculating supernormal earnings, or the extra money he would make by investing in businesses other than his own.

Concept of Costs in terms of the Nature of Expenses

Outlay costs

Outlay costs are the real costs that the entrepreneur incurs while using inputs. Costs for paying labor, rent, power or fuel bills, raw materials, etc. are some examples. They must be handled as ordinary business costs.

Opportunity costs

Opportunity costs are earnings from the next best option that the entrepreneur forgoes while making specific decisions. For instance, if the entrepreneur had chosen to work for someone else rather than focus on his own company, they may have been paid. These expenses account for lost opportunities and potential earnings from pursuing other policies.

CHAPTER 3

CONCEPT OF COSTS IN TERMS OF TRACEABILITY

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Direct expenses are associated with a particular procedure or product. They are also known as traceable expenses since we can easily link them to a certain process, commodity, or activity. They might alter as the activity or product changes. Examples of direct expenses include production-related manufacturing costs, sales-related client acquisition costs, etc.

Indirect costs

Untraceable expenses, also known as indirect costs, are those that are not directly related to a particular activity or area of the firm. For instance, a rise in the cost of power or the amount of income taxes due. Indirect expenses are significant because they have an impact on overall profitability even if we cannot directly track them.

Concept of Costs in terms of the Purpose

Incremental costs

These expenses are incurred when the company decides on a policy. For instance, switching up the product line, acquiring new clients, and upgrading the gear to produce more are incremental expenditures.

Sunk costs

Suck costs are expenses that the business owner has already spent and cannot now recoup. These include funds used for research, advertising, and purchasing equipment.

Concept of Costs in terms of Payer

Private costs

The firm incurs these expenses in order to achieve its own goals. They are spent by company owners for both personal and professional reasons. For instance, the price of manufacture, selling, promotion, etc.

Social costs

As the term implies, societal costs for individual interests and company expenditures are borne by society. These include societal resources like the atmosphere, water resources, and environmental pollutants for which the company does not bear costs.

Accounting Conventions of Consistency

Accounting conventions are rules that businesses employ to decide how to record certain business transactions which accounting standards do not yet completely cover. Although not legally obligatory, these guidelines and practices are typically recognized by accounting organisations. In essence, they are designed to encourage uniformity and assist accountants in resolving real-world issues that might occur while compiling financial accounts. Accounting conventions serve as a set of rules that businesses may use to decide how to record the transactions that are not yet entirely covered by accounting standards.

Although they are not enforceable by law, they are usually recognised by accounting organisations. The accounting convention is no longer relevant if an oversight group establishes a guideline that covers the same subject. There are four generally accepted accounting conventions: materiality, complete disclosure, consistency, and conservatism. Sometimes a certain circumstance is not governed by a clear rule in the accounting standards. Accounting conventions may be used in such circumstances. There are many presumptions, conceptions, norms, and traditions in accounting.

Accounting norms that support concepts like relevance, dependability, materiality, but also comparability often work to standardized the financial reporting process. In other words, accounting conventions fill in the areas where accounting standards fall short. The accounting convention is no longer relevant if a regulatory body, such the Securities and Exchange Commission (SEC) or Financial Accounting Standards Board (FASB), establishes a standard that covers the same subject. There are currently fewer accounting standards that can be employed as the breadth and level of complexity of accounting standards continue to grow. Even accounting practices are not rigid rules. Alternatively, they may change over time to reflect fresh perspectives on the most effective ways to record transactions. Accounting norms are crucial because they guarantee that transactions are recorded uniformly by several organizations. Investors may more easily evaluate the financial performance of various companies, even rival ones that operate in the same industry, by using a consistent technique. Despite this, accounting practices are far from perfect. As a result of their frequently hazy explanations, businesses and their accountants may be able to bend or exploit them to their benefit.

Accounting Convention Methods

In order to help accountants, there are four primary accounting conventions:

Conservatism: A tradition and accounting concept are to always err on the side of safety. It advises accountants to provide estimates for assets and liabilities that are on the conservative side. This signifies that the lesser value should be preferred when there are two possible values for a transaction. The fundamental idea is to take the worst-case scenario of a company's financial future into account.

Consistency: Throughout many accounting cycles, a business should use the same accounting standards. If it adopts a way, it is advised to continue with it going forward unless there is a compelling reason not to. Without this standard, it would be considerably harder for investors to compare and evaluate the company's performance over time.

Full disclosure: Information that is deemed relevant and/or potentially vital must be disclosed, whether or not it is harmful to the firm.

Similar to full disclosure, this tradition calls for firms to show all of their cards. It should be revealed if something is material, which is another way of saying significant. The principle here is that any information that might affect a person's judgment after seeing the financial statement must be disclosed.

Areas where Accounting Conventions Apply

Inventory value may be based on accounting conservatism. Conservatism requires that the reported value of inventory be equal to the lower of the historical cost or replacement cost. Additionally, line item changes for market value or inflation are prohibited by accounting rules. This implies that book value may sometimes be lower than market value. For instance, even if a building is now worth more, it should still be recorded as costing $50,000 when it was first acquired.

The conservatism convention is frequently used for estimates of casualty losses and uncollectible accounts receivable. A business cannot record a gain if it anticipates winning a lawsuit unless it complies with all revenue recognition standards. However, a projected economic effect must be shown in the notes attached to the financial statements if a lawsuit claim is anticipated to be unsuccessful. Contingent obligations must be reported, including royalty payments and unearned income.

Types of Accounting Convention

Conservatism

When generating financial accounts, the accountant must adhere to the conservative concept of "playing it safe," taking into consideration all potential loss possibilities when documenting transactions. There are particular arguments made against such a principle. While tracking assets, two values—Market Value and Book Value—occurred. Since these standards examine the worst-case situation, a lower figure is often taken into account. It has been noted that private reserves are sometimes being produced by displaying excessive provision for bad debt and dubious debts, depreciation, etc. Additionally, this has an impact on the idea of "real and fair state of financial situations.

Consistency

When a firm chooses a certain reporting strategy, it should stick with it throughout the following years. The financial statements of the firm may be read, understood, and compared with the aid of this concept by analysts and investors. If the business wishes to alter the procedure, it should only do so if there are valid grounds for doing so. This approach is criticized in several ways, such as the fact that some things are valued at cost while others are valued at market value, which violates the accounting principle of consistency. However, accounting convention takes into consideration continuity of reporting techniques throughout time rather than continuity of line items in comparison.

Full Disclosure

Even after using the accounting standard, pertinent and significant information on the company's financial situation must be included in financial statements. For instance, contingent liabilities and legal actions brought against a corporation should be disclosed in the financial statements of the company in accompanying notes.

Materiality

The influence of a situation or item, as well as its importance in financial statements, are included in the materiality concept. It implies that when goods are not material, materiality permits an accountant to disregard certain criteria. Every such occurrence and item that could have an impact on investors' or analysts' decisions must be reported by the accountant. However, the information must be interesting and should be worth more than what it costs to prepare the statements. Examples include charging low-cost assets like office supplies and cleaning supplies under expenditure accounts rather than as normal depreciating assets. Such things are really unimportant

The Cost of Capital

A crucial component for assessing investment choices is the weighted average cost of capital (WACC): Usually, it serves as the discount rate for calculating net present value (NPV). In terms of the potential cost of capital used to produce value, it also acts as the baseline for operational success. While it has been criticized, the Capital Asset Pricing Model (CAPM) is still the most useful method for calculating the cost of equity. In actuality, many alleged limits result from difficulties using the model. We will provide solutions to address the main challenges in using the CAPM: A few examples are calculating the market risk premium (MRP) for stocks, quantifying a company's systematic risk (or beta), normalizing the riskless rate, determining an acceptable cost of debt, and calculating global capital costs. Lastly, we'll talk about the related subject of corporate investment hurdle rates. To prevent any delusions of false accuracy, the cost of capital is an assessment that should be used with caution. Despite its wide range of options, risk management and value creation are often better places to spend time and resources than financial planning. The factors that will ultimately have the biggest an influence on value creation are the business case, the accuracy of the cash flow predictions, sensitivity analysis, and strategic risk management.

Calculation errors

WACC is the market-weighted average of the cost of after-tax debt and equity at target leverage. We calculate the cost of equity as Rf beta MRP, where Rf is the risk-free return, MRP is the projected return premium above the risk-free rate for carrying equity market risk, and beta is the systematic risk of the company in relation to the market. A variety of results may be obtained by estimating these important inputs, or degrees of freedom (riskless rate, market risk premium, and beta). With an eye on the future of the financial markets, we normalize the riskless rate. Based on past market data as well as data that is projected into the future, we still think that a realistic estimate of the MRP is 5 percent. We will provide resources for obtaining more accurate beta estimations in the most troublesome regions. This will be particularly beneficial for company divisions, unlisted businesses, and stocks with shaky betas. The most popular way is direct regression, but we also utilize other approaches including built betas, portfolio betas, segment regression betas, and multi-variable regression betas. The most frequent mistakes include the weightings of debt and equity in addition to these essential elements. Financial policy changes and changes to the capital structure may not always be reflected in financing events per se. Temporary changes in the mix shouldn't have an impact on WACC. As most debt is funding debt (rather than financing debt) and should be expensed (rather than capitalized), the WACC for financial organizations is often the cost of equity, with the cost of funds being a cost of goods sold (COGS). Both sovereign risk and inflation risk are quantified and taken into account in our

approach to global business capital costs. Nevertheless, we advise that the cash flows be modified to account for the expenses and irrational risks associated with international investment, along with a more thorough risk analysis. More accuracy in estimations of global capital costs may assist ensure that businesses choose to make investments that have the potential to generate value given the many options for profitable expansion overseas.

The following are the main tenets of our conceptual justification and methodology: Most businesses make adjustments for sovereign risk. The techniques used, which are generally based on dubious methodology and range from fabricated risk premiums to qualitative modifications to a broad variety of quantitative procedures, vary greatly, but most businesses take action. Each year, a big number of large-capitalization firms (large caps) approach their five preferred banks with a broad list of nations in hand, compare the answers, and choose their top five. Most corrections are too big. A large portion of global risk is execution risk (poor sourcing and logistics, overuse of expensive expatriate personnel, and failure to grasp local market execution), which should be taken into account in the cash flows rather than the discount rate. This narrow perspective results in lowered growth potential and stock values. The cost of debt and the cost of equity should be adjusted for sovereign risk in order to account for systematic risk. The image need not be complicated by actual funding options unless economic subsidies are taken into account.

It is possible to "triangulate" sovereign risk premiums using nation ratings, sovereign yields, stripped Brady yields, and euros. A yield's volatility is just as crucial as the yield itself. A point estimate of the sovereign risk premium could be inaccurate. In certain instances, a range that is determined from the volatility provides a more useful viewpoint. In any market without long-dated local currency borrowings, avoid offering a local currency WACC. While a local currency WACC might potentially be created using projections of long-term inflation, the market is not there for any particular reason. While nation betas and correlations theoretically allow for the quantification of the economic benefits of global diversity, in reality the statistics are too unpredictable to be utilized for financial planning or policy decisions.

High Market Risk (MRP)

The common consensus is that the return premium offered by stocks over long government bonds (i.e., MRP) ranges from 3 to 8%. The widely used Ibbotson and Sinquefeld analysis is based on the 1926 U.S. arithmetic mean (now down from 8% to around 6–7%). It's not that 1926 was a significant year in the history of econometrics; rather, this is the year when the market recordings began to be stored. The risk premium would have altered by a full percentage point if the trial had begun one year sooner or later. Some American research (using manual data retrieval) do go back a lot farther (to the time when the market was dominated by railroad stocks) and provide figures that are closer to the low end of the spectrum. Several studies base their conclusions on more recent events, which again brings the range's lower end. More observations will result in higher predicted accuracy as long as the data exhibit a "random walk" and there are no obvious upward or downward trends. Nevertheless, the early statistics are less useful for projecting predicted returns now due to fundamental economic changes over the last century. A shorter history is more suitable, in our view, due to a confluence of macroeconomic forces. Investors in the stock market today may probably anticipate a premium of about 5% for assuming the market risk of stocks based on the arithmetic average of compounded monthly return premiums and on forward-looking multiples. The danger of investing in government bonds has grown while the risk of owning stocks has typically decreased, lowering the premium

between any of these two securities classes. Results are comparable when utilizing a value-weighted index of any and all NYSE, AMEX, and NASDAQ stocks as both a market proxy, despite the fact that this is based on monthly returns upon that S&P 500 index (which only contained 90 companies before 1957) and on U.S. Treasury long bonds.

Converging Volatilities and Returns

Bond returns are now less volatile than stock returns are. From 25% in the 1950s to around 16% in 2004, the trailing average standard deviation of annualized monthly stock returns decreased. The standard deviation of bond returns grew throughout that time, rising from 4% to roughly 12%. Use of the 10-year and 20-year average periods as 30 years reveals similar tendencies. According to variations in relative volatility during the previous century, investors' premium for equities over bonds decreased from over 10% to under 5%. A lower level of stock market risk and higher real necessary yields on bonds were also factors in the risk premium's decline. The idea that prior history may be less important to the ex post derivation of predicted equity returns is supported by a number of considerations. Here, we discuss some of the potential causes:

Norms and Public Policy the Federal Reserve and its international equivalents' prudent monetary policies, as well as the overall liberalization of regulatory rules, seem to have lessened the volatility of economic cycles. Notwithstanding significant political change and instability, the liberalization of emerging countries, the formation of trading blocs, and the expansion of international commerce have all contributed to global economic development and stability.

Globalization and expansion Global market capitalization expansion provides greater liquidity, lower net volatility, and lower net risk. The expansion of developing markets acts as a buffer against the downturns experienced by established economies. Developing nations are encouraged to increase their investments in human and technical capital by emerging markets. The established markets often act as a support for the volatility of emerging markets. Notwithstanding exaggerated assertions to the contrary, systemic risk is decreased due to a decreased sensitivity to the economics of any one country.

Risk Liquidity Contrary to assertions to the contrary, the availability of more risk management products (including those for commodities, credit, interest rates, and insurance) has enhanced risk liquidity, making it possible to separate, trade, and manage risks. The majority of investors enter the market via funds and institutions, which has caused our equities markets to become more sophisticated and shift in character. Technology and Information Notwithstanding previous accounting disasters, disclosure is now quicker and more thorough, which lowers uncertainty and demanded returns. Notwithstanding Regulation FD, there have been improvements in segment data, reporting standards, and analyst coverage over the last 50 years. Moreover, technological advancements have improved information processing quality while lowering costs.

Labor Movement Employment has altered in nature. Massive expansion in the service industry makes it possible for the production and service cycles to be partially counterbalanced. Service economies are less subject to price pressures during overcapacity because they have lower fixed costs. Mobile, employable knowledge workers are on the rise, which lowers fixed costs and improves resource allocation. Agency Charges Nowadays, major institutional investors and hedge funds are considerably more involved in pressuring businesses to maximize shareholder value, lowering the risk of common stock. The success of LBOs and the widespread use of value-based management support this drive. It is commonly known that agency expenses and ownership concentration are crucial for enhancing company performance.

The premium investors earned for stocks compared to bonds decreased from over 10% to about 5 percent, in line with trends over the last century.

Going too far back in time when measuring the MRP would be a mistake given the data's obvious trend toward reduced equity premiums. The amount of history utilized affects the MRP estimation. Indeed, practically any premium might be justified. Beginning from 2004 suggests a negative premium of 5%, but adding the whole 78 years of historical data raises the premium to around 7%. Economic and market structural changes imply that more current data provide a stronger foundation for making future predictions. The MRP has decreased, so long as you choose a time frame that extends back at least as far as the early 1980s. Here are the concerns that need to be addressed: How far will the MRP decline, and when can we anticipate it to cycle back up? In order to improve statistical dependability, we have opted to utilize the second half of the 20th century (instead of 3/4), omitting the early market returns that may have been less important. As a result, we calculate the MRP over the long bond to be about 5%.

Premium for Market-Implied Risk

The market's total capitalization, amount of profits and reinvestment, and projected earnings growth may all be used to assess the market risk premium. For instance, the Gordon growth model's dividend discount model offers a straightforward, one-stage valuation methodology that may be modified for this use. While difficult for a single firm, the constant growth rate assumption of a straightforward one-stage model could be more beneficial for a large market. The Gordon growth model may be written as Ke [(Div0/P0)(1 g)] g when the cost of equity is taken into account, where Div0 is the yearly market dividend payments, P0 is the entire market capitalization, and g is the anticipated dividend growth rate. Instead of using a reinvestment rate, we may cancel both market profits and capitalization by using a distributed yield. It is also crucial to remember that share repurchases and dividends are becoming more and more common forms of dispersed yield since they both have a comparable effect on the balance sheet in terms of lowering capital employed (cash and equity). Returns on equity and reinvestment rates may be multiplied by the retention ratio to determine long-term sustainable growth rates (i.e., one-payout ratio). An ex-ante method of predicting future growth rates is used. 5 Retention growth posits that earnings retention serves as a stand-in for future growth and that past returns on book equity (i.e., net income/book equity) are indicative of future growth. For instance, a return on equity of 10% and a reinvestment rate of 60% imply a growth rate of 6%.

The dividend discount model assumes a market cost of equity of 7 to 9 percent and an MRP of approximately 4 percent, utilizing a riskless rate of around 5 percent, based on expected future growth rates and dividend yields. In line with anticipated inflation of 2 to 3 percent and real GDP growth of 3 to 4 percent, estimates of long-term sustainable nominal growth rates now range from 5 to 7 percent.

The Global Market Risk Premium

Given the dynamics of globalism and the convergence of the financial markets, a global MRP is the most suited. Practically speaking, any market-weighted mean will still be dominated by American data. A future global MRP may also be best approximated by the U.S. market as markets integrate, grow, and season. 6 The greatest economy and most thriving capital markets are found in the United States. So, after accounting for variations in tax rates and other factors, the 5 percent risk premium appears fair for other markets. Similar findings from recent international research, which produced MRP values around 5%, were obtained. The U.S. risk

premium relative to Treasury notes was 5.3 percent over a 103-year period in a study of risk premiums in 16 nations, compared to 4.2 percent for the United Kingdom and 4.5 percent for a global index. 7 Once again, the past data may still be too optimistic about the future risk premium. Because of new technical advancements and more investor diversification possibilities, risk may be less prevalent overall and market volatility may be lower than in the past. These same authors determine forward-looking stock risk premiums of 4.3 percent for the United States, 3.9 percent for the United Kingdom, and 3.5 percent for the global index after correcting for the anticipated effect of these variables. The risk premium, however, may change over time, and managers should make the necessary changes when there are strong economic reasons to believe that predicted premiums are abnormally high or low. However, the majority of market research from other nations often use more recent data: Due to substantial changes in exchange restrictions and monetary policy, their older statistics are sometimes inaccessible, untrustworthy, or irrelevant. The methodology and its results are commonly questioned for many big and developing markets since foreign market derivations of MRPs are sometimes undercut by incorrect historical information, local tax difficulties, irrelevant history, and liquidity problems. Yet, a worldwide risk premium may be a little too early due to disparities in taxes, dividend treatment, and other policies that exist now and in the future.

Aiming for a Better Beta

A WACC calculation's identification of a reliable proxy for systematic risk (beta) is sometimes troublesome, particularly for business units, privately held corporations, illiquid equities, and publicly traded companies with little historical data. The regression coefficient known as beta is often used to characterize the slope of the "best fit" line across a history of dividend-adjusted stock and market returns. Do not toss away the baby with the bathwater since betas might be difficult to evaluate even if they can be respectable and statistically significant. We'll provide a few different approaches for using the CAPM with a trustworthy indicator of systemic risk.

Transverse Regression

Other sample intervals and frequencies may be more suitable. The most recent 60 monthly results are normally used in the calculation. For industries impacted by the internet boom or 9/11, for instance, a three-year sample of weekly data may be more suitable. How much of history applies to your business or sector? Check the statistics in addition to a qualitative evaluation to look for fundamental changes in risk. The interpretation and reasonableness of the residuals, summary statistics, and regression coefficients may be the subject of possible concerns. You can highlight and interpret dubious data by sorting the residuals, and it will also help you decide how much history and how long to utilize for the return periods. Longer periods may be used to give more data and increase dependability if there is no clear pattern and the data is a random walk. More data may be extracted from the shorter history using weekly or daily returns to offer enough data for just a meaningful regression if a pattern is obvious or adequate history is not available. Plot or sort the residuals of a regression to determine what the model did not explain. Regressing the data in the interquartile or interdecile range should provide a comparable slope (beta), but it may also produce a much better "fit" (i.e., a more statistically significant coefficient of determination).

Sector Betas

Several markets and equities have little historical data or are less liquid, which might provide erroneous findings if the beta is calculated too mechanically. Calculating an industry beta may

serve as a straightforward answer in such circumstances, as well as for private businesses and business units. The fundamental assumption is that all firms in that sector face a comparable level of systemic risk. These methods, however, may be sensitive to the choice of peers.

Simple Mean or Unlevered Beta Median The business unlevered beta may be proxied by the simple mean or median of pure-play equivalent asset betas (i.e., asset betas). A target capital structure is used to relever the unlevered beta after that. Market beta is modified to remove financial risk from asset beta, also known as unlevered beta:

Unlevered beta = D/EV∗debt beta(1 − tax rate) + (1 − D/EV)∗levered beta

D stands for debt, EV stands for enterprise value, and debt beta is calculated using either direct regression on market data or credit spreads. Based on how much each division contributes to the intrinsic value of the company, the beta for a conglomerate may be a weighted average of the betas for its several divisions (capitalized operating cash flow may serve as a proxy). Market Beta A portfolio beta may act as a stand-in for a business beta in cases when leverage ratios are consistent throughout an entire industry. A single regression combining cross-sectional returns for all firm market return points yields the portfolio beta. To reduce bias from any point, provide as much data as feasible. Do not aggregate, average, or group your data.

By Segment Secondary Regression

A secondary regression by segment may be used to calculate a pure-play beta in situations of highly vertically integrated sectors (financial services and resource industries), in which there are often just a few pure-play peer businesses. In integrated sectors, this is particularly useful for evaluating segment or line-of-business capital costs. Unlevered beta for each firm serves as the dependent variable, while the percentage exposures to various business segments serve as the independent variables (e.g., by revenue, assets, or operating income). For instance, the integrated forest products industry's development of unlevered wood with a beta of 0.4 as opposed to pulp and paper with a higher 0.7. Despite the fact that the t-statistics are all often quite significant, the "other" beta will obviously not be relevant given the diverse range of other segments that it will represent.

Built-in Beta

For illiquid equities, when the beta is artificially suppressed by a poor correlation to the market owing to very low stock liquidity, a built beta is particularly useful. An industry portfolio correlation coefficient and a company-specific comparative volatility coefficient may be used to create betas:

Company volatility divided by market volatility is known as beta

Market data may be used to directly calculate the industry correlation coefficient as well as the volatility of market returns.

If the company is not publicly listed, return volatility may be approximated using the standard deviation of changes in capitalized net operating profit after tax (NOPAT) or profits before interest and taxes (EBIT).

We recommend regressing the percentage change in capitalized NOPAT or EBIT over the same time last year against the corresponding yearly market returns if operational data, which are typically provided on a monthly basis, display seasonality.

Beta for Multivariable Regression

For hybrid firms that share traits from other industries, we have used an innovative strategy. For instance, a privately held industrial biotechnology business has elements of biotechnology, medicines, and speciality chemicals. These factors were taken into account in our multivariable regression. Based on these important factors, or value drivers (size, growth, R&D intensity, profitability, and capex intensity) in comparison to those of publicly listed pharmaceutical, biotechnology, and specialty chemicals businesses, our depiction forecasts an asset beta. Using this model, we discovered substantial and attractive coefficients.

"Riskless Rate"

We often adjust the riskless rate to reflect the exceptionally low values of the 10-year Treasury. The 10-year historical average is closer to roughly 5.5 percent; 10-year Treasuries are close to record lows below 5 percent (and 30-year Treasuries are close to 5 percent). While many businesses normalize the riskless rate for insurance purposes using a trailing average, this will have the perverse consequence of keeping premiums lower even as spot rates rise and the forward curve steepens. A market-derived estimate of the riskless rate represents the forward curve for 10-year Treasury securities. It often asymptotes in the 5% range. The forward curve offers a reliable and impartial baseline for a normalized riskless rate and is less subject to the selection of the historical averaging period. In reality, investors utilize any variety of government bond rates—each with advantages and disadvantages as a stand-in for the risk-free rate. T-bill proponents contend that because of their shorter term and weaker connection with the stock market, T-bills are really risk-free investments. T-bill rates, however, may not accurately represent the return necessary for holding a long-term asset since they are more sensitive to supply and demand fluctuations, central bank intervention, and yield curve inversions. The best risk-free rate for valuation, long-term projections, and capital budgeting choices is determined from longer-term government bonds. They are valued in a liquid market, less volatile and susceptible to market fluctuations, and they represent long-term inflation forecasts. Nevertheless, since the long end is more vulnerable to systematic risk, some professionals have suggested making modifications to the risk-free rate that would unleveraged it with a Treasury beta, creating a rate that is really riskless.

CHAPTER 4

COST OF DEBT

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The marginal cost of corporate debt, or the return the business would experience with an extra dollar of borrowing, is used to compute WACC. Interest costs is a misleading indicator of a company's actual cost of debt. It's also not a trivial expense. The yields and credit rating at the time of issue determined the average coupon that a firm now pays, which may not accurately represent the state of the market or perhaps the corporate credit quality. The main drivers of the cost of debt are credit quality and corporate bond ratings, which are impacted by several qualitative elements and variables including size, industry, leverage, cash flow and coverage, profitability, and many others. The WACC is based on the cost of debt after taxes. Lower projected values for each dollar of tax shelter will result from higher levels of financial leverage and cash flow volatility. Less earnings will be available to protect, time value from loss carryovers will be lost, and the likelihood of financial trouble will rise. The most effective method for evaluating this impact may be to use company-specific stochastic solutions. As a quick fix, this impact may be approximated by comparing risk-laden corporate debt to risk-free debt, minus a put option with a strike price equal to the face value of the debt, on the company's assets. According to a paradigm for valuing options, using the interest tax shield becomes less likely with more leverage, volatility, and length. As the debt matures, equity investors have the option to "put" the company's assets up front in return for the debt's face value (in bankruptcy, the debt is effectively forgiven when debt-holders take possession of the assets). The bondholders incur a loss if the value of the company's assets decreases below the debt's face value. Time till maturity and the underlying asset's return volatility, in this instance the enterprise value, are important factors in the option valuation.

Integrated Instruments

By amortizing the warrant value, convertibles may provide issuers with considerable tax benefits while lowering cash servicing expenses. The addition of hybrids to the capital structure complicates WACC calculations. The most straightforward way to handle this is to effectively divide the instrument's value into debt and equity in order to represent the actual intended debt-equity ratio. Therefore, the equity content for ratings treatment could not accurately reflect the underlying economic cost or substance. For instance, cash-pay converts are normally classified as debt until conversion for the purposes of ratings agencies. Regardless matter how successful they get, this is true. Although though they don't cause any economic dilution to the common

shareholders, certain hybrids, such as the more recent long-dated junior unsecured notes, obtain significant equity credit from the rating agencies. Trust preferred securities and mandatory convertibles are given some equity credit overall rating reasons. The weighted average cost of the equity and debt components, or WACC, of this convertible security Grossed up yield (coupon accretion), convertible yield/debt percentage of total value, straight debt portion of total value, warrant value/value of a convertible bond, and discount rate (%) based on similar 10-year corporate bond rates are the components that make up the cost of the debt. The price of warrant equity is the price of the equity. The Black-Scholes formula or another option pricing method is used to estimate the warranty value: risk-free rate; exercise price premium (strike price/share price) Treasury rate with such a tenor equal to the number of years in the option means term; warrant beta equity beta warrant delta (share price/warrant premium). There isn't any underlying dilution (or conversion) to the basic equity interest in the case of the more recent hybrid instruments with equity-like qualities that allow them to be given a degree of equity content (usually, C or D bucket classification by Moody's) for ratings reasons. These instruments (long-dated, junior, subordinated notes) are regarded as debt for WACC purposes in such circumstances.

General Capital Costs

There is an extraordinary desire for profitable, long-term sustainable growth among many enterprises as a result of the equities market's persistent instability and unpredictability. Foreign direct investment continues to provide investors with the possibility of worthwhile business development prospects. The majority of multinational corporations still prioritize global expansion in their overall business plans. Businesses that aim for worldwide expansion do something that their investors seem incapable or unwilling to undertake. An approach to deal with economic vulnerabilities that market integration and risk management were expected to reduce but did not is global diversification. Investors still act as if there are significant expenses associated with overseas portfolio investing notwithstanding the growth and integration of global financial systems. The strategic advantages of foreign direct investment, however, are clearly at contrast with modern corporate financial management techniques. There may not be another area where business practice and financial theory disagree so drastically. Many people still adhere to traditional methods and ad hoc generalizations, where high hurdle rates for international business and investment activities often obstruct value-enhancing development. Despite the fact that investment returns in developing economies are often more erratic than those on local operations, emerging market investments do not greatly increase the net risk of a multinational corporation's (MNC) portfolio as one would anticipate. In actuality, the degree of capital markets' current integration is one of the main reasons for the great variety of methods.

A Market Segmentation Viewpoint

A local country viewpoint presupposes that country managers work and make investments only in the confines of their own local markets. Using a "local" version of the CAPM incorporating local equity risk indices, local market risk premiums, debt costs, and nation risk premiums, this perspective analyzes each country operation as both a stand-alone venture. This strategy often results in numerous practical difficulties in obtaining trustworthy and intuitive results, even though it reflects managers' intuition that international markets exhibit higher risk. It also ignores shareholders' more global viewpoint and the positive effects of a diverse MNC portfolio. From the standpoint of company financial policy, this method adds a significant amount of complexity, communication difficulties, and administrative work.

A Markets Integration Viewpoint

Investments are seen from the viewpoint of interconnected markets as elements of a global portfolio. According to this strategy, each nation, business unit, or investment would get a uniform allocation of the corporate portfolio's net sovereign risk, inflation risk, and diversification effects: one source of capital and one cost of capital for everyone. Regardless of how much it contributes to the systematic risk of the business portfolio, each component completely shares the risks and rewards of the portfolio. While this is effective for the total cost of capital, we use a hybrid viewpoint for national operations and investments that incorporates the marginal impact of each investment on the systematic risk of the company portfolio.

The Hybrid Viewpoint

Although while the global financial markets are now more linked than they were 25 years ago, there is still a substantial amount of market segmentation. The fact that investors still prefer to invest in businesses in their home countries, which is known as the "home bias" in investor portfolios, is perhaps the most significant factor. Yet there are also obstacles caused by laws, taxes, accounting, and regulations. Several of the world's capital markets, especially developing nations, have continued to display evidence of illiquidity or, depending upon your interpretation, market inefficiencies associated with market segmentation as a consequence of these barriers to efficient markets. Yet instead of deterring corporate foreign direct investment, these obstacles increase its advantages above those that would arise from full market integration. Foreign direct investment is still able to provide the firm's shareholders investment alternatives and diversification advantages that they cannot get on their own in a world that is still at least somewhat segregated. Additionally, as global economies and financial markets continue their integration process, this benefit of foreign direct investment's diversification will gradually vanish and be replaced by other advantages, most notably the decrease in risks (sovereign and inflation) that come with global integration.

Our hybrid viewpoint makes the assumption that an organization maintains a dynamic portfolio of international and domestic investments that is continually assessed for potential growth, reduction, or even sale; as a result, the proportionate weightings from each real portfolio element have been constantly changing. We modify the framework for systematic and unsystematic risk like follows in order to apply the CAPM to the assessment of activities and investments made abroad:

Operating cash flows should be adjusted for project-specific risks and expenses. Simple rules of thumb are simpler to use, but they obfuscate important concerns, impede discussions of strategic risks, and lose their usefulness as circumstances change. To improve active risk management for value, do thorough risk analysis of risk drivers using techniques like sensitivity analysis and Monte Carlo simulations. Our suggested technique is as follows. Modify the cost of capital considering sovereign risk and anticipated inflation.

The risk characteristics and volatility of each market, in addition to the relationships between them, are really changing. Hence, for each operation or potential investment, we do not use a nation beta relative to the home country as our proxy for the added systematic risk to the portfolio; rather, we believe sovereign spreads better capture the incremental systematic risk. In a similar vein, we do not make an effort to estimate the diversification advantage that each marginal investment brings to the portfolio. This is always evolving. The variation at all between the two correlation coefficients is often bigger than the variation within the estimate of just about

any one correlation coefficient. Any point calculation of WACC is an oversimplification in so many markets due to the volatility of sovereign ratings and sovereign risk. In order to simulate the risk of a value-dilutive investment, historical distribution and standard deviation data may facilitate the construction of a range estimate. For instance, the likelihood that a financial decision may result in a negative net present value (NPV) because the genuine WACC is greater than the hurdle rate.

The Risks and Returns of Foreign Direct Investment

Global investment has advantages from a strategic standpoint in addition to profitable expansion. Global businesses of today are often more desirable than their local counterparts, who lost the opportunity to go abroad in part due to exaggerated international hurdle rates. Bestfoods was a popular acquisition target for packaged food firms for a long time. The company eventually traded at a significant premium, in part because of its exposure to faster-growing consumer markets and highly diversified worldwide portfolio. Take Japanese FDI in the United States during the 1980s as an example. These "transplants" were relieved by the cheap manufacturing costs brought on by an unexpected yen rise versus the dollar. The supply to the big U.S. market would not have been competitive had manufacturing stayed in Japan. Similar advantages accrued to European immigrants during this more recent period of Euro strength. Yet, as global investing implies risks and expenses above and above those associated with local investing, the profits of global investment cannot be obtained without significant risk. We make a distinction between systematic and unsystematic hazards and provide methods for dealing with each. Economic risks that influence all enterprises, including the currency and sovereign risks of the economy itself, are the source of systematic risk, also known as market risk. Every additional contribution to risk is important to the well-diversified business and, eventually, to the well-diversified investor.

Unpredictable Costs and Risks

Foreign legal and tax, currency repatriation and hedging, insurance and other transaction expenses are new and substantial extra costs that come with foreign direct investment, which lowers the underlying value of the venture or business. There are several risks that are particular to the investment or operation (increased project uncertainty, such as market success, labor unrest, or other operational issues). These expenses and risks are often noncompounding and are best assessed via simulation, sensitivity, and cash flow scenario assessments. Our experience has shown that these costs and risks are still commonly overlooked in the cash flow predictions of foreign investment choices, despite the heroic mentoring of finance academics throughout the globe. They often score "below the line" in any review of foreign activities, too. Higher hurdle rates are thus required. The frequently unstated justification for raising the hurdle rates for these investments is the acknowledgement of project unpredictability and the fact that many foreign risks and expenses are ignored. Nonetheless, managers often have the most knowledge about how these risks could affect the anticipated stream of operational cash flows. The impact (if any) on the needed rate of return for shareholders cannot be quantified by managers, and these risks may be diversified by investors or businesses with international portfolios.

Systemic Threats

To better manage the MNC portfolio, they identify the systematic risks to discrete foreign direct investments which may be quantified and addressed within the cost of capital framework. Yet, these risks may be more strictly managed in a very simple way rather than being included with arbitrary and expensive risk premiums. Finance and Business Risks Since a company's

fundamental business and goal capital structure normally do not rely on any specific overseas activities, we would typically anticipate them to be relevant globally, the underlying business and financial risk need not alter for foreign direct investments. Business risk is significant, for instance, in businesses like semiconductors where operational profit has a tendency to be more erratic and tied to the market. The corporate cost of capital has been adjusted to account for these risks, which are represented by the business beta.

Expected Inflation Inflation risk, which assesses a currency's relative strength in proportion to domestic predicted inflation, is often expressed in forward foreign exchange rates. It reflects the pace at which prices are expected to rise. In essence, it stands in for the risk associated with anticipated currency depreciation over the long term owing to differences in long-term inflation forecasts (assumes interest rate parity holds over the longer run). The cost of debt and cost of capital estimates include the risks represented by the relative risk-free rates across nations or from inflation-linked government bonds. This risk has to be separated from short-term scenarios where parity fails and abrupt currency depreciation is a potential hazard covered by sovereign risk. Governmental Risk The risk that a foreign government would break other contractual obligations owing to a change in leadership or policy is the one most often linked to sovereign risk. The impact of currency controls, changes throughout tax or local content laws, changes in quotas and tariffs, and the sudden encroachment of labor or environmental regulation are all examples of risks that are specific to a country's political and economic environments and are collectively referred to as sovereign risk.

Unexpected inflation or devaluation Substantial changes in relative currency values often emerge from unrealistic currency pegs and go beyond the weakening predicted by projected inflation differentials, as was the case in Mexico in 1994 and Russia and most of Asia in 1998. To assist pay off debt, sudden runaway inflation has been "hired" (e.g., Bolivia in the 1980s).

Policy risk: A host government may breach contracts, agreements, or approvals owing to changes in leadership or policy. It also may forbid currency conversion or obstruct repatriation. Additional instances include very significant changes to tax rules, local content regulations, quotas and tariffs, and environmental restrictions. See, for instance, the unanticipated challenges that Multinational miners and loggers encountered in the 1990s in the Pacific Northwest as a consequence of environmental advocacy.

Expropriation: A foreign company's ownership, control, or rights to an investment might be reduced or eliminated by host government legislation. Russia, Cuba, South America, Israel, and several other nations have all experienced this.

War and civil unrest involve acts of terrorism or sabotage, destruction of physical property, and meddling with an enterprise's capacity to do business. Sub-Saharan Africa and the Middle East have had especially severe cases of this. The needed rate of return for foreign direct investment is increased by sovereign risks. Examining the "insurance premiums" charged by organizations like the Overseas Private Investment Corporation (OPIC) and the Multilateral Investment Guarantee Agency (MIGA), that also protect foreign investments against some of the risks mentioned above, is one method of estimating the potential size of this premium. There may be more trustworthy market-based techniques.

To "triangulate" sovereign risk premiums, we often combine data from other sources, such as rates on USD-denominated (Global Euro and stripped Brady) national debt. We employ the premiums suggested by a basket of nations with comparable S&P country ratings when bond

yields are absent or seem untrustworthy. One may utilize Eurobond yields or even the stripped yield of their International/Brady bonds as a foundation for USD-based risk-free rates for the nations that make long-term borrowings primarily in USD and not in the local currency. The yield here on bond's uncollateralized part is known as the stripped yield. For local currencies without a long-term market, we do not use a WACC. Corporates shouldn't quote and make long-term bets on a currency if capital markets are unable or unwilling to do so. In these situations, we maintain WACC in a "hard" currency and advise taking extreme caution when projecting and discounting cash flows to protect against speculative future inflation predictions. When estimates are based on local currency with embedded local inflation expectations, the local cost of capital in local currency gives local managers a frame of reference. Therefore, a Turkish cost of capital in USD (without material revenue inflation) gives a superior foundation for analyzing a prospective investment in Turkey (or, say, a considerable extension of its present activities). We can estimate USD-based sovereign rates for wealthy nations (and those who can and choose to borrow long-term in local currency) using their S&P sovereign credit ratings and corporate credit spread matrices. First, we estimate the domestic cost of capital, and then we include the premiums for sovereign and anticipated inflation risk. While the net additional risk of the global assets is already represented in the business beta, this process is relatively iterative and should not be reflected in the domestic cost of capital. When the effect is judged irrelevant at the corporate level, we skip this phase. Our sovereign risk premiums, which account for national risk, are lower than those of bigger markets like the G7 and other AAA and AA nations, sometimes at less than 50 basis points (bps). For investment-grade loans like Chile and Poland, emerging market sovereign risk premiums vary from 50 to 100 bps to hundreds or even thousands of bps for non-investment-grade debts like Argentina, Indonesia, Peru, and the Ukraine. For instance, the USD-denominated government debt of Chile yields 4.9 percent and incorporates a needed additional rate of return to cover the risk that Chilean sovereign debt entails to U.S. (or internationally diversified) investors. We basically deduct the U.S. sovereign yield from the local nation yield (again, ignoring the impact of compounding) to calculate the share of that 4.9 percent that corresponds to Chilean sovereign risk, which is estimated to be 70 bps, in line with their country's USD rating.

Expenses of Corporate Capital Worldwide

The marginal effect of the two systematic risk components, sovereign and currency risk, is a useful technique to analyze the cost of capital for foreign nations. The domestic WACC is increased by a sovereign risk premium when calculating international WACC in USD. We also factor in the anticipated inflation premium when calculating international WACC in local currency. Using predicted changes in the Consumer Price Index (CPI), LC sovereign bond rates, and the implied LC issuer yields based on S&P Country sovereign yields, we calculated currency risk through inflation-linked sovereign bonds or from the difference between the two. WACC in USD, local WACC in USD, and WACC in USD for sovereign risk premium. WACC regional in LC WACC local inflation risk premium in USD. A corporation with a domestic WACC of 8% will have a foreign WACC in USD of around 8.7% and a WACC in local currency of roughly 8.8% in the instance of Chile (Country C), wherein we estimate a sovereign risk premium of 70 bps as well as an inflation risk premium of 10 bps. Yet, any given assessment of sovereign risk may be inaccurate. Even among countries with similar ratings, sovereign risk premiums may fluctuate abruptly. Using a Monte Carlo simulation and historical data on sovereign yields, we estimate and demonstrate the range for a sovereign risk premium for noninvestment grade nations.

Hurdle and WACC Rates

Many businesses use artificial decrees to make up for poor sensitivity or risk analysis, free capital, and an excessive reliance on single-point estimates of an internal rate of return (IRR) or net present value (NPV). This results in higher required returns for investments than their actual cost of capital. Many businesses consider money to be "free" since, after investment permission has been secured, managers have already paid for it. Since it is free, capital must thus often be rationed. In contrast, capital becomes abundant but costly when it carries its own full cost. Nevertheless, hurdle rates reduce value: Starve growth by consistently preventing opportunities for investments that increase value cause the proponents of investment possibilities to make exaggerated predictions, steer the business away from advantageous activities like thorough risk analysis and innovative risk management, By passing up favorable NPV investment possibilities, the corporation may lower its weighted average return on capital. Managers typically face hurdle rates that are higher than the cost of capital in order to counteract the issues caused by inadequate risk assessments and free capital. In most cases, this effort to replace a thorough risk analysis and make up for excessively optimistic projections results in even more optimistic forecasts. A lesser importance placed on even basic risk assessments and more optimistic projections are the practical repercussions of the seemingly easy appeal of increased hurdle rates. The temporal pattern and severity of the risk being examined are not given appropriate attention when a project's rate of return is increased. The cost of any risk is geometrically compounded by using a greater discount rate to represent increased risk, which arbitrarily penalizes future cash flows compared to more recent ones. For discounting and hurdle rates, it is easiest to utilize a single cost of capital (per currency). The greatest way to identify and assess risk is via scenario or simulation analysis, but the best way to control capital consumption is through performance monitoring and incentives. Inflated hurdle rates do not alleviate, and in fact worsen, this issue since they restrict the amount of capital that generates an offsetting return. While certain negative NPV projects must always be performed for environmental, health, and safety reasons (defensive capital), the total return on capital is nonetheless raised by any investments that generate profits over and beyond those of the running firm. Increased hurdle rates lead to missed opportunities, slower development, poorer returns on invested capital (ROCE), and decreased value. We show quantitatively that decreasing the hurdle rate from 20 percent results in rising weighted average returns, more NPV, and bigger enterprise values (compared to an 8 percent WACC and 10 percent ROCE). Project and company operational cash flows should be adjusted lower to reflect the additional risks, costs, and uncertainties rather than increasing the cost of capital. We advocate ranking in situations where money must be rationed in order to provide the highest additional NPV possible. Any ranking of investments has the drawback of having to be completed in a static setting with each investment opportunity accessible for review at the same time, which is seldom practical. As investors are yearning for opportunities, capital is seldom in short supply. The chance for expansion is the biggest barrier and one of the biggest strategic problems confronting publicly listed firms. Stock prices often reflect forecasts of explosive growth. The present value of future cash flows capitalized as perpetuities may often be used to justify around half of the total S&P enterprise value. The remaining half of market capitalization depends on profitable growth above and beyond current cash flow levels.

Excessive hurdle rates inhibit growth, particularly organic development and smaller investments (where risk is lowest), and ultimately force massive acquisitions (where risk is highest) to supplement moderate growth, which is at contrast with current corporate finance policies and practices. The duty to maximize shareholder wealth is one of the most fundamental and essential

concepts of contemporary corporate finance, and in fact of capitalism. Both passive investments, which involve holding on to money rather than sharing it, and active investments, which require capital raising, imply a commitment to maximize NPV. All positive NPV investments must be made, and where feasible, negative NPV projects must be refused or postponed, in order to fulfill the duty to maximize shareholder value. Any project with a positive NPV adds value. When all NPV projects are positive, value is maximized.

Discovering Your Value Sources

Traditional methods of performance evaluation, appraisal, and strategy planning have failed. Today's leader has made managing for value their guiding principle once again. Yet, managing for value efforts have long been dismissed by academic literature, popular media, and even parts of the analytic community as just improvements in metrics and measurement.

Such a constrained reading suggests minimal fundamental change in the conduct of the individuals and systems in charge of the choices and deeds that generate value. Value-based management requires a significant transformation of people and processes, including planning, portfolio management, strategic and tactical decision-making, and remuneration, in order to generate value. Instead of the vision, many tactics fail because of the choices made. Too often, plans and their implementation are based on deficient metrics and measurements, which leads to unwise choices, value loss, or sub optimization. Numerous financial, value-based decisions at all levels of the organization are necessary for the deployment and execution of strategies, including decisions about integrations, dispositions, closures, outsourcing, run-length, customers, and stock keeping units (SKUs), as well as adjustments to pricing, promotions, and value propositions.

Many businesses are under pressure to identify the areas of their company portfolios where they are adding value and those where they are losing it. Almost 80% of businesses, in our experience, are unable to assess returns on capital or real contributions to value generation below the business unit level. Meaningful indicators of customer, product, and SKU economic profitability continue to be theoretical concepts. Value-based portfolio management gives value-oriented managers the resources they need to make strategic choices and carry out tactical plans. However these tools need to be used and used with caution. Despite the apparently straightforward directive to maximize value, decisions are complicated because it becomes increasingly difficult to distinguish between performance assessment and valuation at the more detailed levels of the company portfolio.

Finding the drivers of wealth generation and destruction within a firm portfolio requires careful economic research and cutting-edge accounting procedures. In order to maximize (analyze, enhance, and manage) the value of a portfolio of SKUs, clients, and products, one must establish the essential components of a granular value-based profitability metric and what levers may be utilized to boost contributions to value.

The focus in business is on shareholder value, and mission statements, research studies, and annual reports all use value speak. Since it is a limited resource, capital must be effectively managed by all enterprises. Due to the limited supply and liquid markets for capital, its users must optimize its worth, or maximize shareholder value, to prevent money from moving to more lucrative alternatives. Maximizing shareowner wealth is one of capitalism's most fundamental and essential ideas. Every dollar raised and invested raises the possibility of a return. To shareowners, a subliminal commitment is made to enhance value while keeping all profits rather than sharing them. Each choice to raise, invest, or keep money must thus be based on whether

doing so would enable the investor to generate more value than they would have with a comparable risk alternative investment option. What about the interests of other stakeholders if managing for value includes the ownership interests? Let's start by taking a closer look at these owners since institutional investors are the savings of regular people, not affluent, young Wall Street professionals. The great bulk of our stock ownership is held in mutual funds, pension plans, life insurance policies, and numerous modest individual holdings. We take on risk when we invest our money in order to get the highest potential return. The interests of consumers, workers, and owners and those of the managers, executives, and directors who look after our savings need not, however, be at odds with one another. Stylish shareholder stakeholder talks reveal disconnect between the methods and the objectives. Value maximization, the driving force behind economic expansion, is a long-term strategy that raises economic production and prosperity via increases in productivity, job growth, and wages. When our limited resources are used as effectively as possible, stakeholders' and society's interests are best served. The primary goal of management is to increase shareowner wealth; by managing for value, we allocate our limited resources to the most promising applications and productive users. The advantages of managing for value to society are obvious. Our economy will expand more steadily and our quality of living will rise at a faster pace if our limited resources can be used and managed more efficiently. Investors have both an opportunity and a problem as a result of globalization. Companies will continue to experience growing competitive pressures as formerly exclusive product, labor, and capital markets become more global. Institutional investors are becoming more open to the ideas of increased corporate governance and shareowner activism as a result of performance pressure. Today's workers, executives, and directors are increasingly concerned about the effects of eroding shareowner value due to market liquidity and the rise of sophisticated institutional investors.

Pit Falls In Performance Measurement

Executives and managers should take care since what is measured is controlled. Despite the fact that valuation theory has been taught in business schools for many years, profits per share and other conventional accounting-based indicators still dominate corporate decision-making. Yet, if the costs of capital and capacity are not appropriately managed, these measures have a number of dangers and may conceal widespread value loss. Using the well-liked medley of performance metrics—top line growth, market share, gross margin, operating income, and standard cost—as an implicit proxy for value creation leads to long-term issues.

Overproduction

The cost of capital, such as the capital used for capacity, inventory, and receivables, is generally ignored or understated by standard cost. Standard cost transforms fixed production expenses and capacity costs from period costs into unit costs. In order to lower apparent unit cost, excess (unsold) throughput is frequently capitalized into inventory. Profit rises with production even if there is no market for the commodities produced since inventory has no cost for the income statement and a fictitious "absorption" gain. Plant managers often get instructions to reduce unit costs regardless of real demand, and as a result, they will produce at and increase capacity. Profit per unit is maximized by producing the greatest number of units, regardless of demand. With increased production and capital expenditure, gross margins and profits will rise, but inventory levels, utilization, and eventually returns on capital and economic profit will suffer. There are times when having too much inventory causes problems with order fulfillment, material flow, and product quality. Large amounts of unneeded inventory and unequal, rigid output are

additional operational difficulties. Surplus merchandise is often destroyed, drastically discounted, or sold wholesale. This vicious cycle results in revenue loss since it necessitates steep discounts and trade promotions to get rid of excess, aged stock, often at the end of each year or quarter.

Overinvestment

Because to their disregard for capital and its cost, profit and profit margin metrics often encourage excessive investment and vertical integration. Several industries suffer from widespread overcapacity, which hurts profitability. More and more, various firms and business strategies use various amounts of money at various prices. On the surface, it may seem that organizations with bigger margins are more appealing to managers. For instance, with modern manufacturing technology, earnings and margins often increase, but they must do so to offset the greater levels of investment. Every business initiative with simply a positive — but not necessarily acceptable — return above zero might increase a manager's margins, unit cost, profit and productivity indicators since standard financial measurements neglect the returns that shareholders demand. An undertaking like this, however, may ruin value.

Since percentages are so obvious, a lot of managers have a great attraction for them. Yet winning games do not depend on batting averages or shooting percentages. By concentrating on percentage margins and rates of return, "stars" are starved and "dogs" are fed. In order to increase margins and returns on capital, a low-return dog business may be driven to seek return-expanding growth that, if below the cost of capital, would devalue the company. Even if it is above its cost of capital and so adds to value, return-diluting growth will reduce returns on capital and erode margins if it is ignored or rejected by a high-return star firm. Conventional financial metrics have not kept up with the rate of change since they are based on conventional company models. Services, outsourcing, partnerships, and other cutting-edge business practices are often the foundation of new company models. The emerging service economy is intrinsically prejudiced against by traditional financial measurements. In an environment where more service-oriented organizations are being created around razor-thin margins but with little capital expenditure, their blunt nature is too basic, posing barriers to successful expansion. A basic, near-term income emphasis might have a bias against sound, long-term investments and economic progress.

CHAPTER 5

MEASURING ECONOMIC PROFIT AND VALUE

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Yearly reports provide valuable insight into the managers' overall perspective. Yet more often than not, we come across broad objectives that are considerably different, understood and presented in terms of market share, revenue dollars, gross margins, expense ratios, profits growth, price/earnings ratios, returns on capital, and share price performance. Profit and profit margin metrics often lead to overproduction, excessive investment, and uneconomic vertical integration since they ignore capital and its cost. Despite this, income statement measures continue to dominate our vocabulary in business. Also, we progressively see various organizations and company strategies using various amounts of cash at various prices. Although while the ultimate objective must be stated in terms of shareowner returns, an operational measure offers a more useful substitute. Economic profit (EP), which is the yearly contribution to intrinsic value, or net present value, is a statistic that best captures the contribution to intrinsic value in any given time (NPV).

Economic profit is calculated as net operating profit less taxes, capital used, and capital cost.Economic profit is the amount made after deducting the cost of all capital used. It accurately accounts for the trade-offs between the income statement and balance sheet in generating value and concurrently captures revenue, cost, and the cost of capital in one metric. It charges your profit statement the entire cost of your balance sheet. Economic profit is also the difference, multiplied by invested capital, between a company's return on and cost of capital. In contrast to investments of equivalent risk generating 15%, the economic benefit for a $1,000 investment in a hot dog shop with a 5% return would be negative $100 [(5% 15%) $1, 000].

Simply put, intrinsic value may be defined as the NPV of all future cash flow. The mathematical equivalent of the sum of the capital and the present value of all future economic earnings may also be used to represent this. The same idea still applies to company valuation, even if there is considerably less confidence in the future figures than there is with fixed income valuation since present value ideas are more accessible and hence more often used. Assuming a 10 percent capital expenditure, or time value of money ($100/10% $1,000), a firm that generates $100 year, forever, may be valued at $1,000. This zero-growth base case is the current operations value and assumes a capitalization factor, or multiplication, of 10 times operating cash flow (COV). The total of capital invested plus the current EP's present value capitalized into perpetuity, with no growth, is another way to represent the COV. The nominal zero-growth hypothesis predicts real-

term decline. Let's explore a growth scenario where operational cash flow increases at a constant rate of 5% per year. Even though many of us would assume that a lifetime is a long period, certain stock prices might not be able to be justified by this length of time. On the basis of present value, our straightforward scenario is worth $100/(10% 5%), or $2,000. The growth scenario suggests a 20-fold multiplier and occurs to show a price point typical of the market today. In this example, 50% of the value is the COV (current operational value), and the remaining 50% is the value of future profitable growth. In other words, 50% of the value is the COV, and the remaining 50% is the value of future profitable growth. Expected growth and the value of any genuine options are both included in the growth value. For instance, a growth rate of 5% may represent a 90% probability of no growth and a 10% possibility of 50% yearly increase.

Book Values aren't Important

Managers often are prevented from making value-accretive portfolio choices by confusion between accounting and economics. The market's liquidity for transactions is often decreased by unnecessary friction caused by bookkeeping entries. For instance, idle assets and loss-making companies that might otherwise be sold for cash are sometimes held unnecessarily to avoid recording a loss on sale, a non-cash accounting entry with no economic impact other than the potential signaling value of an overdue correction.

Negative EVA is Meaningless

Similar to how book values shouldn't prevent value-creating sales, they also shouldn't unfairly cast a corporation in a negative light. Even while achieving a return that is less than your cost of capital is by no means ideal, these returns are often determined using book value rather than market value. Negative EVA measured on book values is also deceptive since we know that they don't matter. The solution, however, is not to use capital valued at market. Going concern market values are also inaccurate measures of the potential cost of present period capital since they capitalized expectations of future increase in EP. A company's intrinsic value is equal to the current value of all of its future cash flow creation, whether it has positive or negative EP (or capital plus the present value of all future EP). So, rather than the quantity of EP, what counts is the current value of future EP for each possibility (expand, divest, closure). Growth or improvement in EP is required to create value, particularly if it goes above and beyond what is previously anticipated or financed. For instance, while having a negative EP, a smelter's liquidation value can be lower than the value of its ongoing operations. For a variety of reasons, such as high closing costs, resale prices that are much below book values, and operational synergies, the breakup value might be lower. It's possible that continuing operations might have a better intrinsic worth than closing down or liquidating this company. If the market capitalizes on a company's poor economic performance and prognosis, it may even be a good investment (if the stock price is sufficiently low to allow you to earn an adequate return on your own investment). In the end, surplus returns will be produced if opportunities for improvement are made feasible and the market capitalizes on them. Negative economic profit is often a warning sign that a company's strategy needs to be reassessed to make sure it is the one with the greatest net present value.

Value-Adding to the Profit Equation

To quantify value generation and destruction inside the company portfolio at low, granular levels, a number of measurement difficulties must be resolved (customer, SKU, product, brand).

Values of fixed assets do not accurately reflect the real opportunity cost of capital used. In industries with persistent overcapacity or high closure costs, book values overestimate the value of plants and properties while underestimating the value of machinery that has a lengthy service life. Moreover, goodwill is used to "mark to market" purchased capital, while organic growth is recorded at book value. Future portfolio choices are less relevant to the sunk cost of goodwill than those made in the past. Realisable Net Value Net realizable value (NRV) is a more precise indicator of the opportunity cost of fixed assets when it comes to measuring economic performance at the individual level. A rough estimate of the estimated salvage or liquidation value (NRV), net of any exit or closure expenses, should be used (e.g., severance and tax). Whether liquidation is a realistic long- or short-term option, the opportunity cost of capital should be measured using the forward-looking NRV. Apart from the possible secondary advantage of lower supply, closing facilities with little to no NRV reduces their yearly operating costs. Nevertheless, selling or liquidating these plants has no economic benefits. This capacity is virtually free in terms of money. Business worth Businesses inside the corporate portfolio (business units, products, brands, and so on) are often not publicly listed, despite the fact that many firms are. So, strategic issues must be resolved in light of how they will likely affect intrinsic value, which is determined via fundamental valuation. Performance is connected to intrinsic value by projecting and then discounting future economic profit or cash flow.

Since intrinsic value depends on expectations, it is susceptible to both changes in performance outlook and capitalized present performance. For instance, the majority of stock prices rely significantly on growth projections. By the end of 2003, the average stock price for the Dow Jones Industrial Average (DJIA) was around 55 percent determined by future growth values and 45 percent by the present value of ongoing activities. An empirical strategic evaluation of COV and growth value (GV) drivers as well as forecast and terminal value assumptions may be supported by this approach. To more accurately assess market pricing, we may break down future growth value into a performance estimate.

Implications for Terminal Value

In an economic profit analysis, terminal values usually make up 50% or more of the NPV, and much more so in a discounted cash flow (DCF) analysis. This is partially due to the fact that capital is expensed in a DCF rather than capitalized as it is with EP, which makes the NPV analysis based on EP less reliant on assumptions about terminal values. Yet, terminal values are among the topics in contemporary corporate finance that get the least attention and investigation. They are the valuation's weak link, not the discount rate, contrary to popular belief. Here, we include a number of terminal value techniques together with their supporting arguments.

Perpetuities At the conclusion of a prediction period, let's say three to five years, the most basic method assumes an endless "stationary state." With fresh investments equal to the yearly depreciation expenditure and capital constant, the final year cash flow stays constant indefinitely. However, since it implies growth value decays to zero, this finite-growth model often cannot account for experimentally how the market values securities. Warranted or not, in actuality, one can seldom find a corporation with zero growth value. A firm, organization, or product need not submit to such a miserable destiny even if a single product may have a limited lifespan because of renewable brand, technology, or franchise assets. Most companies and products have the chance to reinvent themselves and reestablish growth principles. If any firms ever trade like bonds with little growth potential, it is rare. This is particularly true in situations where expansion is anticipated until surplus returns are no longer accessible and poor return firms are

anticipated to be "turned around" or sold and where they may earn more than their cost of capital. Businesses cannot really be expected to trade like a bond with no growth potential. Simple perpetual growth hypotheses for nominal yearly economic growth of 3 to 5 percent are often used by analysts to answer this. Others favor a commercial remedy. We have discovered correlations, for instance, between return on capital, margins, R&D intensity, and the perpetuity growth rate reflected in market values, enabling us to create tables of suitable perpetuity growth rates for various industries. Investments are necessary in R&D, brand development, technology, capacity, and other areas to sustain growing value. If no investment or renewal is anticipated, it may be expected that economic returns would diminish or decay toward the cost of capital. Marketplace Multiples Market multiples are a typical empirical shortcut to the terminal value factor, especially when market-congruent values call for substantial growth value in the terminal value. The same issue affects terminal values, even though it is impossible to anticipate certainty in long-term forecasting; all multiples and terminal value assumptions have implicit expectations for the future. Market multiples are often income statement-focused (e.g., 1 sales, 6 EBITDA, 20 earnings), and they might be economic profit-based to more systematically account for capital use. A strong theoretical construct of value should serve as the conceptual foundation for multiples, which should subsequently be experimentally proven using data on market value. We may create an industry-specific valuation model by doing an industry regression study of market values (market multiple). The applicable historical range for market multiples will be constrained by cyclicality, with multiples being lowest in prosperous periods and greatest in prosperous periods. Economic profit multiples could exhibit less standard error and explain a greater portion of the variation in market prices. In the case of branded food stocks, regression analysis produced a y-intercept (1.30) that represented the capital multiple and a slope (3.5) that represented the capitalized economic profit multiple. The theoretical presumption in this situation is that both coefficients are equal to one for the value of the present operation. The coefficient premiums, which are generally included in the economic profit component, stand in for GV. Despite the fact that negative economic profit is often capitalized at a lower multiple, there is not enough data for this sector to support the statistical conclusion.

The Corporate Portfolio Is Analyzed

Revenue, expenses, and capital are the three types of data needed to calculate economic profit. The cost of capital is less of an input and more of an economic factor. An EP computation at the consolidated level is often straightforward with minimal problems with data availability and clarity. Whenever a financial prognosis can be estimated, intrinsic value may likewise be established and compared. Yet, significant measurement problems appear at more specific levels (product, brand, SKU, and customer). Does growing companies with returns above their cost of capital and selling or closing all businesses with returns below their cost of capital (book value difficulties apart) constitute managing for value, whether it be for a portfolio of businesses, goods, brands, or clients? Although while this strategy seems appealingly straightforward, we argue against it because of four typical mistakes.

Insufficient Time Horizon

Economic profit is a period metric, but its worth is based on the performance's present value throughout the course of the current period and all subsequent periods. Even if a firm, business unit, product, or consumer may now have a negative economic profit, if it is anticipated to have a positive enough economic return in the future to cover the expense of keeping the negative, it

still has significant value. Early years of poor economic performance might be seen as the cost of a call option on a brighter future a genuine choice.

Cross-Subsidies that are not acknowledged and improper transfer pricing

Cross-subsidies that aren't recognized and improper transfer pricing can conceal the sources of real economic performance and value, especially at more detailed levels within a company's portfolio. Cross-subsidies will always provide false signals of performance and value within the portfolio if transfer prices are not used to effectively manage them. When we only perceive a portion of the picture, suboptimization may happen; choices may be made to maximize the value of specific components, features, or processes, but the overall value may not be maximized due to our partial understanding of the situation. We've heard stories about how razor blade sales supported the sale of razors and how Polaroid cameras supported the selling of film. Similar to this, casinos sometimes incur losses on housing and meals in order to increase gaming earnings. Drug manufacturers attempt to spread their expensive research expenses among multiple therapeutic areas. Investing in a high-profile magazine to demonstrate their production quality skills might cost a huge printing business money. To earn used car, servicing, insurance, and finance revenue, auto dealers practically give away brand-new vehicles.

Yet strict management of these tactics is required. For instance, many people are unaware of how unproductive automobile financing may be when the expenses of the capital used and the risk involved are taken into consideration. Yet, after taking into account the risk capital associated with matched maturity funds transfer price and the fiercely competitive consumer loan market, it is best left to the majors. Instead of being done on purpose, business operations are commonly combined by default. For instance, it's not necessary to combine the three components of consumer finance (origination, service, and investment). Without using economic transfer pricing, it is difficult to determine the real nature of the value proposition and the sources of value when they are packaged. To allocate resources and outsource projects effectively, businesses must comprehend the actual economics of each activity.

Misallocations

Standard cost reduction and top line growth may conceal widespread value degradation. Misleading signals of performance and value may be produced by the improper distribution of indirect expenses and assets. Problems arise when fixed period and sunk costs are variable (more on this later), but they arise most often when cost drivers are not taken into account when allocating expenses. Allocations include a range of expenditures, such as outside purchases, administrative expenses, and the division of shared and common costs. These allocations often include overhead expenses—period expenditures that will be spent regardless of the situation—or they may theoretically correspond to an allocation of sunk fixed costs, such as capacity.

Note that economic expenses might include the carrying cost (opportunity cost) of capital utilized in addition to charges from the profit and loss statement. A charge for the capital used to start the firm is a necessary component of a proper economic profit calculation. As a result, allocation problems may arise even with shared receivables, payables, goodwill, and fixed assets. Despite the fact that activity-based allocations are ideal, the 80/20 rule is essential for success. There are problems with how to determine the real quantity of capital utilized at these low levels, despite the fact that a capital charge is a need for developing a value-based profitability metric. Net working capital and the fixed assets already in existence are the two basic components of capital. Measuring the components of capital first seems like a straightforward process: Calculate

the current amounts of working capital and fixed assets, then assign these two items and clients. Yet there are challenges.

Real Inventory vs. Ideal Inventory Actual inventory levels are probably not ideal. As was previously said, standard performance assessment and reward systems place a strong emphasis on plant efficiency while ignoring the cost of capital. Hence, the perceived quantity of inventory does not represent the level required to operate the firm smoothly, confounding any forward-looking measure of economic performance. Actual levels of inventory, accounts receivable, and accounts payable must be taken into account since they are genuine expenses when evaluating performance ex post on a firm-level. To apportion the expenses of the extra inventory that is being stored in trailers ex ante, however, may not be acceptable. These inflated inventory levels are a buried cost and a reflection of previous mistakes rather than the actual capital expenditure required to sell the goods. It may be more suitable to normalize inventory levels in order to evaluate economic viability on a prospective basis.

Contrasting customer and product working capital

When capital expenses are incorrectly attributed to certain items or clients, net working capital is particularly vulnerable to distortion. Although it could be simple to link an account receivable to a client, it might be more challenging to defend that charge when examining the profitability of the product as the charge is a consequence of the customer being satisfied. The profitability of a big client has an impact on the profitability of a product when it is sold to them. Retail vendors, for instance, run across this issue. Since they cater to a mix of countless little and few major consumers, many of their items seem to be unprofitable. Big clients might pressure a supplier into longer terms, more inventory needs, and lower profit margins. Selling the goods to small stores makes it seem lucrative; selling it to big clients makes it seem unprofitable. The unprofitable factor is the consumer, not the product.

Improper Costing

The unitization of fixed (period) expenses and capital costs, such as the cost of capacity, are examples of improper costing that can provide false signals of performance and value in a company portfolio. Costing methodologies, as said, may disregard or overstate the cost of capital. Instead of being expensed as period expenses, indirect overhead costs and surplus capacity are sometimes wrongly handled as a unit cost and capitalized to inventories. Since there is no cost for capital, capitalization makes expenses "free" and incentivizes short-term overproduction rather than building to order. In the long run, unitizing expenses for set periods, like capacity, results in a death spiral with increasing prices and diminishing output. For instance, a failing manufacturing plant with 100 units of capacity and a $300 yearly depreciation estimates utilization to be just 30% (30 units), as opposed to 50% last year (50 units). The fixed cost per unit in the previous year was $6 ($300/50), despite the fact that the "real" fixed depreciation cost (at capacity) is $3 ($300/100). Therefore, the fixed cost per unit that was budgeted is now $10 ($300/30). The factory will go out of business as a result of increasing pricing and future volume reductions, including from internal customers, caused by perceived growing unit costs. We suggest full cost accounting, which accounts for the cost of all capital while assuming full capacity utilization. Throughput accounting units fixed costs (including the cost of capital) by capacity as opposed to actual or planned volumes. A part of the overhead expense is still considered an unallocated, period cost when utilization is lower than 100%. Volume variation has no negative effects on the profitability of either the product or the

consumer. Profitability is independent of utilization, and capacity and portfolio mix choices may be made more accurately and independently using throughput accounting. Also, in organizations with different levels of utilization, comparisons of customer and product profitability may be conducted.

Cost-effectiveness of Joint Goods

Products that are produced simultaneously while sharing overhead expenses or capacity are known as joint goods. For instance, chicken breasts are a poultry farmer's main product, but a chicken also has wings and drumsticks, which may be sold for some extra money. Production in the textile and garment industries often results in some low-quality output. These erratic items are an unavoidable byproduct of manufacturing "first grade" goods. The amount of these irregular byproducts may be gradually decreased via variation reduction (also known as Six Sigma) activities. Joint production expenses are commonly disregarded or unfairly distributed, which results in an inaccurate profitability estimate that misleads decision-making and misstates profitability. For instance, when first quality and irregular items have the same manufacturing costs, the irregulars are sold at a loss and the first quality products do not account for the cost of quality. For instance, first-quality goods generate $135 in income and cost $15 beyond the split-off point. The sale of irregulars generates $7.50 in income with $5 in additional direct expenses. We must allocate the joint and shared costs in accordance with the product's capacity to pay for these production expenses if we are to comprehend the economics. 2 Given that the $120 represents 98 percent of the overall contribution paid to cover manufacturing expenses, first-quality items are given a weight of 98 percent. As a result, first-class items account for 98 percent of joint production expenses. The difference between revenue, costs after splitting off, and assigned costs of the joint manufacturing process is then the total profit. If irregular data cannot be matched to first-quality data, this strategy is challenging. Using scrap rates is a useful substitute. While being less accurate than the joint cost allocation technique, it nevertheless outperforms normal costing since it makes use of publicly accessible data. This approach acknowledges the price of quality in the creation of high-quality goods. The scrap rate inflates the manufacturing costs for first-quality units while setting the production costs for irregulars to zero.

The Cost of Capacity is incorporated

Understanding the short term vs the long term requires a cost of capacity paradigm. This concept divides customer and product economic profitability into two categories. Just the direct operational expenses are included in the first category. It comprises a charge for the net working capital used in operating the firm as well as the direct variable expenses of producing and selling goods. The second category consists of longer-term capacity costs, which are often step costs that are mostly volume independent.

Long-Term vs. Short-Term

The EP contribution margin, which accounts for variable expenses and includes variable capital costs, reveals if the company is value-adding in the near run full price EP demonstrates if the company will provide value over the long run while recovering all associated expenditures (including all fixed cost and capital, such as the cost of capacity). For instance, we assessed the profitability of the portfolio of international food companies. The EP contribution for each of the eight goods in the portfolio is shown by lighter bars. With the exception of a low margin product that cannot even pay direct economic expenses like material, labor, and the carrying cost of

directly attributable working capital, each makes a positive contribution to indirect costs and capacity. While the prospective termination of this product will certainly be considered in short-term portfolio choices, the longer-term strategic problem concerns overall capacity may be more urgent. With all economic expenses apportioned, the direct economic profit was calculated. As a period cost rather being unitized into product cost, volume variation was expensed; most barely covered their entire cost.

Customers and items are therefore divided into one of three groups. The contribution of economic profit and EP are both negative. Category 2: The consumer or product earns its directly attributable costs, and the contribution to economic profit is positive while EP is negative. Category 3: Positive economic profit contribution and EP (i.e., all costs are covered).

Serving any client who makes a positive EP contribution is favorable in the near term since capacity and administrative expenditures are "sunk" period costs. Customers in categories 2 and 3 should all be attended to. Yet, in the long run, all expenses must be paid for; otherwise, capital would need to be redistributed, and capacity and associated administrative costs should be reduced. For category 3 clients and goods, including those that can transition to category 3 thanks to a stronger value offer, capacity will be shrunk over the long term. In a cutthroat industry where margins were under pressure and there was surplus capacity, we worked with one Textile Company. Serving category 2 consumers in the near term is often followed by the corporation adopting that approach as its long-term production plan. It might be difficult to cease working with this company without facing backlash from the clientele.

At one time, this corporation had extra capacity, which its sales staff filled with aggressive negotiations for significant clients. The major client at the time helped pay for fixed expenditures. Yet, longer-term planning often ignores the problem of surplus capacity, and these marginal accounts could have a detrimental knock-on impact on market price levels. In this instance, capacity grew further as a result of operational upgrades, acquisitions, and new equipment.

This growth was financed with excessive debt, which put the business in dire straits. This practice often forces the firm into bankruptcy in the aviation sector. For instance, airlines always struggle to pack airplanes, first with full-fare clients like business travelers and subsequently with people paying limited fares. Low-cost seats help to cover fixed expenses and pay for variable charges. The only expenditures that matter in the near run after establishing a schedule and a defined number of aircraft are operational expenses. Nonetheless, the number of anticipated category 3 clients should be the primary factor considered when deciding how to characterize fleet size.

A minimum capacity might often be required due to technological limitations and the "lumpy" nature of capacity expenses (e.g., there are few small aluminum smelters). Under these circumstances, it is best to fill capacity with category 3 customers first, followed by the most lucrative category 2 clients, as at least they help to pay fixed costs. In order to maintain a positive overall plant economic profit, this scenario implies that the fixed cost contribution of category 3 clients is at least equivalent to the fixed cost deficit of category 2 customers. Customers in categories 2 or 3 should not be serviced if this is not the case. Ultimately, the profitable capacity level is determined by the long-term prospects for these clients. The cost of capacity model may allow ongoing cost and capacity monitoring, particularly when demand is weak. The model may be used to calculate the profitable capacity.

Clothing Case Study

We discovered that category 2 accounted for about 80% of total revenues, however this figure only includes a few significant clients. These clients' profitability was responsive to value factors including terms and inventory needs. Management thought it would be able to convert half of these category 2 sales into category 3 sales after initial discussions with the important clients, but it would still need to decrease capacity by around 50%. They manufactured items in two factories (A and B) that were comparable in size, set up, and price. For these two plants, it displays masked numeric information. Although Plant B is 50% used, Plant A is operating at full capacity. Plant B produces more "value" items whereas Plant A produces more premium goods. Direct cost (material) differences are a reflection of the better quality components utilized in the production of premium goods. As the overhead is unitized across a lower amount in Plant B, the standard cost technique results in greater utility and other fixed expenses. According to conventional profit, Plant A is more lucrative; thus, keeping Plant A and closing Plant B would appear to be the right choice.

Yet, there are two errors in this line of thinking that make it fallacious. First, plant A is more lucrative in part because standard unit cost is lower due to full capacity operation. Second, factory A produces high-end goods. Throughput accounting may be used to solve the capacity issue. The plant cost structures should be evaluated using the same utilization rates in order to compare them. Accounting for throughput fixes the utilization issue. We eliminated the unit price and solely examined unit cash and economic expenses in order to account for the distortion brought on by variable product pricing. Plant A was almost identical to plant B after this modification. Which plant should? Remained the issue. The quantity of capital invested in each facility is the last consideration. A better measurement would take into account solely the potential (rather than historic) cost of capital. We may examine the accounting records to determine the historic worth of plant, property, and equipment. To do this, we are aware that upon the closure of a factory, the corporation realizes a liquidation value based on the net of salvage costs and values related to the property, plant, and equipment as well as severance, after taxes (NRV). This is the actual capital invested and opportunity cost if the corporation chooses to maintain a certain facility. In this instance, plant A's NRV was much larger, and as a result, the opportunity cost of leaving it open was higher. When this potential cost was taken into account, it became clear that Plant B was the most cost-effective option. The firm made the decision to liquidate Plant A, switch production to Plant B, realize the high liquidation value, and pay off the debt.

Value-Based Strategies and Tactics

In any given firm, innumerable individual operational decisions might add value, but they must all result in one of four categories as determined by an increase in economic profit. In particular, EP may be raised by using the four methods listed below.

Fix

By raising pricing or margins, increasing volume, or cutting expenses, one may increase returns on existing capital. Profit margin and asset use are both included in economic profit margins: Start industry-wide initiatives to combine and improve resources or activities that are industry-specific. To increase use, they might be built as autonomous or co-owned networks.

To increase value chain transparency, use "virtual" vertical or horizontal integration. By wider network optimization, improved supply and demand visibility may increase efficiency and utilization. Using dynamic materials flow optimization economics of fulfillment profit optimization. Production economics for businesses that transport or manufacture things is still generally misunderstood, poorly managed, and under-optimized.

Sell

Investments in businesses that cannot provide returns larger than their cost of capital should be rationalized, liquidated, or scaled back: Outsource unproductive tasks (in-source capacity that cannot be profitably sold, shuttered, or outsourced), reduce the size of your manufacturing footprint, sell or divest, and stop doing business in unprofitable regions. Innovative methods for selling a firm, include employee, customer, or management purchases, demergers, spin-offs, and other types of financial restructuring

Grow

Profitable expansion via capital investment, when higher earnings will offset the expense of more capital. Increased sales, new goods, or new markets could need investments in working capital and manufacturing capacity: invest in intangibles (brands and capabilities) that produce growth value, including institutional procedures and technology, by recording them as costs, for instance. Invest on scalability and actual alternatives (options to expand, switch, postpone, or abandon). Investigate innovative acquisition tactics including joint ventures, licensing-in (and out), economic profit earn-outs and creeping acquisitions, asset swaps, and shared service models as "vanilla" purchases become more and more prohibitive.

Optimize Cost of Capital By making careful use of debt, risk management, hybrid capital, real-time capital, and other financial products, it is possible to reduce the cost of capital while maintaining enough financial flexibility to support the company plan. The sources of wealth generation and destruction within a company portfolio may be measured and analyzed, but that is only the start. In the end, it is necessary to leverage sources of value creation while making adjustments to prevent sources of value loss. Pricing, terms, promotions, availability, process control and quality, packaging, and other value proposition-related elements might all change.

Loss leader tactics, which include purposefully losing money elsewhere to make up for it elsewhere, are often the subject of much discussion. For instance, to create the perception of value pricing in the eyes of customers, stores reduce the cost of a few obvious products (such as milk and diapers). We have learned that Polaroid sold cameras at a loss in order to make up the difference in film. These tactics, their effectiveness, and their worth must be measured and tracked, however. Polaroid, once a household name, went bankrupt because its markets developed more swiftly than the business. A loss leader approach has unique difficulties. Even while it would seem that removing a loss leader would increase profitability, doing so might hurt overall profitability and sales of lucrative goods. One supplier, for instance, was still losing $2 million annually on a product to a major store after advocating for a price rise and working capital enhancements, but was able to keep the client due to $4 million in related and lucrative sales.

Costs and Conditions

The value proposition's major lever is pricing. Price and volume often change inversely. The amount of an item that is wanted changes by a certain percentage in response to a 1% change in

price. This is known as price elasticity of demand. As prices are altered and quantities requested vary in response to these price adjustments, this decides what happens to overall income. The study may be conducted at the corporate level to take competition reaction into account or at the sector level to look at macro-consumer response. In one instance, we used historical price/quantity data to forecast income across a range of prices by estimating the price elasticity of demand. This enables the examination of pricing schemes to optimize value when coupled with a total cost curve. We discovered that many items' EP might grow by $10 million with a 4–6% price increase, but that for high margin products, a 3–5% price drop was preferable. Hence, the corporation initially suggested price hikes to make the business value-accretive before discontinuing any marginal business. At times, it was feasible to offer clients more affordable terms, a wider range, and availability. The net working capital needs of customers and/or goods are a significant factor in low-level economic profitability analysis, in addition to fixed assets. Working capital requirements vary depending on the client. Using a customer-by-customer study of capital turns and profit margins, find clients with upside potential. If a consumer is not profitable and won't accept a price rise, shorter payment periods or less inventory may be sufficient.

CHAPTER 6

COST STRUCTURE

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A better mix and pricing may be supported by higher product quality. Increased throughput and improved net operating profit after tax (NOPAT) and return on capital result from less scrap and rework. Greater returns and less downtime result in less money being invested below the cost of capital, less capital being charged, and less capital being avoided. Less work in progress (WIP), less risk, and less uncertainty result in a lower capital charge. Process simplification and reduced material and labor costs result in lower direct costs, which enable greater margins, larger volumes, and higher NOPAT and return on investment. Investments in capacity, machinery, and cutting-edge technology are often driven by the need for reduced unit costs and larger profits. Unfortunately, when earnings do not increase by enough to offset the cost of the extra capital used, these investments often destroy value. For instance, the local textile sector has witnessed significant investments in new technology and capacity, boosting efficiency. The long-term answer requires greater offshore sourcing and local capacity reductions since excess capacity is ruining price and return on capital. Finding the lowest cost value offer is challenging, however. In certain instances, it makes sense to shut down the more recent, less expensive capacity due to factors like lower closing costs, greater salvage values, higher cash operating expenses, taxes, or more feasibly realizable overhead savings.

Size of the Run and Material Flow

The lean manufacturing system's key component is single-piece flow. Pulling smaller batches shortens the supply chain, accelerates the production process, and lowers complexity, waste, and capital expenditure (invested capital is reduced both in the form of WIP and finished goods inventory). Therefore, the use of single-piece flow need not be at odds with profitable run lengths.

The inclination to prepare for buffer stock results from the curve being often significantly steeper to the left of ideal and declining more gradually when above optimal. The execution of lean manufacturing techniques depends on the curve's form. A significant cost penalty for overproduction results from high-priced items (such as precious metal-containing catalytic converters) having a considerably higher than average cost of carry and, therefore, a much steeper decrease to the right end of the run length curve. Elastomer engine cradle isolation mounts, for example, have a considerably flatter curve and a lower carrying cost penalty for overproduction than more expensive items. Set-up time and expense largely determine the

curve's form at the left end; in general, processes with lengthy, costly setups will show a steeper curve, suggesting a substantial cost penalty for underproduction. Processes with quick, affordable changeovers will often have a flatter curve, suggesting that there is less financial penalty for underproduction. The objective is to continually improve processes to reduce the time and expense of changeovers, continuously moving the economic run length curve to the left, and easing the transition to single-piece flow. The greatest potential profit from short runs comes with the lowest risk when it comes to high-value items with quick setup periods and minimal setup costs. The top priority for process optimization activities should be high-value products with high set-up time and cost profiles. If this effort is successful, tiny lot sizes might be used without incurring as much of a cost penalty for underproduction. The lowest possible gain and biggest potential penalty for shorter run durations are offered by low-value items with lengthy set-up times and costs, while they could still provide some advantage from a set-up time and cost reduction program. Any project aimed at reengineering the set-up process will have the lowest reward for low-value items with quick set-up timeframes. A single-piece flow project may have some promise given the cheap cost of underproduction.

Inventory

Inventory is often an indication of ineffective process management and optimal processes, facts that require time to change. Throughout the value chain for raw, WIP, and completed products, factors like as demand uncertainty and unpredictability, SLT, process variance, inadequate flow control and physical tracking, equipment condition, and constraints contribute to the necessity for buffer stock. Without identifying and addressing these underlying issues, inventory reduction results in extra costs, unanticipated downtime, and unfulfilled orders constructing to order while taking lead times into account, given normal DLT and SLT curves. Frequency is plotted vertically, while lead time is charted horizontally. The form or breadth of the curves is determined by lead-time variability; lead times are often erratic and varied. The curves have a rightward skew because lead times tend to stretch farther to the right and are confined to the left tail by zero. Demand lead times often differ from SLTs in length (hence, the frequent need for some amount of inventory). Once again, the inconsistency and fluctuation of demand, manufacturing lead times, process variance, insufficient or nonexistent statistical process controls, subpar physical tracking, and insufficient preventive maintenance are the primary reasons.

All scenarios in which the DLT surpasses the SLT are shown by the shaded area of the graph. A pull method of constructing to strict commands would be simple to implement in these instances (BTOs). More overlap means it will be simpler to satisfy a tight BTO timetable and secure new business upon delivery. Yet, in a setting with limited overlap, where SLT may often surpass DLT, a strictly lean manufacturing system may run into problems. Due to the massive amounts of overtime premium and the congestion on the floor, many situations result in expedite orders that have a disastrous impact on scheduling. Now, the idea of an economic run length, if it surpasses demand, clearly demonstrates that there are instances when building to stock (BTS) is more economical than building to order the volume with SLTs higher than DLTs, which is the unseen order, should be triggered. While the order has not yet been received, when it does, it will already be too late, leading to the need for an expedite order. The provision for variability in unseen orders as a result of the net variability of DLTs and SLTs makes up the third part of the synthetic order. For the purpose of maximizing economic return, optimization algorithms may be created and used using historical data and run duration limits. Unseen orders and unseen order

variations are real-world challenges, although they shouldn't always exist. The highest value cases should be the focus of Six Sigma activities in order to lower SLTs and lower net DLT-SLT variability. Create a new BTOr lean production strategy to take into account practical restrictions such economic run duration, unforeseen orders, and order fluctuation. To reduce SLTs and net DLT-SLT variability, improvement initiatives should concentrate on the highest value cases (e.g., working with customers and vendors, process mapping, reducing setup costs and times, real-time monitoring of critical process parameters with feedback loops and visual queues, fundamental statistical process controls, physical tracking and flow control, preventative maintenance, and retrofitting newer process controls on outdated equipment).

Lean and EVA

A production planner named Jonah compares producing to capacity with producing to demand. He saves $2 million in inventory by going lean with shorter runs, but the cost of changeovers rises by $200,000 yearly. He claims that although profit, profits per share, machine utilization, absorption, efficiency, and productivity all decrease, unit and total cost, scrap, and budget variation all go up. I'm not sure. EP 10% capital advantage of $2,000 000 less 70% 60% of $200,000 after taxes was spent. If the present value were repeated yearly, it would increase the intrinsic value by $600,000 ($60,000/10%).

Scheduling

Eliminating the practice of weekly bucket scheduling in favor of daily bucket scheduling in various sections of the organization may be a "quick hit" in terms of operational performance and intrinsic value per share. It is not appropriate to leave the conventions of scheduling systems and material flow procedures to the whims of information systems or material managers. The amount of granularity needed to manage a lean manufacturing system is not provided by this norm. The smallest planning increment is one week's worth of inventory, starting with raw materials and continuing through multiple stages of conversion work in progress to completed items.

The requirement for precise scheduling is driven, in part, by the large quantity of WIP inventory that results. For instance, there are 7 7 7 (343) permutations to be planned using weekly bucket scheduling and a straightforward, three-step conversion method. Nevertheless, with daily bucket scheduling, this number drops to 1 (1 1 1) for the identical situation. Stop using weekly bucket scheduling altogether and switch to daily bucket scheduling with overnight updates. Delay undertaking intricate scheduling plans until production processes are optimized and manual Kan-bans, visual queues, and other tools are put in place. Before launching into system efforts, address fundamental production and process control challenges. A thorough scheduling effort or any significant new systems solution might possibly burden the floor with complexity and data needs, as well as hard-code procedures and practices that need to be reengineered.

Balancing Performance with Value

The combined maximum of COV and growth value instead of only maximizing current operations value maximizes intrinsic value. This calls for the reinvestment of growing value in intangibles and the future, as well as the transformation of prospects into performance via operational excellence or execution. The effects on corporate strategy, monetary policy, and remuneration are extensive.

The examples in Quadrant I show situations in which items have a premium position but may have been overlooked because of their lower size, conventional income-based margins, or other

factors. They could, however, use minimal capital, leading to a higher economic profit margin. Because to a strong worldwide brand and the simplicity of contract manufacturing, they could also be extremely scalable, which makes them a compelling tale.

In Quadrant II, we locate the hot companies with strong expectations for growth or the underwhelming companies that would be worth much less if not for their minimal value floor, which is often brought on by the prospect of an acquisition or split. Certain legacy brands with a poor EP contribution could need rationalization. Those with the largest sizes being the most crucial may be placed on notice as a possible selling candidate.

In Quadrant III, there are often ongoing issues that need to alter for the better. Before receiving more investment, their economic margins must be improved. It is necessary to quickly and realistically assess their potential. The low growth number indicates that there is limited potential for gain and that the contribution is just minor, which does not make up for the capacity that it uses. It's a superior relocation prospect because of the low realizable value.

Quadrant IV often includes out-of-favor industries, or cyclicals, that are experiencing a downturn and need ways to increase the sustainability of performance or the variability of costs. To address the underlying source of the valuation restrictions, strategies are required. They could be top performers with a value restriction, such an unscalable company strategy, or they might be candidates for strategic investment (strong regionals, orphaned brands, unscaled technologies). To create a more alluring and scalable value dynamic, slow-growth markets should be resurrected, brands repositioned, or business strategies and cost structures reviewed.

Selling It to Create Wealth via Divestiture Vestitures are a crucial, if sometimes overlooked, strategy in corporate portfolio management. They are crucial in actively managing a company's portfolio's development profile, allowing for the departure from less desirable markets and products and the reallocation of money to more productive applications. However, best practices dictate that divestitures be no longer postponed by erroneous beliefs about book losses, market timing, and earnings dilution, even as acquisitions continue to far outnumber divestitures. Although formerly only acquisitions were the emphasis, strategic evaluations and economic profitability assessments are now increasingly used to discover divestiture candidates inside portfolios. Best-in-class, multiline businesses continuously assess their portfolios of companies to identify opportunities to add value and shed companies that might be worth more under a different form of ownership, such as companies that have reached a plateau or may need a lot of money to fully realize their growth potential. By enhanced resource allocation, market openness, managerial incentives, and accountability, restructuring ads value. Enterprise value may be restricted by restrictions on money, strategic direction, rules, or operational processes for business divisions. Businesses may generate a significant amount of additional value when allowed to operate in their own best interests, which may differ from those of the parent. The market often views divestitures positively, and excess profits are routinely produced for both the parent company and the publicly traded subsidiary. Studies on value creation demonstrate that public divestitures may generate a large amount of wealth.

Even if a public divestiture does not generate any revenue for the parent firm, it may nevertheless benefit the shareholders. The shareowners gain value, not always the parent firm. The value may be lost at the parent level and the parent may even be worse off as a result of having divested itself of a subsidiary, but the shareholders may actually benefit if the value of the

subsidiary increases more than makes up for any value losses at the parent. In general, organizations that regularly traded their corporate portfolios and balanced acquisitions with divestitures outperformed their control groups, according to our own experience and several studies. According to one research, this strategy beat acquisition-tilted strategies by 17 percent and passive M&A strategies by 47 percent. The best mix of acquisitions and divestitures depends on factors including the company's life cycle and core competitiveness. For instance, the McKinsey study found that "builders" who followed a more balanced strategy outscored builders with a bias toward acquisitions by a factor of five. For "operators," a balanced approach fared six times better than acquisition-focused methods. At the time of the announcement, the parent company's short-term excess returns ranged from 2 to 4 percent with a broad range of results, partially relying on the precise measurement period for short-term cumulative abnormal returns. According to the majority of research, divvied-up subsidiaries exceed their respective businesses with extra returns of roughly 6%. Assessing the cumulative anomalous returns around the time of the announcement is the method used most often to gauge the value created by public divestment transactions. Here, it is assumed that markets would, on average over time, internalize the advantages into market price within a few days after announcement. This is a semi-strong variation of the market efficiency hypothesis. In actuality, the week before a public announcement is when the majority of the advantage is realized. We and others have also examined the major and considerable longer-term value generation of divestitures, which normally occurs one year after the transaction. Nevertheless, some estimates are as high as 20 to 25 percent, which is consistent with data from successful merger and acquisition (M&A) deals. Longer-run projections are more debatable.

This makes sense in light of the enhanced incentives, resource distribution, and strategic freedom theories. Since these justifications largely help the subsidiary firms and because the parent's size and other external variables will be more important, it will be difficult for the parents to see a longer-term effect. Parents who are successful in their restructuring efforts are more likely to come from industrial sectors, have enterprises that are typically older and have more company lines. Less successful parents had higher ambivalence about their commitment to separation and were less mature in terms of valuation and dividend characteristics. Profitable subsidiary have lower debt and dividend levels as well as more promising futures. Spin-offs make up 60% of the total and have historically been the favored mode of divestiture, both in terms of transaction volume and cash amount. Around one third of all restructuring activity consists of public offers, such as initial public offerings (IPOs) or carve-outs. (A carve-out is a kind of public offering in which a company only offers up to 20% of a subsidiary in order to preserve the option to eventually sell the remaining shares in a tax-free spin-off or split-off.) While the tendency for following stocks seems to have mostly gone, split-offs are still utilized sometimes (many former tracking stocks were either bought back or later sold). In 2004, the public sale of noncore company divisions has the potential to be a new and interesting alternative thanks to yield-oriented structured instruments. In the face of a reorganization, financial policies (liquidity, leverage, and shareholder dividends) and incentive pay need to be reevaluated.

Diversification Generates Value

Parents' short-term cumulative abnormal returns around the time of the announcement average between 2 and 4 percent, according to studies of the value produced by restructuring (Table 3.1). In their first year, divested subsidiaries exceed their industry indexes by around 6%. The excess returns close to the announcement date are the most popular method for analyzing value creation

from public divestiture deals since markets tend to price advantages within a few days after disclosure. The week before the announcement to the public is when most of the advantage is realized. The generation of longer-term value by relinquished businesses is significant and considerable. Longer-term operational benefits have been shown, confirming the claims that improved resource allocation and incentives have boosted management concentration and efficiency. Long-term value creation estimates are more debatable, although some are as high as 20 to 25 percent. Since the advantages are mostly for the subsidiary firms and because the parent's size and other external variables will be more important, we do not concentrate on the longer-term effect on the parents. Spin-offs and carve-outs produced the greatest value during the previous ten years, according to an analysis of the market. Parent businesses that elected to sell via an IPO (floating more than 20% of their ownership) were more likely to experience a loss of capital. Nonetheless, there is a significant amount of result dispersion (30 to 35%). The enormous value produced by the "winners" is thus irresistible, even when the average return from public divestitures may not appear alluring enough to justify the accompanying labor, expense, and danger. The important question is not so much whether these transactions generate value on average as it is how to recognize and organize a successful deal. Also, there are similarities between the "winners" and the "losers."

Winner

During the previous ten years, industrial corporations with more established business lines and typically more varied company portfolios have been the parents of the highest performing public divestitures. Similar to the losers in terms of profitability, subsidiaries showed higher levels of future potential, but with lower levels of debt and dividends (based on multiples of enterprise value to capital employed).

Losers

While the parent firms of the worst-performing public divestitures over the previous ten years were not significantly different in terms of size or debt, they did look less mature in terms of their valuation and dividend profiles (higher price-to-book and low dividend payment ratios). Although losing subsidiary showed inferior prospects, they had comparable margins to the winners (as evidenced by lower valuations, higher leverage and dividends). The usage of tracking stocks (none were used by winners) and a larger percentage of maintained control and ownership among losers indicate that parent commitment to separation is often more ambiguous.

Sources of Value: Divestiture Goals

The decision to classify a firm as noncore and look into divestiture options is influenced by a variety of variables in addition to the criteria of strategic fit. These enterprises are often valued more with an alternate ownership structure, even while a part of the value flowing to shareholders may reflect a wealth transfer from bondholders due to lost collateral – parent company credit rating downgrades are clear. The generation of value via enhanced market transparency, managerial incentives and responsibility, and resource allocation is the main justification for most restructuring.

The capital markets are better able to assess a company's value when more regular, detailed, and thorough disclosure of strategy, tactics, and operational and financial performance is made. As earnings quality improves, market multiples (capitalization rates) increase (cash flow certainty). Nevertheless, improved segment reporting in business units is sometimes hampered by worries

about competition, accounting challenges, and administrative overhead, making it more challenging to obtain this advantage in the absence of complete separation.

Rewards and Responsibility

The study on divestitures has shown longer-term operational benefits, confirming theories of higher management efficiency brought on by better focus, incentives, and resource allocation. An enhanced system of incentives and accountability derives from more transparency, a closer line of sight (shorter distance) between management actions and results, and the availability of equity incentives (stock, restricted stock, stock options).

By offering improved manager-owner incentive alignment and leverage for a certain level of shareholder cost, this aids in attracting and keeping the finest personnel. Concerns about internal consistency within big companies typically complicate business unit remuneration, compromising the potency of incentives and the expense of competitive pay.

Resource Distribution

Resources may be limited as a result of conflicting requirements and interests within a multiline company's portfolio or the impression of more lucrative prospects. Multiline corporations' "diversity discount," often referred to as their "conglomerate discount," is usually used as evidence of the potential for increased fit and focus. 7 The streamlining impact of a well-executed public divestiture may help the parent and segment allocate capital more efficiently and pay better attention to management. Several studies have indicated that, after being released from their parent, divested enterprises usually exhibit better levels of investment and increased profitability.

Strategic Flexibility

Business units can face restrictions on strategic direction, operational guidelines, or operational practices. A parent's unwillingness to support the business unit's vision may limit future development opportunities and, in the end, enterprise value. The chance to create significant new value will often present itself when business units are allowed to operate in their own best interests, which may not be the same as the parent's. The requirements of the subsidiary may not entirely coincide with those of the main firm, however. In vertically integrated organizations, a subsidiary could want to sell a product to the parent company's rivals, like Motorola's semiconductor business, GM's car components business, and other captive financing businesses. In the end, it must be determined if the additional value produced at the subsidiary level outweighs any possible value loss at the parent level. It often is, making stockholders happier following a split.

Overtaken Premiums

Recent academic research has shown that heightened market expectations for consolidation and the consequent receipt of takeover premium may be linked to part of the value gained by financial restructuring. Intriguingly, the McKinsey study found that outperformance was highest (26%) among the approximately one-third of businesses that stayed autonomous over the long haul. 8 And even while there is a greater anticipation for takeover premiums, this does not fully account for the value that has been produced. A percentage of the value produced by divestitures is attributable to takeover premiums, although operational benefits have been shown to be more substantial.

Financial Guidance

Higher and lower growth organizations often have different optimal financial strategies, such as operational and strategic liquidity, leverage and financing, dividends, and share repurchases. A higher market multiple may be fundamentally justified by optimizing business unit weighted average cost of capital (WACC) and financial flexibility (if sold), which is driven by industry considerations as well.

Alternative Disposition Methods

Choosing to divest is often simpler than choosing how to divest. The basic level of intrinsic value generation as well as taxes, accounting, and revenues generated are all impacted by divestiture strategies.

Public and private sales

Private sales provide speedy execution, but the revenues aren't always in cash, and there might be significant tax leakage. Via competitive bid dynamics and tax-efficient arrangements, economics may be improved. In reality, a dual-track procedure is often used, and one of the public disposal strategies listed below is included into the restructuring plan. In an IPO, a business sells the general public shares in a subsidiary in return for money. Final separation may be done by secondary common stock offerings, block trades, selling down gradually, or exchangeable securities if the parent firm retains a holding in the subsidiary. Often, the purpose of an IPO is to release imprisoned wealth while also generating revenue for the parent. In the public markets, attractive enterprises of a sufficient scale are routinely sold at a premium over earlier transactions and trading multiples. When embedded tax advantages are comparatively minor and there is a strong desire to obtain money, initial public offerings (IPOs) are often the vehicle of choice for selling growth-oriented enterprises during volatile markets. Long-term results of an IPO's subsidiary have often outpaced those of the parent company, suggesting that IPOs are usually employed for companies that may have more lucrative potential than the parent.

Equity Carve-Out

A carve-out is the initial public offering of no more than 20% of a parent company's stake in a subsidiary. Parent firms still have a variety of alternatives for when and how to further segregate from the subsidiary. Maintaining at least 80% ownership in the subsidiary gives the parent firm the flexibility to use a 355e tax-free spin-off to distribute the remaining interest to its shareholders (back-end spin). As long as at least 80% of the vote is maintained, several classes of stock may be utilized to sell up to 49% of the business. The subsidiary will profit by offering shares to the general public and then distributing a dividend to the parent in order to reduce tax consequences. In a transaction that would otherwise be cashless, the carve-out offers some monetary profits. Carve-outs also provide the chance to create stronger incentive systems for subsidiary management by enabling the creation of a stock market for subsidiaries, improving their access to money as well as offering investors and the parent more accurate valuation information. Companies that use carve-outs as a restructuring method often need (or at least seek) financial proceeds, may lack clarity on the worth of the company, and may be unsure of the necessity, sentiment, and timeline for complete separation. While these transactions are uncommon, they may be used to help with the price of an exchange-offer as a precursor to a split-off. Parent firms somewhat outperformed the market around the time of the announcement,

and over the long run, the parents did even better. In the first year after a carve-out, subsidiaries typically perform between 8 and 10 percent better than their peer groups.

Spin-Off

In a spin-off, a business distributes a subsidiary's tax-free (355e) 80 percent or more too current owners proportionately. Thus that their proportionate ownership in both the parent company and the new business entity does not change, shares of the subsidiary are allocated to the parent's current shareholders. Similar to a dividend, no more funds are generated, and the total number of shares outstanding stays the same. Shareholders now own a share of the subsidiary, therefore even if the profits potential of each individual parent share is decreased, their net effective position is unaffected. When there are large tax advantages and no urgent need for capital, the majority of businesses choose spin-offs. Spin-offs are often pursued by businesses in an effort to release value that has been locked up in a subsidiary and provide shareholders the possibility to control the parent and subsidiary independently. More wealth has been produced through spin-offs than by any other strategy, with parents typically beating the market by roughly 8% at the time of the announcement. Subsidiaries typically outperformed in the first year after the spin-off by an additional 10%. In contrast to the S&P500's 7.7% return, Dun & Bradstreet (DNB) generated a 14.5 percent compound return between 1995 and 2003 by spinning off a number of subsidiaries, some of which were preceded by carve-out transactions. By a tax-free (355e) exchange offer, a company distributes at least 80% of one or more subsidiaries in a split-off. Shareholders may choose to exchange their parent shares for subsidiary stock or keep their parent stock. Similar to a reverse stock split, no money is raised, but the number of shares outstanding is decreased. The exchange ratio must be chosen such that it offers enough incentive to encourage tender but not being so high as to run the danger of an excessive wealth transfer. The split-off strategy is less prevalent and is often used by businesses considering a sale and seeking to lower the number of outstanding shares. A split-off is typically preceded by an equity carve-out to assist determine this exchange ratio. Split-offs have been used to retire the excess of a large block of parent stock owned by a single shareholder or to change the degree of investment in a subsidiary by a shareholder (or class of shareholders). The 1984 separation of EDS from GM is perhaps one of the most well-known and successful situations. The avoidance of the "recirculation" of shares that may happen as a consequence of a spin-off is another appealing aspect of split-offs. Shareholders don't need to rebalance their portfolios after the transaction since they "opt" to hold subsidiary shares. This could help to boost and maintain the stock price throughout the short-term ownership turbulence around a financial reorganization. It is challenging to make empirical conclusions on the success of split-offs due to the limited number of agreements.

Tracking Stock

A tracking stock, commonly referred to as a letter stock, is an effective economic claim on a subsidiary and a legal claim on the assets of the parent. An initial public offering (IPO), carve-out, spin-off, or split-off of a subsidiary may produce tracking stock. Both the viewpoints of shareholders in the parent company and the interests of shareholders in the subsidiary must be adequately represented by the board of directors. When firms wanted to maintain a sizable amount of control over a company while discovering hidden value by monitoring subsidiary performance with a publicly listed instrument, they turned to tracking stocks in the past. The usage of tracking stock seems to have mostly vanished since many of them underperformed or ran into governance issues before being reacquired. For instance, during Q1 2004, Sprint

declared its plan to exchange 0.50 Sprint FON shares for each Sprint PCS share in order to reunite its wireless and long-distance operations, which were previously divided using a tracking stock structure. Trackers, which include many instances of direct "e" channel bets, have been utilized by diverse firms to enable investors to profit from the advantages of higher growth businesses (GM Hughes and EDS), as well as to undertake higher-risk capital-intensive enterprises (Repair). Some more noteworthy Tracking Stock transactions include those between AT&T and AT&T Wireless, US West and TCI, and DLJ and DLJ Direct. In the late 1990s, tracking stock became popular as a means for conglomerates to take part in the stock market boom while maintaining control over their subsidiaries.

Buildings Oriented to Yield

Public divestiture options that focus on yield, such master limited partnerships (MLPs), real estate investment trusts (REITs), unit trusts, and "Extreme" Dividend Stocks, are appropriate in today's environment of income scarcity. These kinds of structures are suitable for companies with low expected future capital requirements, a solid and predictable cash flow profile, and a need/desire to distribute a large portion of this cash flow to investors. In essence, they are a public divestiture alternative to the private sale to a financial sponsor. The holders of yield-oriented instruments, for instance, may be granted composite ownership of debt and equity with all relevant rights; they may also be given the same tax treatment as if they had invested separately in the underlying assets (reporting interest income and dividend income for tax purposes). A subsidiary carve-out, split-off, or spin-off may be used to construct yield-oriented structures, which are often generated via an IPO. Because to the improved certainty around projected returns and the diminished governance problems with little capital left in the firm, these structures are valued as the yearly distributable cash discounted at the declared annual yield. Even though all public divestiture strategies aim to separate companies, the best strategy may vary depending on the unique characteristics of the parent and subsidiary. The state of the whole market will be an influence. It's interesting that neither our own empirical study nor the available literature provide any proof that industry or size are important factors influencing the strategies used. In the following circumstances, IPOs are often preferred over spin-offs: To get rid of more valuable firms, Companies with stronger rates of growth and bigger capital requirements (Capex and R&D).

When it comes to IPOs, rival share prices often respond negatively, suggesting that the market may regard the development as an indication that the sector is overvalued or that the predicted financial benefits from IPOs would accrue at the cost of competitors. In contrast, the response of competitor share prices following spin-offs is often positive, which might be a symptom of undervaluation.

Academic research does lend credence to the idea that some of the value produced by sold companies came from expected takeover prices, as was already mentioned. Yet, given that many divested enterprises continue to function as stand-alone businesses, this represents only a small portion of the overall value produced. And considerable gains in operational performance have been shown to have contributed to value generation. According to a long-term research on spin-offs, nearly half of the enterprises that were sold have continued to operate successfully as separate businesses. The parent has acquired, bought back, or delisted the others. The enterprises who made it out the most profit. The most effective instances of corporate restructuring deals are those in which the subsidiaries have retained complete independence for a longer length of time after achieving it very quickly.

The case of Dun & Bradstreet (DNB)

Once a massive information conglomerate, Dun & Bradstreet (DNB) launched a strategy in the 1990s to sharpen its focus and maximize shareholder value. Spin-off or carve-out/spin-off strategies were used to execute the majority of DNB's divestitures. Via a partial public carve-out followed by a full spin, Cognizant Technology was divested. DNB bought a number of comparable firms after losing a few of its own. An initial DNB investment would have exceeded the S&P500 by a wide margin and resulted in seven new public firm holdings, five of which are still in operation today. VNU paid cash for the remaining two, AC Nielsen and Nielsen Media (a Dutch media and advertising conglomerate). It's interesting to note that VNU came close to buying IMS Health, but the idea was rejected by the company's shareholders. Moreover, the stock maintained its strong performance, and DNB's valuation multiples notably increased, indicating a greater market attribution to lucrative future growth potential. Along with these developments in DNB, institutional holdings in Value and Index styles withdrew and moved into Growth at a Reasonable Price (GARP), Growth, and Hedge Fund holdings.

Practical Barriers to Divestment

Notwithstanding the genuine potential for enormous wealth creation, there are a number of real-world barriers preventing corporate divestment activities. We discuss the factors that prevent company divestitures, including profits dilution, uncertainty about value creation, concern about the firm contracting, book losses, and CEO remuneration.

Income Diluting

Due to the potential for profits dilution, many CEOs are hesitant to dispose undesired firms. Even while they fail to cover their cost of capital and would be worth more to a different owner or under a different ownership structure, this is particularly true for big, established, low-growth, cash cow enterprises. We use dilution from a divestiture to show the arithmetic of multiple expansion. Earnings per share are decreased when a parent with a high price-to-earnings ratio (P/E) divests a subsidiary with a low P/E. (EPS). The earnings decline is disproportionate to the decline in intrinsic value, which causes the multiple to increase. Similar to what a reverse stock split would do if it were carried very soon after the spin-off, more appealing aesthetics. Alternately, splitting apart the higher multiple firm would result in an even bigger decrease in share count and be the most desirable approach from the standpoint of profits accretion.

Notwithstanding the reduced share price, excluding taxes, shareholder value is maintained. In the event of a spin-off, stockholders will now own two stocks with at least equal value. Proceeds from a cash sale may be invested, utilized to improve credit, or given back to shareholders. Also, in circumstances when the subsidiary is minor, it would only need a little additional multiple expansion (perhaps owing to signaling), while this is unnecessary since overall value (remaining business + dispersed value) is retained anyway.

The second barrier is the uncertainty around investor wealth and value development. Corporate divestitures may generate enormous shareholder value, but depending on the specifics of the divestiture, a large portion of this wealth cannot stay with the parent business. The shareholders may get the residual value as a cash payment, another security, or by repurchasing the securities at a premium. The parent security may be smaller and worth less, despite the fact that the shareholders are better off and overall investor wealth has grown. The parent company share price will be lower until the share count is decreased (via a share buyback, reverse split, or split-

off), and the market capitalization is likely to be lower. But, the shareholders—to whom the board has a fiduciary duty—are in a superior position.

Reduce the Company

Many leaders are hesitant to downsize the business. Particularly when financial proceeds are involved, a sale is often postponed until a suitable, offsetting, purchase candidate can be discovered. For many, using cash earnings to buy back shares is a last resort even though it is sometimes the greatest option. This challenge is somewhat brought on by the previously noted uncertainty around value generation, but it may also be partially related to CEO remuneration design.

Loss on Disposition ofa Book

Due to the possibility of a book loss on disposal, the noncash accounting entry needed for the income statement to reconcile to the new pro forma balance sheet, many organizations are hesitant to sell underperforming or noncore operations or assets. Yet, since they are underperforming, underperforming assets are often worth less than the book value of capital. These undesired firms often languish, depreciate in value, and squander resources while they wait for a buyer willing to pay at least book value. We provide three strong arguments for selling any non-core or underperforming assets right now, regardless of the probable book loss on disposition: Cash profits are reflected in market multiples a promising indicator, as well as the opportunity cost of resources other than capital

Market Multiples Show Cash Income

Book values are neither intended to be, nor are they intended to be, a representation of a business's worth. A company's balance sheet can only serve as a best-case scenario indicator of capital, or the amount of money invested in the business. Whether such capital generates value relies on how well a management generates returns that outperform the cost of capital. Many theoretical and empirical investigations have shown the economic insignificance of extraordinary, noncash charges (such as loss on disposal, write-downs, and accounting adjustments), which are most definitely not worthy of the attention paid to them. 16 These expenses have no impact on intrinsic value since they have no impact on the company's future operational cash flows or its discount rate. Net present value (NPV) is thus not impacted.

By comparing the market multiples (P/E) of high book loss firms to the relative price implied on low book loss companies, the stock market does take into account book losses. The 750 biggest industrial enterprises in the United States were divided into three categories based on the book loss percentage of profits. We should see proportionally higher market multiples on businesses with greater book losses to counteract the effect of the charge if the market overlooks the earnings burden of book losses. And we do in fact see that. The lower profits statistics from the book loss do not deceive the market; instead, a greater multiple is successfully allocated from the underlying value. Such non-cash, unusual expenses shouldn't alarm us. A Promising Indicator Many managers are concerned about the impact of public disclosure for a loss on disposal, even though others have criticized book capital as an irrelevant accounting artifact. Yet, the fee "is a noncash fee." It is an exceptional or unusual one-time fee rather than an ongoing expenditure. We have shown that these charges have no impact on future cash flows, the discount rate, or intrinsic value, as have many others, and the market is aware of this. The incident is not usually news. We are aware of which companies are struggling. We are aware of which industries are

noncore. We are anticipating action from someone in this regard. If anything, the discovery of a book loss during disposal may be a good indication. Positive action is increasingly being made in recognition of the futility of sunk expenses. The firm presents itself as being adaptable to change and boldly pushing ahead rather than taking the risk of seeming to be in denial or lethargy.

A strong new vision is presented, resources are redirected, and underperforming and noncore enterprises are discontinued. For instance, Lockheed Martin disclosed the findings of a strategic and organizational review on September 27, 1999. The review included three key initiatives: (1) streamlining the organization and assigning new senior management roles; (2) repositioning a few related high-growth businesses; and (3) considering the divestiture of noncore businesses. Management communicated that the sum of all possible divestitures would lead to a loss in net profits of around $1 billion, mostly noncash. Lockheed Martin stated on July 13, 2000, that it has agreed to pay BAE Systems $1.67 billion in cash for the Aerospace Electronics Systems (AES) companies. In connection with the transaction, the business recorded a non-recurring and extraordinary loss of $598 million, inclusive of income taxes, which was included in other income and costs. On a book basis, the corporation had an after-tax loss of $1 billion, mostly due to the goodwill lost as a consequence of the high price Lockheed Martin had to pay for similar enterprises in the past. Measured during the time from the announcement of the sale of AES to BAE Systems (in July 2000) to the conclusion of the transaction in November 2000, Lockheed Martin's post-announcement shareholder return were 26.7 percent. Because of the company's greater emphasis on its core competencies, less risk of vertical integration, and more financial flexibility, research analysts were generally enthusiastic about Lockheed Martin's announcement of the divestitures of non-core businesses. Cost of Opportunity Possession adds value in a variety of ways. An underperforming or non-core company continues to use resources while it is up for sale. In fact, since they are failing, many underperforming firms spend a disproportionate amount of resources. They want additional supervision and continue to hold back money that might be invested. A tax loss, a genuine source of cash savings that adds to intrinsic value, often equates to a book loss on disposal. Nonetheless, these companies often lose value when they are labeled as non-core or underperforming. Good talent becomes more difficult to find and keep, key clients grow apprehensive and are more inclined to utilize their negotiating position, and maintenance is often put off. Acquisitions, significant organizational efforts, strategic transformation, and other investments are also postponed.

American Home Products (AHP) stated on October 5, 1999, that it was reorganizing its agricultural chemical business (AgChem), incurring a charge of $220 million to terminate offices, pay severance, and purchase unsold supplies from dealers. A sluggish global agriculture economy and fierce rivalry from Monsanto, a competitor, had hurt the company's bottom line. AHP announced a deal to sell the AgChem to BASF AG for $3.8 billion in cash on March 20, 2000. AHP reported a $1.6 billion after-tax deficit. Since the transaction was announced in March 2000 and closed in June 2000, AHP's post-announcement shareholder return has been 12 percent.

Executive Compensation

Regrettably, we commonly discover a financial motivation to maintain company size. This is because CEO remuneration is often designed and calibrated using measures related to business size. The size of the company has a strong positive correlation with competitive pay, and it commonly influences yearly executive compensation surveys. One of the greatest indicators of CEO total direct remuneration is the natural log of firm size, which may be calculated using

revenue, net tangible assets, or market capitalization. This measure is widely used to "size-adjust" executive pay statistics. Hence, unless the Compensation Committee is made aware of this issue, a divestiture might effectively be a pay decrease, producing a deterrent for any major divestment. In this procedure, executives must be "made whole" at the parent company level. By enhancing "line of sight" and responsibility for shareowner value, the formation of public equity in a subsidiary may alleviate an issue with incentive pay at the subsidiary level. The performance and success of the company may be more effectively correlated with cash bonuses and equity incentives. Executives of subsidiaries may own stock and options in the parent, which would result in the unfavorable consequence of separating their fortunes from those of the newly independent firm. To better match the executive incentives, parent shares and options are typically exchanged for those of NewCo. Subsidiary managers may also lose the benefits of diversification they enjoyed while working for a conglomerate, where cash bonuses are linked to the achievement of individual business units and even though equity-linked incentives are linked to conglomerate stock, if the separation is complete through a divestiture. If the new compensation package is really a riskier strategy, more total direct compensation might well be justified.

CHAPTER 7

FINANCIAL POLICY CONSIDERATIONS

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Financial policies (financial liquidity, financial leverage, and shareholder dividends) may also need to be adjusted in the event of a sale in addition to incentive pay rules. Also, there is a connection between financial guidelines and the techniques of divestment used. Businesses with more volatile operational cash flows or with a bleak future need more financial liquidity. Comparable businesses are more comparable to liquidity than the parent. For spin-offs and IPOs, subsidiary liquidity is often greater than parent liquidity. The most liquid companies are often IPO subsidiaries, indicating more divergent growth and volatility potential between the IPO parent and IPO sub. Parents of IPOs have less liquidity than parents of spin-offs, which may help to explain why IPOs are preferred over spin-offs.

Leverage on the financial front is often not ideal for development. Divestiture subsidiaries usually have equivalent leverage to peer companies but less leverage than the parent. The least leveraged subsidiaries in initial public offerings (IPOs) tend to be those with the most divergent development prospects from the parent company. Again pointing to the appeal of raising cash, IPO parents are somewhat more indebted than spin-off parents. Dividends and share repurchases are examples of shareholder distributions that are often less suitable for growth-oriented enterprises since, presumably, the cash should be reinvested in the growth prospects, decreasing the need to raise costly capital externally. Because of their fixed costs, dividends are often even less suitable for these enterprises than share repurchases (at least buybacks can be suspended if need be). The majority of the time, subsidiary dividend payment ratios are substantially lower than the parent but more comparable to other corporations. Most of the time, payouts start off at zero. This was particularly true for first public offerings, which probably have better growth potential.

Structural Refinements and Tax Implementations

The following criteria must be met in order for an event to qualify as a tax-free one, according to Section 355 of the Internal Revenue Code (IRC):

Prior to distribution, the parent would have to have control (80 percent ownership) over the subsidiary and must have done so for at least five years. There must be a distribution of all subsidiary shares and securities held by the parent (with occasional exceptions), there must be continuity of the historical shareholder interest (minimum 50% continued stake) in the parent

and subsidiary. After the divestment, the parent and subsidiary's business activities must continue, and during two years of a divestiture, a subsidiary or parent may not be bought; this clause may be utilized to stave off aggressive offers.

In an "A" reorganization, the acquirer acquires all of the target's assets and liabilities in return for a combination of shares (minimum of 50%) and cash. In a "B" reorganization, the acquirer is required to purchase at least 80% of the target's shares with 100% stock. In a "C" reorganization, the acquirer acquires the majority of the target's assets (between 70 and 90 percent), but not its liabilities, in return for a mix of stock and cash (minimum 80 percent voting stock). Any assumed obligations are considered monetary consideration.

Debt Exchange and Spin-Off

A debt exchange for subsidiary shares (355a1a) may be used as a tax-efficient distribution method where a spin-off would lower the parent's tax basis in the subsidiary below zero (resulting in a taxable event). The debt (such as AT&T/AT&T Wireless) must have a duration of at least 5 years in order to qualify. If the exchange is made in accordance with Section 361 and is a part of a D-type restructuring of the subsidiary (such as Lucent's IPO of Agere), debt of any term may also be utilised. No taxable gain is realized on the exchange of debt for shares in either scenario.

Thomas Trust

Concurrent spin-off and merger with such a smaller target firm make up The Morris Trust. This kind of transaction is permitted under Section 355e if the parent shareholders possess at least 50% of the voting and market value of the merged business (for up to 2 years). If the objective is too big to fulfill the aforementioned condition, partial payment in cash may be employed. The intricate requirements of a spin/merge transaction (Morris Trust) call for caution, and any consideration transferred must be practically entirely stock to be in compliance with Section 355 of the Internal Revenue Code. If the target is a publicly traded business, a 368 triangular merger may be the most cost-effective way to combine the SpinCo with the target's subsidiary.

How to Make M&A Pay: Growing

Almost all analyses of mergers and acquisitions (M&A) demonstrate the generation of overall value. Yet, it is often discovered that the majority, if not the whole, value creation goes to the shareholders of target businesses, while the owners of acquiring corporations do far worse. On how much less, when, and why, discussion rages on. A few studies do indicate that gaining shareholders has advantages. The 1.1 percent, or $5.61 in value, equal weighted average announcement return was calculated for each $100 invested. The average announcement returns, however, are dollar-weighted at 1.2 percent. Smaller companies make smaller purchases that add value, but larger companies undertake larger acquisitions that might result in larger losses. The overall effect of acquisitions was negative because big business losses outnumbered small firm benefits.

Yet, these studies don't provide much useful guidance and conceal the truth that lies beneath the rule of averages. Executives don't require answers to this query, either. Despite the abundance of thorough scholarly research on the subject, appropriate advice for CEOs has not received much attention. Notwithstanding the fact that many M&A transactions fail for a variety of reasons, many do generate enormous value. A more crucial question for company leaders and board members. By outlining connections between crucial success characteristics, value creation, and

the distribution of value creation between buyers and sellers, we expand on the more recent studies in this field. The relevance of strategy fit, goal size, ownership, finance, profitability, and growth profile is being increasingly supported by data. We emphasize these data in order to draw attention to the recurrent patterns seen in profitable mergers and acquisitions.

The business environment of today is characterized by a number of variables that make the M&A atmosphere more appealing than it has been in the last few years. With the resurging interest in M&A, questionable track record, and propensity for large gains and losses, this field of research is crucial for both corporate finance practitioners and scholars. Market assessments demonstrate a persistent reliance on anticipations of positive net present value (NPV) growth.

Quiet Period

Aggressive strategic action has been put on hold while executives and their directors sorted through a flurry of internal efforts, including regulatory (e.g., SOX), governance, and accounting (e.g., restatements, stock options, FAS 133) reform. A protracted string of corporate scandals and bankruptcies, the ongoing danger of terrorism, the Middle East conflict, skyrocketing steel and oil prices, and election-year politics all contributed to a general lack of initiative and hindered the stock market's recovery. Because of the overhang on stock market values, sellers were unwilling to sell, and purchasers were put off by the perceived devaluation of their own currency. After the 1998–2000 peak, the ensuing decrease of "mega transactions" ($10 billion) was a major deterrent to M&A activity, however we now see stability. The "calm time" is over, there is a lot of unmet demand, and the business climate is good.

Advantageous Capital Markets

Equity capital markets are poised to recover as the majority of the aforementioned bad news has been factored into market pricing and most of the uncertainty has now subsided. Even for issuers who have no purpose for the revenues, low interest rates and narrow credit spreads continue to make the debt capital markets attractive. High-yield and convertible bonds provide excellent alternatives to leveraged loans, which are still in demand. Bonds are preferred over the bank market due to worries about the possibility of increasing rates and the allure of purchasing duration now while rates are still low. Moreover, although new call features and equity claw-backs often play effectively with the flexibility of bank debt, they have also improved bonds' historically significant financial flexibility.

Growing Financial Sponsorship

The role of financial sponsors in M&A is expanding globally. Strategic buyers' focus allowed sponsors to profit from the slowdown in company activity and the favorable capital markets. Another development that has contributed to the expansion and competitiveness of the sponsor market as well as the support of valuations is the rise of stapled agreements, in which the seller's bank provides financing for the purchasers. Sponsors are now price-competitive against public market alternatives and are constantly looking for new possibilities thanks to their over $100 billion in uninvested cash. Sponsors have resurrected middle market activity and divestitures. The fact that smaller purchases never vanished is one that is sometimes forgotten. Volume is spread more equally in industries with significant middle markets. Global real estate (5 percent of the total amount from 1992 to 2004 YTD) and healthcare (7 percent) have had a consistent flow of M&A activity, according to a sector study (not shown).

Windows of Opportunity for Currency

A well-crafted foreign currency (FX) strategy is required in addition to possible pricing and financial arbitrage possibilities for the effective integration of a cross-border agreement. Foreign direct investment is more influenced by equities market growth than by changes in exchange rates. While exchange rates do not influence transaction flow, they are a crucial factor in deal timing and structure. They may also provide enticing price and financing windows of opportunity. The USD/EUR movement, Canadian (CAD) volatility, and the currencies of Latin America have all provided some of the best recent chances, but it's possible that the best investment window for South America has already closed.

Business as Usual

According to Securities Data Corp (SDC) statistics, the telecom and financial services industries, which account for 17 percent and 20 percent, respectively, of the total $7 trillion worldwide M&A volume from 1998 to 2000, serve as the greatest examples of the significance of the "mega transaction" to M&A. A few significant agreements (such the $63 billion combination between Ameritech and SBC and the $34 billion deal between JP Morgan and Chase Manhattan) accounted for around 70% of the telecom deals and 70% of the financial services acquisitions. By 2003, the volume of telecom agreements had fallen by 78% from that of 2000, and that of financial services had fallen by 48%. But suddenly, business as usual is back. Based on dollar volumes for the first half of 2004, M&A is up 44% worldwide and 34% in the US compared to 2003. Major strategic alliances are paving the way; examples are Cingular/AT&T and Kmart/Sears.

Continual Growth

For strategic and financial planning, evaluation, and cost of capital calculations, long-term growth rates must be anticipated. According to the non-financial S&P500 universe during the last 20 years, achieving sustained growth is a challenging challenge. During the heyday of the DotCom period, expectations for long-term growth rates, including such top-line, operating profit, and net income, have usually decreased. We compiled our long-term growth rate data in the following table to provide as recommendations for planning reasons. Even though it is profits growth that drives stock prices, top-line analysis is more useful due to the prevalence of negative earnings. Top-line revenue growth is ultimately the only way to maintain long-term profit growth. While certain businesses have historically experienced rapid growth, this is exceedingly uncommon. Long-term profits growth persistence is difficult to detect and doesn't occur any more often than what we would anticipate to happen by chance.

The long-term growth projections of the Institutional Brokers Estimate System (IBES) are often too optimistic and provide surprisingly little predictive ability in finding candidates with high growth rates. A 30x price-to-earnings ratio for the S&P 500 implies perpetual earnings growth of 6.8 percent, or around the 30th percentile of earnings growth performance. The actual rate of increase in the gross domestic product (GDP) during the same time is comparable with the median estimates for historical real growth, which are approximately 3%. The effects on businesses are obvious. Growing sustainably is difficult. Given the historical experience, estimates about hurdle rates and growth rates are often excessively high. We may anticipate long-term returns from stocks of roughly 7 to 9 percent assuming continuous growth and current dividend yields of about 2 percent, which is a far lower cost of equity than most corporate threshold rates would suggest.

Transactions that Create Value

Many M&A transactions fail for a variety of reasons. Nonetheless, many do provide a lot of value. To achieve the value imperative, our goal is to comprehend how to include M&A as a component of a growth plan. We want to make sure that an M&A transaction begins with the essential components in place. It's interesting to note that around half of all agreements show positive excess returns over the longer period and positive excess returns over the short term. Unfortunately, the results are wildly inconsistent—the averages are scarcely significant—and the longer-term results are much more inconsistent. While less diffused than longer-term results, short-term outcomes often get greater attention in the literature because their effect is more shielded from those of unrelated causes. Their usefulness is of course based on a semi-strong form of market efficiency; we assume that the market provides our best independent assessment of both the transaction and factors in these expectations when setting market prices. In addition, we assume that the share price capitalizes the impact's net present value (NPV). Due to the populations' overlap and the tendency for short-term success to be connected with long-term success, similar insights are often seen in both perspectives. Short-term returns are often consistent with longer-term returns, according to our data and those of other academics. Longer-term excess returns are widely spread and regularly surpass 20%; most short-term excess returns are firmly grouped within a range of between 5%. As a result, acquirer shareholders may make large profits or large losses. So how can the crucial M&A business process be managed to produce results that are on the "right tail" rather than the "left tail"? The statistics of successful mergers and successful acquirers have a lot of comparable patterns. Strategic fit, target size, ownership, premium, refinancing, profitability and growth, value, and to a lesser degree, financial policy considerations are essential success elements according to our own empirical study as well as the current research.

The Right Match

A more effective M&A transaction results from a greater level of strategic fit. Acquisitions within the same industry (same 8-digit SIC code) are around 50% more likely to be successful in the long run than unrelated purchases, according to Standard Industrial Classification (SIC) codes used as a rough proxy for strategic fit. Acquisitions that are unconnected or just somewhat linked (share 2-, 4-, or 6-digit SIC) have a lower success rate. According to the majority of the research, linked industry purchases perform better than unrelated industry acquisitions. 3 In contrast to acquirers that maintained industry concentration, one research indicated that acquirers who sought mergers in adjacent industries tended to incur excess cash flow decreases and value discounts. Contrary to acquirers that kept focus, those who chased mergers in adjacent areas had surplus cash flow losses of 10% and value discounts of 4%. In connected sectors, operational synergies ought to be more prevalent and simpler to accomplish. Due to a larger degree of expertise, ability, and business process overlap, post-merger integration is likely to start earlier, progress faster, and provide better outcomes.

In similar businesses, synergies are also less likely to be exaggerated, reducing the chance that the buyer would overpay. The buyer's competitive advantages may also be applied to a larger scale of company and are more likely to be relevant to the target. Yet, the higher likelihood of cost savings may be factored into an acquisition in a comparable sector, increasing the dependence on effective post-merger integration and, therefore, execution risk. Longer term, when cost savings from synergies result from integration efforts, the market will reward these agreements appropriately.

Efficiency and Development

Success is correlated with goal profitability and growth levels. Earnings before income and taxes (EBIT) margins show that successful target cases often have better levels of profitability than failed target cases. Despite the higher EPS dilution in these circumstances, the targets with promising product and market prospects are the more lucrative ones. Similar to this, more long-term performance is related to larger goal growth potential. For instances with successful objectives, three-year trailing top-line growth is typically 30 to 40% greater than for situations of failure targets. Even the highest growth objectives, but not ones with statistically significant growth rates, have been linked to negative short-term market responses. Repositioning yourself into more lucrative markets may be beneficial in the long run, but there are hazards involved in the near term, and there is a significant execution risk involved. Because of this, the market can adopt a wait-and-see attitude. When we use value, we get comparable outcomes.

Value Over the long run, higher multiple objectives often outperform lower multiple targets. Growth strategies are more likely to beat "cost synergy" tactics because the valuation multiples of the instances of successful targets are about 50% higher than those of failed targets. Acquisitions of more desirable targets are more likely to be a successful strategy over the long term; however, doing so comes with increased execution risk and the possibility of adverse market reaction at the time of the announcement, which is consistent with our findings regarding target profitability and growth. The markets often wait for milestones that indicate a successful execution before fully incorporating the anticipated benefits into share prices in the absence of a documented track record of such performance.

Size, both absolute and relative

With smaller agreements, the crucial post-merger integration process is simpler, requiring less of a resource drain, more manageable assimilation logistics, and faster execution. In our opinion, smaller, less strategic acquisitions are less likely to get special treatment throughout the review process and are generally held to a higher bar for price and approval. In situations when the sale is less important to the seller, the buyer's negotiating position is more likely to be advantageous. These factors make smaller objectives less likely to be overpaid. Private businesses or divisions of bigger organizations are more likely to be involved in smaller agreements, which may command cheaper pricing. Larger transactions often perform worse than smaller agreements. The size of the top 500 successful agreements over the previous ten years (referred to as "winners") is only around three-quarters that of the bottom 500 failed deals (referred to as "losers"). Smaller deals are more usually connected with successful announcements. According to one research, 66% of transactions under $5 billion generated value for the owners of the acquiring company, whereas 66% of transactions beyond $5 billion either destroyed or did not generate value for the acquiring company. A more challenging problem is relative size, in part because smaller acquirers often outperform bigger acquirers. Curiously, smaller companies often have greater acquisition success, perhaps as a result of their stricter standards for price and strategic fit. According to a study of 12,000 purchases between 1980 and 2001, small acquirers (market capitalization below the 25th percentile of NYSE-listed companies in the year of acquisition; currently, this would be $700 million) consistently beat larger acquirers. It should not be surprising, however, that on a relative basis, we discovered that the greater relative sizes (seeking at least 50% acquirer revenue) were somewhat more commonly connected with winners. According to a study of public transactions, smaller transactions—where the goal capitalization was less than 5% of the acquirer—performed better than bigger transactions,

where the target capitalization was at least 25% of the acquirer. Little relative purchases showed positive excess returns of 0.3 percent in the two days before and after the announcement date in this research of public agreements, but bigger relative acquisitions showed excess returns of 1.5 percent over the same time period.

Ownership

Public aims often underperform private goals. Private targets (including divisions of publicly listed corporations) have a greater likelihood of being among those who are instantly perceived favorably than unfavorably by more than 50%. Moreover, the literature favors private targeting, despite the fact that our own longer-term results were equivocal. Excess returns are larger for corporations purchasing private companies than for firms acquiring public companies, according to one research of serial acquirers (defined as organizations that have made five or more acquisitions or divestitures). According to this research, bidding shareholders earn 2.1 percent when buying a private company or subsidiary within three days of the announcement date but suffer a 1.0 percent loss when buying a publicly traded company. Private targets are most likely to benefit from all the advantages of smaller targets, including a more structured review process, simpler post-merger integration, and better negotiating strength. Yet even after adjusting for size, private objectives continue to perform better than their comparison group in general. Private enterprises lack a clear starting point from which to allocate a premium, which might result in lower prices being paid. In addition, difficulties with succession, liquidity, estate planning, and tax implications may result in a motivated sale.

Premium

Premiums do not predict success in the short or long run. Successful transactions need a focused acquirer, but premiums do not distinguish between winners and losers. The premiums paid by winners and losers over longer periods of time do not vary statistically significantly; in fact, winners over longer periods of time pay somewhat greater premiums on average. The number of variables that affect premiums—including previous market prices, strategic considerations, and anticipated synergies—is too great to use them as a reliable predictor of success. According to one research, cost synergies occur more often in mergers than revenue synergies; although 25% of mergers failed to realize 30% of claimed revenue synergies, more than 60% of mergers obtained close to 100% of stated cost synergies.

Fact and Failure of M&A

The M&A landscape of today looks to be more difficult than ever. But, prospective purchasers are often building up extra cash and are under growing pressure to refresh their growth choices. The market has had a consistent drop in profitability, returns on capital, valuations, as well as real and anticipated growth rates, from the beginning of 2000. For the S&P500, the percentage of enterprise value based on profitable growth had decreased from 72% in December 1999 to 56% in March 2003, a drop of over 50% from $8,550 billion to $4,350 billion. But not every acquisition strategy is the same. Businesses with active portfolio management have outperformed those without it. Companies that combined acquisition plans with a good dosage of divestitures won over acquirers, who outperformed divestors. Many businesses have the chance to reevaluate their expansion choices in the present climate of cheap loan rates and depressed values. Yet there are three persistent problems that get in the way. We'll talk about three problems that often cause transactions to fail: Goodwill, timing the market, Diluting of earnings

The Goodwill Items

The accounting premium, which is the excess of the acquisition price above the book value, was not recorded on the balance sheet under the pooling technique, therefore there was no related postdeal amortization expenditure. The accounting premium was excluded, resulting in increased profits, returns on investment, and economic profit (EP), also known as economic value added (EVA). The Financial Accounting Standards Board (FASB) did away with the technique of pooling interests in 2001. Nowadays, many businesses are hesitant to explore acquisitions that would lower returns on capital used or reduce economic profit (EP). Yet, since any purchase would initially reduce return on capital used, most firm valuations are typically greater than book capital. The transaction, which is a mark-to-market event, capitalizes existent value by abruptly recognizing it in book capital for accounting reasons. Yet academics and Wall Street professionals both agree that book values are retroactive accounting inventions. Future-looking intrinsic value is based on the present value of anticipated cash flows. Every effort at a comparison between book value and market value is a futile endeavor. The economic premium, or the extra purchase price above fair market value, is a more significant premium to count and keep track of. Instead than defending current market values, a strategic buyer should concentrate on the business case's justification, strategic fit, synergies, and integration. Institutional investors, traders, and financial purchasers are responsible for this. For stand-alone valuation, a decently priced asset in a somewhat efficient market should serve as a reasonable starting point. Instead than focusing on the discrepancy between the market and book value of accounting capital, a buyer should feel obligated to defend and profit from any economic premium over fair market value.

Although while the opportunity cost of every company's market value is crucial, only those that have been bought are subject to widely accepted accounting procedures (GAAP). Yet, choosing to buy is the same as choosing not to sell. The potential cost of organically created company values is disregarded, and the majority of the soft expenses incurred during their development (such as investments in R&D, human capital, etc.) are expensed rather than capitalized.

Amgen announced the purchase of Immunex for $16 billion in cash and equity on December 17, 2001. The transaction represented an attempt by a firm to invest in growth, but Amgen's return on capital employed (ROCE) would drop from 22% to 18% owing to the high growth value (GV) ingrained in Immunex's share price. With the purchase, Amgen would expand its dominant positions in nephrology and cancer to include a third therapeutic area (inflammation). Moreover, Amgen's research skills to develop a potent product pipeline were anticipated to be strengthened by Immunex's research experience in immunology and cancer. Research analysts were pleased with the acquisition. Also, from the day before the announcement to the announcement date, Immunex shares increased by 13% and Amgen shares increased by 6% after the news of the acquisition. Goodwill is most prohibitive for businesses wanting to invest in industries with greater margins or faster growth since these industries will have the most effects on returns on investment and EVA. Regrettably, many organizations must think about taking these kinds of strategic moves in order to reposition themselves.

Timing the Market

In an attempt to timing the market more effectively, many purchases and even more disposal are delayed. Dispositions are put off in anticipation of greater market multiples, delaying growth activities in order to wait for lower multiples. The idea of fundamental market inefficiency is the

foundation of market timing. Nonetheless, the market for corporate assets is surprisingly effective, and other considerations influence the choice. We provide three reasons for not attempting market timing: Multiple offsetting, delay destruction, and the moment has come.

Inverse Multiples a hesitant parent who is committed to the sale postpones acquisitions and the sale of non-core or underperforming assets in the hopes that it will do so when market circumstances and company profits are at their best. Regrettably, market multiples and attractive profit levels seldom match. Similarly, we often talk about acquisition targets that have a strong business case and a good strategic fit but are put off by the buyer in order to get a better market price. Surprisingly, the market is efficient. Poor profits and very high market multiples are common characteristics of market troughs. Record profits and low multiples are often indicators of market peaks. The two impacts often balance out, leaving company values largely unaffected by the vicissitudes of the economic cycle.

For the previous ten years, increased profits have been offset by lower multiples, and higher multiples have been countered by lower earnings (in the chemical industry).

Getting Rid of Delay

The annihilation of delay is a second, and perhaps more significant, argument against market timing. Acquisition delays impede the implementation of your growth plan. Deferred growth prospects might disappear or the window of opportunity could close. Alternately, if it is held for sale and has an unknown future, the target may become less competitive. A company that is up for sale or has an unclear future loses value quickly as rivals seek it and take advantage of the chance to snatch up clients and staff. It will be harder for a company in flux to offer goods or services that have a clear or ambiguous requirement for future maintenance. Key clients will become cautious and exploit their stronger negotiating position. It also becoming tougher to find and keep strong talent. Investments and upkeep are put off. Value will be ruined by delay. The moment has come. The majority of balance sheets have been fixed, liquidity has typically been restored, and in many instances, cash holdings are at all-time highs. Issues may still be presented to the financial markets. Price points are robust and interest rates are cheap. Capital costs are at an all-time low. Financial sponsors have often cut their necessary rates of return since they are hungry for transactions. Target financial advisers provide stapled financing, or pledge funds in the form of debt to lend to prospective purchasers in a takeover transaction, on typically advantageous terms. The opportunity to move is now, with money easily accessible and stockholders eagerly anticipating an inflection point.

Income Diluting

Earnings dilution will often result from the purchase of a desirable company and the sale of an undesirable one. Nonetheless, notwithstanding contemporary corporate finance theory and a substantial body of empirical data, many desirable enterprises are not bought or undesirable ones are not disposed because of worries about dilution of profits. Even while about half of all transactions dilute shareholders, the percentage need to be greater. Each acquisition is hampered by the fear of diluting profits, but this concern is particularly acute for businesses looking to reposition themselves in end markets with greater margins and faster growth rates, which have correspondingly higher earnings multiples than their own. For every firm wishing to migrate into a portfolio of higher margin, more value-added companies with stronger end markets and enhanced growth prospects, dilution is a strategic reality of life. Boards and company strategists will need to comprehend that diluted short-term profits will unavoidably be a need for different

growth plans. 13 Multiple expansion, the mathematical consequence of short-term earnings dilution, has empirical evidence. Dilutive transactions fared better than accretive ones, according to one analysis. Just a third of all firms with one-year excess returns more than 10% were the consequence of accretive transactions, although accounting for over half of all companies with such returns. According to the standard accounting framework for valuation, stock prices are a function of normalized current EPS capitalized at the right price-to-earnings capitalization ratio, or P/E multiple. Many infer from this premise that, regardless of the reason or how brief the slump, the share price will fall from $10 to $8 if a business generally trades at 10 times profits and earnings per share fall from $1 to 80 cents. P/E multiples, however, are a byproduct of market valuation rather than an input to it; they vary constantly. Current earnings quality and expectations for future profits are constantly changing. Multiples fluctuate in response to changes in underlying profits, shifting prospects, mergers and acquisitions, divestitures, and adjustments to financial policy or accounting practices. Core profits and the proper capitalization factor determine intrinsic value, which translates to calculating normalized current cash flows and their appropriate growth and discount rates. Think about an acquisition where a business selling for a low P/E multiple (10x) acquires a company selling for a high P/E ratio (20x) to improve its growth prospects in an all-stock transaction to prevent too much debt and a potential drop in ratings. For ease of analysis, we presum no synergies. To retire all 100 of High's $20 shares, Low must issue 200 shares at $10 each. The buyer's EPS will constantly drop since additional low P/E shares are required to retire all of the existing high P/E shares. Since EPS dilution portends bad news for the shareholders, many would be hesitant to complete this purchase. Nevertheless, if the transaction is reversed, with the high P/E firm purchasing the low-multiple business, then the buyer's earnings per share (EPS) must constantly rise; just 500 of the high P/E shares, valued at $20, are required to retire all 1,000 of the existing low P/E shares ($10). Many believe that's excellent news for the shareholders of the buyer. When Low acquires High, the EPS is diluted, but the multiple grows. The multiple fades but the EPS is accretive when High buys Low. Low-High is just High-Low with a stock split of two for one. The amalgamated firm will have the same assets, products, prospects, and value regardless of which company buys or which company sells. Every firm seeking to move into higher margin, more value-added areas with better growth prospects must get used to the fact that multiple expansion will almost always result in a short-term erosion of profits.

CHAPTER 8

CONGLOMERATE DISCOUNT

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Many articles about the conglomerate discount (also known as the diversity discount). We provide an overview of the key research results. We will also discuss the critical strategy change needed to eliminate the conglomerate discount. Findings indicating diversified firms sell at a 10 to 15 percent discount to pure plays have been reproduced in several research. One study indicated that companies that announced refocusing received roughly 7% in excess returns, and this return was highly correlated with the value decline brought on by the refocuser's diversification strategy.

Preference Bias

Pure plays are often better companies to start with, and greater performance and value are attributable to superior goods, markets, and opportunities. The discount may simply reflect a selection bias. The act of diversification does not diminish value, according to new econometric methods for "casual inference," and after these other aspects have been taken into account, conglomerate ownership results in a premium rather than a discount. Successful acquirers must get over multi-industrials' persistent unwillingness to pay more for superior firms with better prospects.

Performance

Diversification discounts are known to be driven by post-acquisition cash flow drops; bidders purchasing unrelated targets incur greater cash flow decreases and valuation discounts.

18 After a spin-off, investment efficiency often rises significantly, and the diversity disadvantage is subsequently eliminated. 19 Outside of the protection of a diverse company, resource allocation is much improved.

The conglomerate discount of multiline corporations is usually highlighted as a sign of the potential for enhanced fit and focus; via the streamlining efforts of a reorganization, capital allocation and management attention in parent and segment may be improved.

Targets that exhibit a superior fundamental strategic fit, as well as market-focused strategy planning and capital allocation, may help successful acquirers overcome the performance issue.

Governance

According to several research, it might be more challenging to recruit and retain the finest managers for diverse organizations because of lower incentives, other salary and profile concerns, and other factors. The agency costs of diverse firms are higher due to weaker incentives, line of sight, and capital market discipline. Governance problems may be resolved with stronger incentives and accountability. A better system of incentives and accountability emerges from increased openness, a closer connection (line of sight) between management activities and results, and the availability of equity incentives (stock, restricted stock, and stock options). The finest personnel is attracted and retained as a result, and manager-owner alignment and leverage are improved at any level of shareholder cost.

Transparency

According to one research, spin-offs enhance the quality of the information managers and investors may infer, raising the anticipated stock price. Another study discovered that companies may be undervalued if the market is unable to monitor the cash flows of each division inside the company. Improvements in segment reporting are typically hampered by administrative cost and competitive considerations.

Transparent reporting is essential for successful acquisitions, particularly when it comes to business lines. The capital markets use more regular, detailed, and extensive disclosure of strategy, tactics, and operational and financial performance to assess a company's value. When the market sees higher multiples (capitalization rates) due to higher-quality profits (cash flow certainty).

We have seen a return to the fundamentals in security analysis and corporate financial management in response to accounting scandals and governance reform. Business development specialists are once again struggling to make value-based management work for mergers and acquisitions since it is once again in vogue. Based upon our personal experience with EVA and mergers & acquisitions, we identify several necessary modifications. The fundamental issue with most issues is that returns are calculated using accounting book capital. Economic profit (EP), return on equity (ROE), and return on capital employed (ROCE) are all return-based metrics where book capital serves as the underlying foundation for returns. Unless there is a purchase, market prices are separate from book values and are not reported. By generating goodwill, acquisitions compel a mark-to-market event. Accounting goodwill capitalizes this into the balance sheet and recognizes the full market value plus any premium above historic book capital. The increased capital utilized simply reflects the realization of previous value and does not indicate any major changes to the assets or business process. This uses a different foundation to record purchased assets.

Even if no purchase premium is paid, acquisitions increase the capital base for EVA and other return-based measurements. As there is merely a change in ownership at such a fair market price and no alteration to the assets or underlying economics, EVA, ROE, and ROCE will always remain diluted. As a result, under this paradigm, organic growth is always preferred over acquisition growth since market premiums over book capital are never taken into account by EVA, ROE, or ROCE. The most disadvantaged markets are the attractive ones. For low-growth, low-profitable enterprises with price-book ratios that are close to or even below one, the mark-to-market event of an acquisition is of the least importance. A simple EVA, ROE, or ROCE will perform best in the least desirable markets. The most affected will be high-growth, high-return

enterprises with enormous strategic potential. Price-to-book ratios will be greatest in an efficient market, and for the most desirable targets, EVA, ROE, and ROCE dilution is going to be most severe.

In an effort to get around the mark-to-market issue and its barrier to acquisition growth when utilizing EVA, ROE, and ROCE, many acquisitive businesses that utilize EVA may refer to a longer timeframe, say three years, to achieve EVA accretion. Yet, turnaround acquirers use this approach most often for value-oriented acquisitions in slow-growing industrial industries. Price-to-book ratios are likely to be significantly higher for targets and markets that are more appealing. These are the objectives that perform the best over the long term, as we have shown. In order to implement effective growth initiatives, the dilution hindrance must be addressed. We suggest that when evaluating acquisition prospects for EVA, ROE, and ROCE, capital employed be replaced by economic goodwill rather than accounting goodwill. The premium paid above market value is referred to as economic goodwill. As a result, all enterprises' capital is recorded equally, eliminating the systematic bias of EVA towards acquisitions and against fast growth, high profit markets. It is advisable to leave the justification of the stock market's capitalisation to market makers. The same rules should apply to organic and inorganic growth, as well as to established and emerging enterprises.

Value-Based Evaluation of Performance after Acquisition

How to assess post-acquisition performance is a crucial concern for executives, investors, and the Board of Directors as M&A activity and knowledge of governance problems both grow. Market response and accounting effect, the two most often used methodologies, both have severe shortcomings. While the stock market's response to the news is objective and prospective, it does not serve as a standard for assessing operational performance after the merger. Due to accounting rules and an emphasis on historical data that becomes less and less relevant over time, particularly after an acquisition, because of the noise produced by different accounting treatments, the financial effect to accounting statements and measures lacks clarity. Value-based evaluation of post-acquisition performance offers a straightforward method for comparing premiums paid with actual operational performance and establishes a connection between operating success and the market. This strategy forecasts the minimal degree of additional operational performance necessary using market data. Start by identifying the performance enhancements brought about by the merger of the two firms, above and above what the market had previously anticipated. Divide the market value into the GV, or any residual market value, which we assign to the present value of EVA growth, and the COV, or present value of the pro forma net operating profit after tax (NOPAT), capitalized as a perpetuity. By keeping NOPAT at its present level, the merged business can generate sufficient returns on its COV. EVA expansion is the only way to get returns on the GV (NPV-positive growth in volume, margins, utilization). This will serve as the standard against which any real EVA increase is measured. By multiplying the yearly growths present value by the capitalization factor (1 1/WACC), the annual growth may be capitalized. According to the first market response, this is the entire wealth that the merger either produced or destroyed.

Serial purchasers" CREATE VALUE

The benefits of a dynamic M&A strategy over the long term are further supported by the fact that markets reward serial acquirers for their growth plans. We define one-time acquirers as businesses that completed only one M&A transaction, including a divestiture, whereas we define

serial acquirers as businesses that completed more than five M&A deals, including divestitures, between 1992 and 2004. Over longer time horizons, serial acquirers fare better than one-time acquirers. Several of the crucial success characteristics we've already covered are often included by successful serial acquirers into their acquisition plan. For instance, serial acquirer acquisition is often more desirable. Higher growth, profitability, and values are shown in their objectives. While in absolute terms they were identical, serial acquirers were twice as likely to make purchases of targets whose sales was less than 25% of their own revenue.

One research of sample serial buyers revealed that 82% of buyers selected targets with a relative size of less than 20%, 76% utilized cash (hybrid agreements are included in cash), and 85% bought private businesses (includes sale of subsidiary). According to other research, targets with quicker revenue growth are more often purchased by serial acquirers. Serial acquirers demonstrate more prudent financial practices, resulting in greater financial stability to enable company expansion. Serial acquirers often have superior credit quality, comparable financial leverage, and more liquidity in comparison to other acquirers (in part due to size and qualitative factors). Because of the abundance of reinvestment options, serial acquirers frequently maintain lower levels of dividends and share buyback programs.

Case Study for Active Portfolio Management: Several equities, including Danaher Danaher (DHR), have beaten Warren Buffett's Berkshire Hathaway during the previous few years. In order to significantly outperform market indexes, this $19 billion diversified industrial corporation has used a combination of acquisitions and strategic divestitures. By balancing divestitures, bolt-on acquisitions, and new platform purchases, the business complements organic growth (4 to 6 percentage compound annual growth rate or CAGR) and achieves overall compound annual revenue growth of 15.5 percent from 1987 to 2004. During the last ten years, there have been more than 60 acquisitions and divestitures for a combined $12 billion in M&A activity, with firms bought in the most recent five years accounting for more than 60% of 2003 revenue. DHR has adopted a methodical approach to generating wealth over the long run. The bulk of DHR's acquisitions have been in the same or very related sectors, enabling the organization to swiftly and effectively apply its business procedures to create revenue and cost synergies.

Smaller, complementary, and synergistic targets which may be incorporated into the business are the main emphasis of bolt-on acquisitions. Less than 5% of DHR's market value has been acquired in the most recent year. Platform acquisitions are desirable prospects in the product and market space with exceptional growth and profitability characteristics. In line with our own research and the debate we had about dilution, DHR does not shy away from chances to pursue greater value targets. While it characterized the endeavor as an extension of the bigger process and environmental controls platform, it recently leveraged M&A to create a new platform in the medical technology sector. Other recent purchases with better margins were Radiometer in 2003. The corporation prioritizes maintaining its "A" credit rating, and financing has mostly come from internal cash production. DHR intends to keep using its effective portfolio approach.

Actual M&A Alternatives Case Study: Anheuser-Busch

The biggest brewer in the world, Anheuser-Busch (BUD), has generated a total shareholder return of 16% over the last ten years (versus 11 percent for the S&P500). This $40 billion behemoth defies convention by generating significant returns in an industry that was supposed to have modest growth (compound annual increase in net operating profit after tax of 5.5%, with

worldwide revenue rising 400% since 1998). For the time period, revenue growth (78 percent domestic) averaged 1.9 percent. BUD started a risky new tactic about ten years ago. A baseball club and stadium were among the several unconnected enterprises that BUD sold off. During a short period of firm contraction, BUD started a series of riskier but seemingly higher growth prospects than the home market investments in developing economies (such as Brazil, Chile, China, and Mexico). BUD often invested in joint ventures with capital, technology, access to the corporate brands, and U.S. distribution to acquire minority stock shares. It had access to expansion and additional brands for its portfolio in exchange. This new tactic was an example of "real options thinking" being used in mergers and acquisitions. Call options on growth, nested options to stage or delay, and put options to abandon were the three forms of lucrative real options that BUD was creating.

A number of nested call options on expanding developing markets were developed by BUD. Before investing additional money, the corporation might test the waters, learn about the local markets, and adjust how its corporate strategy is implemented for the local market. An initial $2 billion investment would be needed for a traditional market launch. If the present value of anticipated future cash flows was more than the investment's cost, the corporation might "call" or exercise the option by purchasing the remaining shares. By the employment of the joint venture vehicle, options to stage or delay capital investments avoided the high potential cost and risk of "lumpy" capital investments. Subject to an ongoing assessment of capital cost and availability, market potential, joint venture economics, and perceived risk, smaller discrete investments may be metered in.

BUD developed useful put options to enable more cost-efficient and convenient exit (which it exercised in Brazil and Chile). Minority investments prevent the downside risk from reaching the full cost of the underlying assets and instead limit it to the original option cost (a few million dollars) (a few billion dollars). Also, if necessary, they may sell back to the current local partner, providing an option for capital recovery (without introducing a new competitor to the market). With total shareholder return (TSR) exceeding profit growth, multiples increasing, and the percentage of BUD's enterprise value based on growth rising from 23% in December 1994 to 59% in December 2004, the market has acknowledged the actual option value produced.

Financial Policy Elements

In terms of what kinds of financial policies are most compatible with effective methods, it looks to be a second-order problem. Higher growing firms often have different optimal financial strategies (financial liquidity, financial leverage, and shareholder payouts). Different common practices throughout sectors are also influenced by industry characteristics, creating opportunities for WACC and capitalization rates. While a company's financial liquidity may influence the frequency of agreements, liquidity is not a significant determinant of success. With a large range in the data, there is no statistically significant difference between the liquidity profiles of winners and losers, long-term or short-term. Lower financial leverage is linked to success over the long run, when the difference is more significant. Reduced levels of financial leverage provide you a stronger negotiating position and more resources to carry out an acquisition-focused growth plan. The lowest levels improve one's capacity for using money and debt, two success-related skills. Surprisingly, goals with high levels of leverage often do badly since they are typically less lucrative and more likely to include stock. Diversification shareholder losses are partially a result of corporate leverage. Different practices are driven by industry-specific reasons, and inadequate capital structures raise WACC and decrease value.

While the independent capitalization of various enterprises may result in more suitable capital structures, benefits may be outweighed by disadvantages owing to the importance of scale in terms of credit quality and cost. Dividend policy is merely a tangentially significant predictor of performance, according to statistics.

Financing Growth

The same issues that arise when refinancing or considering the ideal capital structure apply to financing expansion as well: debt against equity or equity-linked, term structure, fixed versus floating, currency, seniority, optionality, and so on. We identify three typical traps that cloud the transaction finance choice and affect the investment choice: By separating the structure from the context of the buyer's current capital structure, one may see the structure as a separate and independent entity. To presume that the only way to evolve toward the ideal or most suitable capital structure is via fresh financings, to consider an acquisition's worth as being based on the method of financing it, with the WACC serving as the standard for value While incremental analysis is the cornerstone of any discounted cash flow (DCF) or net present value (NPV) study, the discipline of risk management as a whole, liability management, calls on us to consider each circumstance in its whole context. The ideal acquisition financing is influenced by the current capital structure as well as any debt that will be taken as part of the transaction. Pro forma ratios will be important to the quantity and sources of cash that may be utilized to decrease stock in the structure, for instance, if credit rating objectives are a concern, and perhaps a limitation, for transaction financing. The whole company will determine how much cash is available from operations and existing surplus cash 12 to 18 months after the transaction. If the ratings seem to be the limiting factor, low coupon or even zero coupon financing options including commercial paper (CP), samurai bonds, and convertibles may be used. A high-equity hybrid, required convertible, or 100-year bond may be used if leverage is more of a worry.

If cash from operations are being used to reduce debt in order to meet specified ratios within a year of the agreement, commercial paper may be used. Debt amortization is facilitated by CP and bank debt. The quantity, duration, and kind of current floating rate exposure all play a role in determining the best incremental floating rate exposure. It is not necessary to wait for or relate adjustments to the fixed-floating mix to issuance. Regardless of issuance, the duration and fixed-floating mix may be changed by using swaps, swap settlement, mirror swaps, and T-locks in a way that is accounting-friendly and hedge accounting compliant.

To eliminate complications and guarantee prompt and effective execution, acquisition financing terms are generally on-the-run maturities for straight debt. However since convertibles draw from several sources of funding, they might be used for off-the-run maturities. In order to eliminate maturity gaps and maturity towers, lower the risk of refinancing, and improve the term structure of the obligation ladder, it is vital to take the current capital structure into account. Targeting current maturity gaps while avoiding maturity towers should be the goal of maturities and put dates. From the standpoint of liquidity management, it is better to avoid call options in order to save costs than to add puts. Yet, it is possible to shorten the tenor of a long-dated convertible by using symmetrically matched puts and calls. Empirically, stock agreements often perform worse than cash ones. Our short-term stock transaction outcomes were less common among our winners, while our longer-term cash deal outcomes were more likely to be winners. Research support the link between success and monetary dealings. 30 The percentage of bank debt in a transaction is positively correlated with announcement returns. According to a research on acquisitions, banks provide funding for 70% of the tender offers and fully finance the tender

offer in 50% of these takeovers. For cash tender offers funded completely by banks, the three-day announcement returns average 4% and are statistically significant. In contrast, tiny and statistically insignificant announcement returns are linked with cash tender offers supported fully by financial slack or partly by banks. According to the authors, bank debt plays a crucial certification and monitoring function for acquirers in tender offers. This is especially true for acquirers that perform badly and acquirers who deal with significant knowledge asymmetries.

Although the usage of stock may indicate that management believe their stock is adequately valued, the use of cash and debt fosters more discipline and implies confidence in future cash flow. In contrast to equity, which imposes a hurdle rate that is essentially an opportunity cost, the cash cost of repaying debt presents an explicit barrier.Acquirers with excellent, long-term stock performance, on the other hand, are more inclined to utilize their stock as an acquisition currency; those with inferior stock, on the other hand, are more hesitant to use their stock and prefer to pay cash. Moreover, stock transactions insure against execution risk and stock market values. Whereas stock deals distribute this risk across both shareholder bases, cash transactions compel acquirer owners to bear the whole risk of generating synergies. The distribution of post-M&A synergy advantages is therefore strongly impacted by the choice between cash and equity financing.

The ideal capital structure and cash

For all NYSE and NASDAQ listed corporations, global cash and near-cash balances have reached historic highs and are still rising, surpassing $2,700 billion and increasing by 24 percent yearly. Cash holdings on U.S. exchanges have increased by 770 percent since 1994. The highest growth were seen in the industrial sectors of telecommunications (1,360%), electricity (1,700%), and media (not indicated) (1,300 percent). At 17 percent of all corporate assets, cash and cash equivalents make up an all-time high share of company balance sheets—almost twice as much as total corporate revenue. This "issue" permeates most industrial sectors and is being closely examined by research analysts in the Americas, Europe, and Asia. Yet up until recently, the loan and stock markets seemed to promote dry powder for expansion and excess liquidity as insurance against risk in unison. Nonetheless, the demand for (and advantage of) excess liquidity has decreased as a result of the mostly repaired balance sheets, lowering volatility, and improving outlook for corporate cash flow.

Previously, a large portion of this money was "locked" abroad for tax purposes, but the passing of The American Job Creation Act of 2004 has opened a brief window of opportunity for the United States to reallocate money to more beneficial uses. The left side of the balance sheet is becoming more and more a part of the optimum capital structure debate. Nowadays, pension assets and cash balances are just as important to consider as financial leverage. The economic cost of being overcapitalized will have a bigger impact on financial performance (ROE, ROCE, and EVA), intrinsic value (net present value or NPV), and market multiples as a result of the potential for growing capital expenses, debt, and equity.

In order to preserve enough operational liquidity and dry powder for expansion, as well as to improve both credit profiles and stock returns, we offer a decapitalization approach that strikes a compromise between the conflicting interests of all stakeholders. In order to achieve the required level of financial strength, balanced decapitalizations—a decrease in capital employed—are now an attractive economic option. Decapitalizations are gaining a lot of momentum as a result of analysts' and investors' activities, other firms' distribution policies, and public concern about

corporate governance and capital management. Since the much anticipated Microsoft announcement in July 2004, we have seen boards examine this topic on a global scale and in several industrial sectors. As the topic has been expanded to include the left-hand side of the balance sheet, there has never been a more heated discussion over optimal capital structure.

Tendances and consequences

The present situation is a result of several things. Excess cash was required due to high volatility and a challenging operating environment. After suffering the consequences of several high-profile corporate liquidity crises, rating agencies and analysts have been outspoken supporters of excess liquidity. The potential cost of being overcapitalized was further decreased by historically low interest rates. But, the economic landscape has changed, and these new forces have given rise to the need for reform.

Repaired balance sheets

Credit quality and leverage are improving. The need for balance sheet liquidity decreases when financial leverage is reduced. All NYSE and NASDAQ listed corporations' overall adjusted leverage decreased from 51% debt/capital in 2002 to 39% in 2004. Worldwide defaults on speculative-grade debt decreased from 8% to 1%. Also, although American issuers are typically assessed based on their gross debt, European and Asian issuers are frequently assessed based on their net debt, which would provide a more eye-catching picture. Throughout the same time from 2002 to 2004, NYSE and NASDAQ's net leverage decreased from 33 percent to 13 percent debt/capital. Unfunded post-retirement health benefits and underfunded pension plans added to the surge in financial debt at the beginning of the decade. Several analysts from rating agencies more officially developed approaches that clearly corrected financial ratios for these commitments. Due to voluntary contributions, a recovery in the stock markets, and decreased pension obligations, pension underfunding, a significant drag on credit ratings in recent years, has greatly improved (due to higher discount rates). According to one rating agency study, the overall pension situation has increased by 50% from its lowest point in 2002, but it has still not reached the level of the previous ten years. 1 Benefit cuts and the consequences of greater discount rates in the computation of cumulative anticipated benefit liabilities have resulted in a reduction in postretirement health benefits.

Low Volatility

Financial leverage and cash flow volatility are both declining, which lessens the demand for additional liquidity. The implied volatility index (VIX) for U.S. stocks is declining, demonstrating the general decline in volatility (down nearly 70% from its high in 2002), which is comparable to the decline in volatility of corporate operational cash flow that is already well under way.

Prospects Up

Not only has the volatility of cash flows decreased, but also the outlook for corporate cash flows has improved, which again has reduced the demand for extra liquidity. For instance, 2005 is expected to have an additional 15% growth over 2004 levels, bringing the total increase over 2002 levels to 550 percent. Reduced debt, less volatility, and improved future cash flows all work together to result in a much smaller cash position needed for sustainable operational liquidity.

Higher Rates

Since there is less demand for surplus liquidity, it is now more expensive. The cost of capital is increasing since Treasury rates have already risen and are generally anticipated to do so in the future. For instance, 10-year Treasuries are approaching 5 percent and 6 percent a few years out on the forward curve after bottoming out at 3.1 percent in June 2003. The negative carry between WACC and after-tax interest income will become worse even while interest income on LIBOR-based surplus cash will also increase. Returns on capital, economic profits (EPs), and net present value are all being adversely affected by the opportunity cost of surplus capital at an increasing rate.

Pricing Pressure on Stocks

Investors and research experts have been openly demanding for significant returns on capital, an ubiquitous tendency across sectors and nations as a result of many equities stagnating and investors becoming restless. Capital is a finite resource that must be allowed to seek out its most advantageous consumers and applications due to the invisible hand at work. In order to reduce historically high cash balances that have accumulated in the wake of the most recent period of challenging economic conditions, we are seeing a pervasive trend of new or expanded share repurchase programs, increased dividends and dividend initiations, as well as the return of the one-time special dividend.

On most balance sheets today, corporate cash and cash equivalents are a sizable and increasing asset. Yet, a lot of specialists now contend that this is a sizable and uncontrolled amount. We haven't before seen such enthusiasm for establishing the ideal financial level. Assets including cash, marketable securities, and corporate pension assets have all been included to the quest for the ideal capital structure. Diverse cash balances exist. The average domestic cash balance of U.S.-listed companies is $691 million, with ranges from $3 million there at 10th percentile to $930 million at the 90th percentile. Cash varied from around 1 percent of sales at the 10th percentile to 143 percent at the 90th percentile, even after accounting for variations in firm size. The industries with the highest cash-to-sales ratios are media (73%), technology (74%), and healthcare (724%) (48 percent). Other size parameters, such as cash as a proportion of assets or enterprise value, provide comparable insights. Companies have begun using techniques to identify acceptable, if not optimum, cash levels, that is, cash positions within industry standards, in order to better manage cash balances as part of the optimal capital structure solution. Common strategies include industry benchmarking, best practices, and any advice provided by analysts and rating agencies. To improve both of these methods and make managing cash balances easier, we use multivariate regression and simulation-based liquidity models.

Heuristics and Benchmarking

Benchmarking against comparables in the business is the method used the most often to manage cash balances. This strategy suggests that typical industry cross-sectional levels are sensible. Industry surveys are a dependable source of this information and are often highlighted in trade periodicals. This category includes conventions such as 2 percent of sales, six months' worth of fixed costs, a year's worth of R&D, $1 billion, or the price of two fabrication facilities, which are sometimes company- or industry-specific. These heuristics continue to be the customary complement to industry benchmarking, despite the fact that their original source is sometimes unknown and their underlying rationale is frequently flawed.

Residence Policy

A significant percentage of the surplus wealth held by many American large-cap technology, industrial, and healthcare corporations has been imprisoned abroad as profits that have not been economically feasible to repatriation because of onerous taxes. Their cash remained stashed abroad while they looked for international investment possibilities. But, recent U.S. tax legislation effectively established a one-year window for repatriating money at a 5.25 percent effective federal income tax rate. According to estimates, the American Jobs Creation Act of 2004 would save both corporations and people $137 billion in taxes over the next 10 years. The Act, which was enacted on October 22, 2004, consists of four components:

Tax reductions for American industry ($77 billion) and reforms for global corporations ($43 billion) further targeted tax relief for businesses ($10 billion), tax savings for individuals ($7 billion), and improvements to excise taxes ($4 dozen) are proposed.

According to the Act, a U.S. business may choose to write off 85% of certain cash dividends it gets from its controlled foreign corporations (CFCs) during either its first tax year, which starts within a year after the enactment date, or its final tax year, which begins before that date. Monetary sums recognized as dividends under sections 302 or 304 of the Federal Tax Code are included in the category of "cash dividends" (IRC). For a dividend to qualify as a deduction, it must fulfill a number of requirements. For instance, if the dividend is paid directly or indirectly using money borrowed from a relative (who isn't another CFC), like the U.S. shareholder, the net increase in the CFC's debt to those lenders lowers the amount of the dividend that is deductible. A CFC cash dividend received by a shareholder during an election year is only eligible to the degree that it exceeds the base period's average annual dividend total. The five taxable years beginning on or before June 30, 2003, except the two years with the greatest and lowest yearly amounts, make up the base period in general. Unless specified as being permanently reinvested outside of the United States in the corporation's audited financial statement filed with both the SEC on or before June 30, 2003, eligible dividends normally cannot exceed $500 million. The amount eligible is equal to the amount of the tax obligation divided by 35 percent if the appropriate financial statement does not identify the amount of profits permanently reinvested outside the U.S. but does mention a tax liability related to such earnings. The calculation of the alternative minimum tax and the permitted international tax credits and deductions are governed by certain laws. In order to be taxed, fifteen percent of dividends must be earned.

The topic of permitted uses of repatriated monies is a crucial one. Before the dividend is paid, the sum equivalent to it must be invested in the United States in accordance with a domestic reinvestment plan that has been authorized. The domestic reinvestment plan must allow for the reinvestment of the dividend in the United States (with the exception of executive compensation), which may include funding for worker hiring and training, infrastructure, research and development, capital investments, or financial stabilization for the purpose of job retention or creation. Bond repurchases are often anticipated as part of financial stability, but stock repurchases should have been included as well. Stock repurchases improve an equity profile and generate demand for market supply inside the equity capital markets, just as bond repurchases improve a credit profile and supply in the debt capital markets. Orderly debt and equity capital markets depend on liquidity and reasonable returns. By preventing overcapitalization, stock repurchases enhance underlying intrinsic value, economic profit, return on equity (ROE), and return on capital employed (ROCE). The increase in returns on equity and total capital utilized will increase the firm's market multiple. In the cutthroat global business

environment, a more highly regarded company will be more competitive and better positioned for growth. The ideal capital structure must be maintained when repurchasing bonds, which calls for stock repurchases. To reach and maintain optimum leverage and keep the weighted average cost of capital optimized while maintaining a competitive level, businesses need to be able to undertake both debt and equity repurchases.

Several-Factor Models

Multimodal regression models are a more specialized kind of industry benchmarking that account for differences across businesses in important variables that are experimentally proven to influence corporate cash holdings. For instance, one important factor affecting cash holdings is corporate size. Because of their more diversified cash flows, which reduce volatility and the requirement for operational liquidity, larger organizations don't need as much cash. They are more likely to locate deferrable expenditures internally, which will lessen the requirement for outside finance. Bigger businesses often find it easier and more cost-effective to acquire money, which reduces their need for extra liquidity. Bigger businesses also often have superior credit ratings, which again makes funding simpler when necessary. We often benchmark cash as a proportion of sales rather than absolute dollar amounts to accommodate for differences in firm size (although this information can be useful, especially with respect to dry powder for acquisitions). Nevertheless, because of the declining benefits to scale, a natural log (Ln) function, rather than any other linear element, such as a percentage of revenue, assets, or enterprise value, experimentally better accounts for the size impact. Multimodal regression models provide a method of benchmarking that takes into account the many important factors that influence company cash holdings (e.g., size, growth prospects, R&D intensity, competitive dynamics, volatility, and financial leverage). 2 Yet, since these models anticipate an average amount of cash, they make the assumption that what businesses are doing is the best course of action, even if they have taken many aspects into account. Consequently, rather than any cross-sectional picture, we advise using a multiyear data collection. Despite the possibility of overcapitalization and undercapitalization, a sector is more likely to mean revert excess time to its optimum levels.

Agency Guidance

The advice provided by rating agencies on cash holdings has lagged behind that regarding leverage. Little is quantitative, fact-based, or data-driven, it is not specific or actionable, and the conceptual frameworks are not completely defined. Although though they are mainly concerned with commitments, short-term ratings also take cash balances into consideration. The examination of short-term credit revolves around an issuer's operational cash flow, present and forecast cash balances, internal resources, alternative sources of liquidity, and cash flow predictions. The agencies have chosen this area for continuing development because they see the need for greater advice. With a conceptual framework that defines appropriate operational liquidity as the cash buffer necessary to assure no requirement for external sources over the following four quarters, speculative grade liquidity ratings are a good place to start. As speculative grade liquidity (SGL) ratings are not linked to long-term ratings, issuers with equal senior implied ratings may have different SGL ratings. SGL ratings indicate the issuer's capacity to create cash internally as well as its dependence on and availability of external resources. Anecdotal advice is especially common in the technology sector, where keeping a lot of cash on hand is recommended. For A-rated technology credits, for instance, some have suggested that cash balances must surpass total liabilities. The apparent cash amount is much higher in one

instance. The argument behind this seems to be that a larger permanent cash position is necessary to create a buffer to counter increasing business risk. Yet, there is no justification for how much of a difference cash holdings make in risk, and there is no empirical support for this either. In actuality, our study showed little empirical support for the hypothesis that high cash holdings have a dampening impact on the betas of industry-specific assets. For instance, we find almost little association between cash and sales and asset beta in the biotechnology industry (R2 0.5 percent, Standard Error 0.32). Last but not least, this justification ignores company-specific elements such backup lines of credit and facilities, equity crossholdings and other possible liquidity sources, and the structure of discretionary or variable capital and costs.

Liquidity models and stress testing

Stress testing is to estimate the amount of cash needed to ensure acceptable operational liquidity and maybe prefund any immediate demands from the standpoint of the firm and its cash flows (commercial paper and near-term maturities, puts, near-term capital expenditures, near-term cash acquisition opportunities). Worst-case scenarios are added to cash flow predictions, which are normally based on the consensus view, to help determine if extra cash reserves are necessary. The typical time horizon for analyzing liquidity is four quarters, and we expect that longer-term requirements may be met by accessing the capital markets. Based on a few fair assumptions, Monte Carlo simulations generate hundreds of cash flow possibilities, substantially automating our normal course sensitivity analysis. Monte Carlo simulations, which are based on the idea of speculative grade liquidity ratings, can calculate the amount of cash that must be held for self-sufficiency at any given statistical confidence level or forecast the likelihood and severity of a cash draw for any given level of operating cash balance.

This architecture and its use have very significant practical constraints. Competitive dynamics (such as rivalry for acquisition targets; supplier, customer, or labor power) and other strategic factors may call for higher cash balances than what is necessary for daily operational liquidity. Thus, additional capital prefunding is necessary for many businesses with restricted access to the financial markets (e.g., cases of extreme leverage, early stage profitability, or constraints imposed by insiders). Due to the nature of volatility assumptions, simulation studies will understate catastrophic situations that lie far beyond the bounds of historical outcomes. Consequently, the optimum method for stress testing cash flows and creating catastrophe loss contingency is still using manually created shock situations. Last but not least, the essential consensus outlook and volatility assumptions won't be sufficiently strong for smaller firms (e.g., less than $100 million in sales) or younger companies (e.g., less than 20 quarters of relevant public financial statements) to offer accurate advice. The most dependable and comprehensible advice will be given in these situations via straightforward cash flow modeling and stress testing, together with benchmarking time series data for close comparables.

The Implications and Advantages of Excess Cash

The advantages and disadvantages of having more money might vary greatly. Even though they are opportunity costs, the expenses may be measured. Several of the advantages are strategic in nature, making it difficult to put a number on them.

Benefits to Operations and Strategy

Investors, rating agencies, and debt and equity analysts have only just begun to appreciate the benefits of having surplus cash and liquidity, not only in the technology industry but also in the

healthcare, industrial, and other sectors. In order to reduce the likelihood of financial difficulty, assure self-sufficiency, and maintain the capacity to engage in growth through challenging periods, cash acts as a vital buffer against operational volatility and unanticipated operating cash flow deficits. Enough cash on hand might serve as a safety net in case of uninsurable shortages. Cash offers the ability to make acquisitions and other expansion expenditures, which may be crucial in consolidating markets or for aggressively acquiring businesses, particularly if cash transactions are the norm.

Other strategic benefits of increased financial strength include competitive advantage over new market entrants through a greater capacity for aggressive pricing, increased bargaining power with suppliers due to a greater threat of vertical integration or switching, and increased bargaining power with labor due to a greater capacity for long-term labor strikes. According to several studies, having extra income indicates that there are plenty of opportunities and that you will be able to execute these genuine possibilities in the future. 6 To avoid sending the wrong message about potential future investment opportunities, any action taken to minimize an excess cash position should be carefully timed with the capital markets.

Last but not least, extra cash may be used to replace pricey outside financings and save transaction expenses. Cash is often used by businesses to control the high fixed expenses linked to capital raising efforts.

Agency Charges

It is a well-known concern that extra capital will make for an alluring source of funding for ill-advised purchases or enterprises; the ensuing economic expense has been dubbed agency cost. Also, constant excessive cash holdings have been experimentally shown to degrade operational performance and increase the likelihood of investing in projects with a negative net present value, supporting agency cost arguments. The value decline ascribed to overinvestment is brought on by the ease with which poor purchases or investments may be made with cash holdings, highlighting the negative side of liquidity; more asset liquidity raises the possibility of conflict between management and shareholders. 8 Another reason why hostile bidders tend to get interested in surplus cash is because of this. Our own research revealed that the energy and utilities sectors, as well as the general category of technology, media, and telecommunications, had the largest association between ongoing levels of surplus cash and underperformance (weighted toward telecom). It's interesting to note that in the healthcare industry, we found the converse to be true: greater performance levels were correlated with consistent amounts of extra cash. This lends unequivocal support to our earlier argument for the need of strategic liquidity. Our findings seem to be particularly logical given the sector's stronger organic growth expectations, acquisition growth, and R&D intensity.

Cost of Opportunity

Notwithstanding the strategic advantages, textbook theory advises businesses to aim to reduce surplus cash to the absolute minimum in order to reduce the opportunity cost of capital utilized and increase shareholder value. The cash after-tax returns are not enough to cover the WACC, which is the needed return on capital, therefore thus reflect a negative NPV investment. The difference between the returns on cash and the weighted average cost of capital will also grow when interest rates rise. Moreover, we could not find any evidence to justify the adoption of a lower hurdle rate for this asset type. Excess cash does not yield the corporate WACC. We found little evidence to support the idea that long-term excess cash holdings result in reduced levered

betas, therefore the cost of cash equity remains high. For instance, there is no empirical proof that big cash holdings in the 180 listed biotechnology businesses have a dampening influence on industry-specific asset betas. This is based on data from the last twelve months (LTM) for cash and cash equivalents, revenue, market equity value, debt/enterprise value, and Barra betas, as well as an anticipated marginal tax rate of 35%. There is evidence that company-levered betas can be adjusted for debt, but there is no need to do the same for cash. Cash, sales, and asset beta have no association in the biotechnology industry. Moreover, the equity amount is not noticeably reduced. Since credit research is centered on gross leverage ratios, there is little evidence to support the idea that surplus cash holdings boost debt capacity (there should be minimal equity needed to maintain this low-risk asset type). The United States' rating agencies favor using gross debt data for credit analysis over net debt data. We anticipate that this viewpoint will expand globally as share repurchases increase in Europe and Asia. Lastly, even if short-duration, low-risk funds have low matched maturity costs, this ignores reinvestment risk and the total weighted average cost of capital. We come to the conclusion that there is no justification for holding surplus capital to a standard lower than WACC, and that it constitutes a poor investment in the absence of strategic and operational advantages. Hence, steps taken to minimize excess liquidity, including The Limited's two most recent self-tenders, have been warmly welcomed by the market and warrant attention. Market responses to companies that have taken steps to decrease surplus cash are often favorable, particularly if the payouts are sizable, one-time occurrences.

High Rating or High Yield Strategy Case Study

Citizens Communications (CZN) declared on July 11 that it intended to significantly modify its financial strategy with the implementation of a special dividend of $2 per common share and a regular quarterly dividend of $0.25 per share, after a thorough evaluation of its strategic options (73 percent payout ratio, 21 percent yield). While CZN pays out around 73 percent of its free cash flow as an annual dividend, the payment in 2004 increased to an even greater 207 percent when the special dividend was included. S&P downgraded CZN's senior issuer rating from BBB to BB after the news (from investment grade to speculative grade). Due to the higher fixed charge servicing and the likelihood that any further deleveraging would be challenging, the downgrading was justified by the diminished financial flexibility. But, since the announcement, CZN total shareholder returns (21%) have outpaced both A-rated telecom rivals (13%) and the S&P500 (0.7%), raising the possibility that, at least in this industry, a high-yield strategy would be preferable to a high-rating approach.

Market Views Excess Cash

On the consequences of extra liquidity on value, there is little empirical data. The few working papers and published research on corporate cash holdings often concentrate on the operational factors that influence and are consequences of cash holdings rather than the capital markets. Yet, one research suggested a pre- mium for stock market valuation: Businesses with long-term surplus cash levels had greater excess enterprise values. 9 Despite the fact that we have seen comparable findings, we believe that this impact is more evident in particular businesses with promising development potential and difficult economic times. These industries are more often affected by the effects of business cycles and external volatility.

The industrial, telecom, and media sectors are where valuation effects are most noticeable. In these industries, corporations that maintained surplus cash holdings benefited from a significant premium value above that of median cash holders. These sectors differ from those where

widespread surplus cash holdings do not result in valuation premiums in that they are more exposed to volatility and business cycle swings, have greater capital needs, and have more substantial growth opportunities (power, energy, and consumer). The 15–45% premium received by holders of surplus cash confirms past studies that showed the market may sometimes reward excess liquidity. Nevertheless, this is not always the case, with certain industries suffering a value deduction for having too much cash.

Also, the study to far have concentrated on data from downturns when the market is more inclined to reward excess liquidity. This impact is most likely a result of cash's ability to stave off financial hardship and its strategic importance in tough economic times. Future research should focus on times of rapid economic expansion.

Anecdotally, however, it seems that the market premium on extra cash has diminished and may even have disappeared entirely given the positive excess returns linked to the latest round of decapitalization announcements. We anticipate that when economic circumstances improve, the marginal premium granted to holders of extra cash will decline as the importance of the insurance premium and strategic values decreases. The likelihood of profiting from a financial policy that, during times of economic uncertainty and challenge, directs more capital to excess liquidity to take advantage of the insurance value of excess cash holdings is highest for companies and sectors that trade at relatively high valuation multiples. Yet, during times of economic recovery and expansion, these same businesses and industries would stand to gain the most from moves to redeploy this money, preferably where it can provide the greatest value. A balanced decapitalization of debt reduction and share repurchases may potentially provide appealing economics in the absence of any near-term applications.

Best Capital Allocation

A capital allocation that maximizes lasting value takes into account and balances the conflicting requirements and goals of all stakeholders. Analysts, investors, and other stakeholders will all try to figure out if the business has balanced and properly taken into account their demands in order to support its plan. To establish the proper prioritizing and scale of requirements, including operational liquidity, dry powder, pensions and leverage, dividends, and share buybacks, the current capital structure must be examined.

Contingent Liquidity

In order to fill the system and offer appropriate operational liquidity and normal course financing self-sufficiency to assure continuing operations without excessive risk of financial hardship, a specific amount of cash work-in-process (WIP) buffer is necessary, as was previously described. More operational volatility, lower anticipated operating cash flows, and greater fixed expenses, such as dividends and debt payments, all result in increased operating liquidity requirements.

White Powder

Growth capital is the use of cash with both the greatest potential upside for many organizations, since values are based on profitable expansion. For event risk, dry powder might provide backup liquidity. Yet, retaining extra cash has a negative impact on ROCE, economic profit, and NPV and is expected to become worse as interest rates rise and cash holdings increase. Moreover, although operational liquidity requirements may be calculated using cash flow simulation analysis, there is no analytical framework for calculating the ideal dry powder reserves. Larger

growth aspirations and possibilities, as well as higher expected hurdles related to capital raising when chances present themselves, raise the demand for dry powder.

The WACC and leverage

By releasing debt capacity and boosting financial stability, debt reduction produces a supply of dry powder similar to keeping cash for growth. This may have a smaller negative net present value (NPV) than retaining idle cash in the current interest rate environment. The practical limitations on debt reduction include noncallable or illiquid debt, significant book losses, and the extra expense of swap unwinds. Also, a lot of businesses have refinanced their most unprofitable debt with new debt with favorable terms, taking advantage of the protracted low rate environment. Due to possible credit limitations on the rating, which may be caused by size, industry, and other qualitative variables, debt reduction may also experience decreasing benefits. Last but not least, in cases when net debt treatment is advantageous, debt reduction from surplus cash has no positive impact on credit and completely removes the possibility of using the money for other reasons.

In order to maintain the ideal ratio of debt to equity, optimally capitalized corporations should balance share repurchases with debt reduction. If debt reduction outpaces start sharing repurchases, the company moves (to the left) toward a stronger credit profile but experiences a higher weighted average cost of capital because of the bigger component of higher cost equity. This is assuming that the starting point for most companies today is their optimal capital structure. The firm moves (to the right) toward a poorer credit and incurs much higher weighted average cost of capital as a result of the declining projected value of the tax shield and the expenses connected with a greater risk of financial hardship if share repurchases outstrip debt reduction. To move the firm toward an ideal capital structure via a balanced decapitalization, overleveraged companies should overemphasize debt reduction in overall mix of bond and stock repurchases, while underleveraged companies should really be overemphasizing stock repurchases.

Retirement Financing

While the several considerations mentioned above have significantly improved pension financing, certain governments may still find this prospective use of funds to be appealing. Prefunding may sometimes be tax deductible. In many circumstances, it will lessen a credit profile overhang, resulting in the creation of a tax-efficient way to keep dry powder. Moreover, accounting revisions are being made such that net underfunded pension situations are treated as debt rather than just a footnote. While it is obvious that any excess financing is typically bad, discussions with rating agencies may be particularly difficult when funding is less than 80%. Yet, certain countries, like Germany, do not regularly fulfill their pension responsibilities.

Repurchases of Shares

Share repurchases provide an effective way to redeploy surplus funds that are neither urgently required nor earning their cost of capital. They are a productive technique to alter the capital structure. Share repurchases might convey financial restraint and assurance in future profits to the capital markets. Self-tenders enable the prompt retirement of a significant number of shares, although they are less flexible than open market repurchases and sometimes demand for a significant premium over the current market price.

Dividends

When a firm believes it has too much cash, dividends are often the first topic of conversation, particularly in light of the current tax system's favorable tax treatment of dividends. Dividends, however, obligate the corporation to a larger fixed cost burden and are a delayed, ineffective way to redeploy extra cash. Regular dividends are less suitable for highly cyclical or variable industries or businesses due to the weight of fixed costs. Despite media coverage and apparent investor excitement, we have discovered that the extra returns linked to the majority of dividend increases are modest, at about 1%. Yet, we discovered that under some circumstances, the announcement of dividend initiations and significant increases created excess returns. Large rises from firms with low volatility, low valuations, strong margins, and dividends substantially below their closest comparable were linked with considerable excess returns, according to our research. When there is a low public float and little stock liquidity, dividends might be a helpful distribution method. Special dividends are most often paid out when share repurchases are complicated by low stock liquidity, when self-tendering is prohibited by tax or regulatory regulations, or when a founder wants to earn cash while retaining a proportional ownership interest.

In distributing volatile or uncertain extra cash flows via share buybacks, we advise calibrating dividends to not exceed that part of quarterly free cash flow that is recurrent and steady. Yet, issuers should be aware that high dividend payouts lower the value of stock options and warrants on convertible bonds, as well as operational liquidity and credit quality.

Effects of Strategic Decapitalization on the Economy

We simulate and analyze the effects of a leveraged share buyback, a lesser share repurchase financed by surplus cash, and a balanced use of proceeds for the extra cash that both decreases leverage and repurchases shares to demonstrate the economics of a balanced decapitalization. The leveraged buyback, which is often marketed by modern hedge funds, has the least striking effect. The balanced decapitalization maximizes intrinsic value generation while simultaneously improving financial stability and credit profile. Our fictitious business starts off with a market valuation of $1 billion, $325 million in debt, and $100 million in cash. The usual operational liquidity and strategic reserve, which together demand $20 million in cash, leave $80 million in cash available for redeployment. Although the value proposition of debt, through an improved tax shield, is less significant, the opportunity cost of extra capital places a significant and rising impact on the company's ROCE, EVA, and NPV.

By boosting debt capacity and financial health, debt reduction generates a supply of dry powder, much like keeping cash for development. In this situation, debt reduction increases debt/EBTIDA and interest coverage while decreasing debt/EV from 25% to 24%. The share buyback boosts ROCE and EPS, but financial leverage also rises (particularly when measured by debt to capital). Share repurchases and debt reduction together increase financial performance and financial leverage.

A Handbook for Executives on Credit Ratings

One of the least researched facets of contemporary corporate finance continues to be credit ratings and rating agencies, which are only briefly covered in the majority of business schools. The need for greater research in this field is highlighted by variables such as agency evolution, the creation of new agencies and agency alternatives, contradicting signals from the agencies,

conflicting signals between both the agencies and the markets, and multiple high-profile agency blunders. Rating agencies have faced criticism lately, but their function as gatekeepers to the financial markets is still very much in existence. Finance executives need to balance company and financial risk with the requirement to obtain capital at a reasonable cost to identify their ideal capital structure. They must decide which ratios are important, how to include industry-specific factors, the effect of the current capital market outlook, and the best way to handle an increasingly challenging rating environment while doing this. Credit issuance has moved from commercial banks to graded capital markets, notably in the United States. Buy and hold investors are less likely to acquire bonds, although bond trading helps to optimize portfolio risk/return profiles. Public debt ratings are now more significant to issuers than in the past since the investor base has grown and diversified (banks are now less lenient with debtors, and other investors are willing to assume risk at favorable conditions). Bank markets have developed into a rated market at the moment.

CHAPTER 9

TRENDS AND IMPLICATIONS

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The challenge of defining an ideal capital structure has been made more difficult by a number of reasons, including a low but increasing rate environment, market volatility, greater credit complexity, more aggressive company financial practices, and negative investor and agency reaction. As a consequence, a lot of corporate finance executives find it difficult to adapt to the shifting environment.

Increased Interest Rates

The Fed Funds target rate has been aggressively and frequently lowered since January 2001, from 6.5 percent in May 2000 to a 40-year low of 1 percent in June 2003. During the same time period, the yield on the 10-year Treasury declined by 330 basis points (bps), from 6.4% to 3.1%. A low rate environment was required at this time due to poor economic development, low employment rates, and weak capital markets. In recent years, debt has been the natural alternative for many financings due to low interest rates and a lackluster equity market. The cost of repaying debt has seemed to be less costly due to the use of commercial paper (CP), convertible bonds, and increased levels of exposure to floating rates. Low financing costs have been made possible by a steep yield curve and narrow credit spreads, which is particularly beneficial at this time of constrained operating margins. Yet, the Fed's measured pace of 25 bps in June and August of 2004 together with increasing corporate rates indicate the rate cycle's bottom has been tested. After the GDP growth spike of 8% in Q3, 2003, the economy has intermittently improved. Since then, interest rates have stabilized and might gradually increase. Rate increases will cause coverage ratios to decline. Coverage ratios are particularly useful for credits of speculative grade since they often result in ratios of just a few turns of coverage. For coverage ratios associated with speculative credits, the statistical association is highest.

Noninvestment grade issuers will be compelled to cut debt as rates rise or to offset growing financing costs by increasing their exposure to variable rates, securitization, and collateralization, through selling optionality (e.g., convertibles and puts).

Lessening of Credit Quality

In recent years, shareholder activism and a sharper emphasis on shareholder value have resulted in corporate financial practices that, although beneficial to shareholders, are less appealing to

creditors. Financial policies have tended to become more aggressive during the previous ten years. While default rates for corporate securities have grown in comparison to other forms of securities, including such mortgage-backed securities, asset-backed securities, and public sector debt, this has typically been favorable for shareholders. For instance, defaults on speculative-grade debt increased from their historical averages of about 2% to over 10% in 2001 and 2002. Since then, default rates have abated but are still somewhat high.

Speculative grade credits, which increased by 320 percent during the previous ten years, made up a large portion of the pool of graded credits' expansion. It is hardly unexpected that these experts' standing inside the rating agencies has increased. Increased investor willingness to take risk in exchange for income, typically sufficient liquidity, and an accommodating monetary policy have all contributed to the growth of the speculative grade. Speculative-grade issuance returned in 2003 with a bang after many years of decreased activity. Nonetheless, an increase in lower-grade issuance might act as a precursor to future increases in default pressure. Several highly rated issuers have moved toward the A and BBB levels for more financial flexibility and just a lower weighted average cost of capital, despite the fact that investment grade issuers are still unwilling to drop below investment grade (WACC). The benefits to WACC from increased leverage are typically quite small and subject to the whims of high-yield market credit spreads in today's low interest rate environment. Financial flexibility and other strategic considerations are typically more significant factors when determining optimal leverage. This has mostly been achieved through increasing financial leverage, using share repurchases more often, and using more cash or debt to fund acquisitions.

For the previous ten years, the overall leverage for the majority of rating categories has stayed mostly constant. The most stringent and cautious financial regulations are necessary for the highest, or top ratings. As a result, issuers operating at these levels should have a compelling strategic justification or market conditions that necessitate such a position. Just 9% of the continually rated corporations now have investment-grade companies with AAA or AA ratings, down from 21% before. More than half of all investment-grade corporations fall into the BBB category, which is the most common investment-grade rating. The percentage of investment-grade issuers among the 656 consistently graded corporations between 1993 and 2003 declined marginally from 72 percent to 68 percent. 48 issuers received an investment grade upgrade while 72 issuers dropped out.

For investment and speculative grades, the overall leverage of the same firm pool has been comparatively steady, with minor changes that have coordinated with the business cycle. Since borrowing rates are falling, coverage has been steadily becoming better. With the exception of the B grade, the debt/EBITDA and debt/enterprise value ratios for the S&P-rated U.S.-listed nonfinancials have shown rather steady levels within ratings.

Volatility and Its Volatility

Investors, analysts, regulatory organizations, and rating agencies were alarmed by the sudden failure of investment-grade issuers like Enron and KMart. In response, the market demanded and received more intense scrutiny, better corporate governance, and more financial reporting transparency. Nonetheless, the Middle East war, fluctuating oil prices, corporate scandals, election-year politics, and the relentless pursuit of government prosecutors continue to be sources of unpredictability. The uncertainty in the middle of this sea of change is increased by accounting changes (such as stock option expensing, pensions as well as other actuarial

responsibilities, and convertibles). While the worst is probably behind, investors, analysts, and agencies had good cause to remain skeptical about the credit climate. In Q4, 2002, the average credit spread for investment-grade securities reached a high of 200 bps, but by Q3, 2004, it had decreased to 64 bps. In Q4 2001, the average credit spread for securities of speculative grade reached a high of 890 bps; by Q3 2004, it had decreased to 356 bps. In today's unpredictable environment, where volatility is still greater than ever, capital structure serves as a crucial pillar supporting workable development plans.

Credit-sensitive triggers, such as major adverse change clauses, pricing grids, and routine marking-to-market, may set off a series of events that, if quality decreases, undermine corporate credit, sometimes resulting in a liquidity death cycle. The WACC is less dependent on shifts in financial leverage within the relevant range of possible leverage options in the low rate environment of today than it was in the high rate days of many of our finance textbooks. Investment-grade leverage is more likely to be in the sweet zone (minimum). Rating objectives may not be the straightforward solution, even if financial flexibility may be more significant than the expense of capital. Corporate financial policies may more readily target factors that are under their control, including such leverage ratios that fit the criteria for a target rating, and can measure their effectiveness by comparing credit spreads to certain rating outcomes.

Practitioners can, for instance, place greater emphasis on corporate bond spreads and also the credit default market than on the informational value of ratings.One study on the quality of external credit ratings found that S&P ratings did not fully account for the information content of all publicly available data, that some ratings categories performed statistically similarly, and that the methodology for calculating ratings had not been fully adjusted for business cycles. Bond categorization, risk forecasting, and rating anomaly detection may all be improved with the use of bond pricing techniques. In order to represent the agencies' evaluation of an issuer's risk qualitative and quantitative profile throughout the cycles, ratings may also be famously sticky.

Increased Credit Complexity

Off-balance sheet goods and structured solutions have complicated the optimum capital structure equation, even if recent accounting rules have limited their usage. Debt hybrids, which range from the commonplace to the exotic, have complicated even the straightforward task of identifying debt and capital (such as operating leases, guarantees, letters of commitment, securitized receivables, convertibles, confidence preferreds, debt in unconsolidated affiliates, put programs but also equity forwards, and underfunded pension and postretirement benefit obligations). With income and book equity capital experiencing increased distortions, the accounting changes have further affected credit analysis, assessment of leverage, coverage, and profitability (e.g., goodwill, mark-to-market accounting, bifurcation, and stock option expense). Investors, analysts, and rating agencies will almost certainly choose the most restrictive interpretation for each degree of discretion in the appraisal of the credit due to the ambiguity and complexity present, which will disadvantage issuers. If feasible, issuers should try to make their own capital structure and credit narrative as simple as possible while also making any complexity that remains clear. To reduce the chance of overly cautious interpretations, provide the information and the analytics. For instance, the present value of commitments to operating leases is typically much lower than what the quick capitalization factors imply. Regrettably, not many businesses provide the current value figure. Giving this information could aid in avoiding the more difficult approximation of leverage.

Agency Reaction

Whilst disintermediation—the transition from institution-based financing to capital market-based funding—has received much attention in the literature, little is said about how it has affected the development and prominence of credit rating agencies. As the debt markets grew and expanded over the past ten years, rating agencies have experienced a dramatic expansion phase. The bank loan and speculative-grade markets, where so many credits had previously been unrated, saw a large portion of the growth. Investors required additional information to assess these circumstances, and the introduction of complex fixed-income products and hybrids has provided another growth area for the agencies. Nevertheless, the high-profile failure of investment-grade and formerly investment-grade loans like KMart, Enron, and WorldCom caused the bubble to implode. The agencies received harsh criticism for how they handled these credits. A number of downgrades, system-wide evaluations, and structural changes within the agencies were the result of these and other instances. By failing to predict high-profile credit meltdowns, agencies received harsh criticism and have come under close external scrutiny. According to academic studies, although agency information is valuable to and relied upon by the credit markets, it is not always thought to effectively incorporate all publicly available information, and the likelihood of defaults for related rating categories is not always thought to be significantly different. According to statistical analysis, the agency is overemphasizing firm diameter in the construction of the rating index, as seen in the case of Creditform's ratings in Germany, which are found to improve the predictive power of default risks. Nevertheless, publicly available information has additional explanatory power. In response to criticism from the market, agencies have taken measures to allay worries, including evaluations of rating policies, examinations of governance and accounting procedures, and improved communication with market participants. Moody's changed the organizational structure of its corporate industrials department and hired additional analysts and experts. S&P changed analysts between portfolios, a process known as fresh eye analysis. Both agencies have upped the quantity and quality of their analytics. By actively pushing its services, Fitch has attempted to take advantage of S&P's and Moody's weakness. Issuers should anticipate increased skepticism toward their forecasts from investors and rating agencies, a greater reliance on LTM forecast numbers as opposed to long-term forecast numbers, a shorter window for achieving target ratios, a greater emphasis on qualitative factors, and a number of other changes that reflect a more conservative analytical environment. The agencies have increased their frequency and intensity of analysis and special remarks, hired more accounting and governance professionals, and improved analytics: Due to the increase of confidence-sensitive behaviors, stress scenarios and contingency preparations are more important. a closer examination of the rating horizon, which may or may not correspond to the economic cycle, paying more attention to data on debt and equities market prices, First-time issuers, or issuers receiving credit ratings for the first time, often have lower ratings than the pool of current credits. Ratings dynamics have significantly mellowed since the 2002 peak in default rates and downgrade-to-upgrade ratios, which were both at previously unheard-of high levels.

The agencies are once again looking more optimistically, with sector and Broad structural changes in the economy are followed by distribution trends across industries: Communication, Media, Healthcare, and Technology had the biggest rise in rated firms across all categories. Throughout the course of the decade, the number of rated Telecom credits increased by nearly 500%. Utilities, Capital Goods, and Transport had the slowest rate of growth among the pools of rated loans. The two biggest industrial groupings in 1993 were Materials and Consumer, and they saw the most growth during the subsequent ten years. The ultimate frontier of credit,

speculative credits, accounted for a large portion of the expansion in the pool of rated credits. Investment grade credits made up 62% of the 794 credits in 1993; by 2003, they made up just 43% of the 2,246 total credits. In contrast to a pattern of rising leverage, this shows a rise in the speculative grade among the 656 consistently evaluated loans. Otherwise, leverage and ratings have remained quite steady.

Agency Interactions

The rating agencies and their connections to issuers continue to be crucial in determining a credit rating. Some issuers manage their interactions and communication with the agencies far better than others.

Metrics are essential

Using principles and suggestions rather than strict laws, investors and authorities assess a company's capacity to endure financial hardship. It is challenging to boil down such a comprehensive picture to a collection of financial statistics because of the significance of qualitative considerations. Quantitative analysis is a crucial component of credit assessment, but it falls short of capturing all aspects of a company's financial risk. Yet, we do see substantial correlations between ratings and ratios that have a growing amount of statistical explanatory power. Although t-statistics for certain indicators have become better over time, coefficients of determination (R2) have stayed mostly unchanged. And when rating agencies feel that financial data is trustworthy, ratio analysis is seen as a crucial step in the rating process. Moreover, ratios rather than scores indicate more approachable goals from a policy standpoint.

There is a general trend toward enhanced statistical significance over the last decade for most measures, across most rating categories and business sectors, in correlation studies between credit ratios and senior issuer bond ratings. The results reveal that, on average, quantitative approaches have become a more trustworthy tool to analyze credit profiles, notwithstanding recent high-profile occurrences that could appear to imply the reverse. This could be the result of enhanced consistency and dependability in financial reporting. In this section, we identify and explore a number of measurement categories and the metrics that fall under each of them.

Size

Bigger businesses often have better credit ratings. According to empirical research, size metrics, which indicate significant qualitative characteristics including regional and product market diversity, competitive position, negotiating power, market share, and brand status, have the highest statistical link with credit ratings. It is advisable to describe this connection as a natural log (ln) function since it becomes weaker with increasing magnitude. Revenue, net tangible assets, capital employed, or market capitalization are all potential size proxies. Financial institutions are examples of an industry where assets or capital are more important than revenue, while professional services firms are examples of an industry where revenue is more relevant than assets. To find the most applicable and statistically sound measure, we evaluate it using industry judgment and empirical analysis. Due to its incorporation (capitalization) of consensus forward cash flows, ln (market capitalization), for instance, frequently has the strongest predictive power; however, in practice, this metric is frequently problematic and can result in inappropriate guidance for establishing corporate policy regarding financial leverage. Little regression coefficients regarding financial leverage and other crucial credit concerns result from the high correlation of this measure in multivariate regression analysis, which often allows little

variance in the data to be explained by other variables. In the end, credit models that use market capitalization as a size parameter may be overly insensitive to minute variations in financial leverage and other crucial variables. Size is a useful statistical foundation for evaluating credit profiles, but it is inadequate for financial policy objectives and is scarcely a manageable goal. Because size is wholly disconnected from financial health, this measure can only be used with care.

Utilize your resources

Companies with higher levels of leverage often have worse credit ratings. In a variety of business performance conditions, companies with a larger debt ratio run the danger of not being able to punctually pay the whole principle and interest due. From the standpoint of company financial policy, financial leverage is the main motivator to determine and manage the ideal capital structure. Corporate financial policies usually aim to maximize financial leverage at a level that offers enough financial flexibility to support a strategic plan that maximizes value, as well as financial strength that is well adapted to competitive dynamics and an effective weighted average cost of capital. One of the most widely applicable leverage ratios is debt to EBITDA, which works relatively well for speculative securities and to a lesser degree for investment-grade securities as well as in the majority of non-financial businesses. We alter the ratio to take into account operating leases' economic responsibility, which is equivalent to debt in lease-intensive sectors including transportation, retail, and capital goods. We add this obligation to the numerator and present value operational lease obligations at an appropriate pretax cost of debt, but we boost profits before interest, tax, depreciation, and amortization (EBITDA) by the rent expenditure. Just the percentage of the rent expenditure that represents interest (versus depreciation in an amortizing lease), say one third, should be put back to EBIT in order to modify debt/EBIT or earnings before income and taxes (EBIT) coverage. Several Moody's analysts would often use a capitalization factor, such as 8x, to approximation the off-balance sheet debt. Nevertheless, this simplification runs the danger of overstating the obligation's value, particularly for assets with shorter useful lives or shorter leases (shorter leases frequently demand higher payments as consideration for the increased financial flexibility of a short lease).

Debt/EBITDA may not be the best statistic to use when there may be significant volatility in the credit data. This statistic is especially troublesome in businesses with atypical taxes or depreciation, such as service sectors with few assets or industries with short asset lifespan. Moreover, measurements based on EBITDA completely exclude improvements in working capital, earnings quality, and liquidity. While it is losing favor and statistical validity, book leverage (debt/capital and debt/equity) is still used by large investment-grade issuers. Its dependence on book equity, whose consistency and quality are distorted by goodwill, write-offs and other expenses, share repurchases, and asset accounting, is a problem. As cash flow-based leverage objectives are unaffected by dividends and share repurchases, equity is diminished even if many issuers do formulate and communicate corporate financial strategy in terms of book leverage since this may limit their capacity to make shareholder payouts. By not depending on accounting artifacts of historical book capital, market leverage (debt/enterprise value) solves the shortcomings of book leverage. It also has the benefit of capitalizing market value from the market's objective, forward-looking consensus on cash flows. Yet, as stock market values are prone to moments of overvaluation and undervaluation, resulting to overestimates and underestimates of suitable debt capacity, agencies approach it with mistrust. Internet valuations from 1999 and 2000 falsely claimed that there was a ton of debt capacity. Moreover, stock prices

are not a useful tool for corporate financial planning since they operate as changing targets due to stock market volatility.

Stronger credits have greater coverage ratios (such as EBIT/interest cost and EBITDA/interest expense), which suggests a lower risk of timely principle and interest payments over the whole range of performance. To guarantee that credit protection measures take into account company demands for ongoing reinvestment, they are increasingly typically EBIT-based (as opposed to EBITDA). Financial organizations often concentrate on EBIT coverage since depreciation is less significant there.

Due to declining interest rates and a steepening of the yield curve, coverage ratios have been better during the last decade even if debt levels have increased. With floating-rate financing, floating-rate swaps, and an increase in the usage of convertibles, interest expenditure has been decreased (where the cost of servicing is reduced by the amortization of the value of the warrant). Except for certain financial institutions and to a lesser degree speculative grades, where more densely clustered data provide superior reliability, these variables have reduced the statistical validity of coverage ratios.

Cash Flow Agencies pay close attention to an issuer's creation of free cash flow (FCF), which is commonly calculated as cash from operations minus dividends and capital expenditures. The FCF/debt ratio of an issuer and its ratings profile are directly related. For better investment-grade assets and at periods of time that are closer to the middle or top of the cycle, FFO/debt appears as an increasingly useful measure. In contrast to Moody's, which emphasizes RCF/debt using retained cash flow (RCF), defined as funds from operations (FFO) less dividends, this measure is more common in the literature from Fitch and S&P. FFO has expanded in usage and was formerly utilized for real estate investment trusts (REITs). Investment-grade media, consumer, pharmaceutical, and capital goods companies benefit from it empirically.

Profitability

Long-term ratings for better quality tend to be supported by greater profitability. The risk of debt servicing is lower and it takes less time to pay off debt with cash flow when the firm is more profitable. According to statistics, profitability is especially important in the tumultuous Technology and Telecoms sector and for high-quality investment grades.While many other industry-specific metrics may be used, we commonly measure return on capital employed (ROCE) as net operating profit after tax (NOPAT) divided by starting period net assets) or EBITDA Margins (EBITDA/Sales). For short-term ratings, liquidity measurements take the role of profitability.

Rates for liquidity and the short term

Although effective in predicting short-term ratings, liquidity is less predictive of long-term ratings. Greater liquidity promotes better ratings. Though CP reliance, looming puts and maturity towers, backup facilities, and other qualitative factors can be just as important, we typically use the current ratio (current assets/current liabilities), cash conversion ratio (operating cash flow/sales), or liquidity ratio (cash plus operating cash flow divided by short-term debt) as our metrics. However, these metrics are not the only ones that should be considered. The capacity of an issuer to satisfy all potential direct and contingent claims is considered while analyzing liquidity. Most often used for CP programs, short-term ratings take into account an issuer's

ability to pay back its short-term liabilities as well as all of its senior, unsecured debts with maturities of less than a year.

The empirical link between long-term and short-term ratings is obvious, despite the fact that advice for short-term ratings may seem unclear. There are a few caveats and difficulties, such the need that BBB issuers with a bleak outlook get an A-3 rating rather than an A-2 rating under S&P standards. In a few instances, businesses with sizable cash reserves get an A-1 rating while only having an A long-term rating. Similar to this, a small number of A-rated enterprises are maintained at A-2 owing to the adverse overhang of qualitative factors. Agencies closely assess the variety, quality, and promptness of funding sources. For typical operational liquidity, it is preferable to be self-sufficient from internal sources of liquidity (such as cash on hand, short-term liquid assets, and working capital). Using external or off-balance sheet resources, such as undrawn lines and backstops, bank and other facilities, asset sales, securitizations, and contingency capital, may be a more effective way to meet your liquidity risk insurance requirements.

Pension and Postretirement Liabilities Treatment

In order to balance what is most practically useful with what is most economically reflective, the agencies have long sought to normalize or remove certain distortions or erroneous accounting practices in their study of profitability. The agencies confirmed their integration of the financial liability of underfunded postretirement benefits and defined benefit pensions in early 2003. The agencies modify capitalization and cash flow protection mechanisms to reflect such responsibilities when applicable. The adjustments are most usually performed in the United States and for pensions, although neither uniformly nor automatically (versus postretirement healthcare). Ratios are often computed both with and without the modifications. A thorough assessment of the accounting for pension and postretirement liabilities has recently been ordered by the Financial Accounting Standards Board (FASB). These obligations will be moved from the footnotes to the balance sheet in the first phase. While being farther away from execution, the second phase may entail a higher awareness of additional factors, such as the diversity of asset strategies and the risks associated with them. This latter problem has mainly had little impact on how ratings agencies evaluate diverse asset strategies, which may have an impact on credit quality. The total accumulated postretirement benefit obligations (APBO) for other postretirement liabilities and the total after-tax total unfunded projected benefit obligations (PBO) for pensions together raise debt (OPEB). This is the difference, net of taxes, between the PBO/APBO at the end of the term and the market value of the plan assets (plan assets are zero for OPEB and, in certain countries, even for pension). The after-tax unfunded PBO/APBO reduces equity (less any preexisting liability already recognized on the balance sheet). To remove any accounting artifacts resulting from the smoothing method of accounting standards, EBITDA is raised by the whole pension expenditure, minus economic service cost. The difference between the actual return on plan assets and the pension interest cost increases interest expenditure (up to the amount of the interest expense but not beyond). The amount by which actual plan asset returns plus benefit contributions exceed service and interest costs after taxes is added to FFO. Net income from ongoing operations + depreciation, amortization, deferred income taxes, as well as other non-cash expenditures are added to determine funds from operations. The returns on plan assets may sometimes be adjusted and almost always capped. In our case, the pension adjustment increases the debt/EBITDA ratio by almost a full turn, the

debt/capital ratio by more than 10%, and the debt/FFO ratio by over 20%. Although having no effect on cover-age ratios, this probably raises the rating a whole notch.

Models of Variable Credit

For a very long time, credit analysts have used many ratios for their quantitative research, which often raises problems about the relative weight of each. Regression analysis may be used to choose the best set of metrics from a sample of historical data and to give each ratio a relative weighting. In essence, a multivariate model uses a weighted average method to analyze numerous ratios. For instance, using the information from the production of equipment as an example, we create a model that is a weighted score of the ratios of size, financial leverage, and interest coverage. The standard error indicates that projected ratings may vary by a full notch, however this model fully accounts for 90% of the variance in all long-term ratings throughout the sector (26 rated businesses having LTM cross sectional data). The center of the grade range (A through B) is where the model performs best, although it still has a respectable level of predictive ability at the extremes. In actuality, we create models with a restricted dataset and strong explanatory power. The 95 percent confidence interval for all scores is often within two notches of the standard error, which might be troublesome. We could qualitatively reconcile the majority of the error after sorting the residuals to better understand the model error. The model indicates that Flowserve will have a superior credit rating by one notch (BB against B), although their aggressive financial practices and bent toward acquisition are undoubtedly a drag on the rating. An identically avaricious company is Danaher (A). As Danaher is acquisitive and not the size or kind of company we anticipate seeing among AA businesses, Danaher may also suffer as a result of the importance of the AA criterion. The forecast for Watts Water (BBB) is nearly two notches lower; but, since the firm is on the verge of investment grade, the agencies would be hesitant to downgrade it to junk if it can quickly strengthen its cash flow protection measures. Our best models use the best data, carefully choosing a range of data that is both relevant and has just the right amount of variance to be able to identify associations without overpowering the importance of other variables. A systematic method to choosing the best group of independent variables is essential, as are relevant comparables (size, rating, business model, economics, and channels), relevant data (sufficient history and credit fluctuation, utilized or meaningless fields), and relevant information. For instance, mixing investment grade and speculative grade credits may reduce a model's effectiveness. Most applicable to a BBB might be A+ via BBB.

Industry Considerations

Due to disparities in earnings quality, outlook, sustainability, and qualitative characteristics, leverage ratios throughout sectors and even within the same ratings categories may change significantly (similar findings were found for FFO/debt and debt/EBITDA). Nevertheless, there is less variation across the higher rating categories, and as credits are held to the same high criteria, industry characteristics become less significant, indicating that many participants may find it more challenging to reach the highest rating categories in certain businesses. In comparison to general corporate industrials, utilities, repetitive fee-based industries like cable TV and transaction processors, and to a lesser degree telephones, often carry higher leverage within the same grade. By giving cash flows greater predictability and stability, regulation lowers credit risk. Due to views of higher technological and/or regulatory risk, cash flow volatility, shorter product lifetimes, product liability, and less fixed asset intensity, technology and healthcare (apart from pharmaceuticals and biotech) have the least debt capacity within each category. In general, asset intensity supports a credit. Many qualitative criteria (franchise

strength, bargaining position, brand, market share, and diversity of revenue), for which quantitative measures (ln of revenue) might operate as a surrogate, have a significant impact on consumer goods credits. Due to low margins and a larger concentration of end market risk, experimentally, retail revenue often receives smaller size coefficients.

Physical Damage and Accident Insurance

The many definitions of capital used by financial organizations, including statutory or regulatory capital, economic or risk capital, and accounting or book capital, make things difficult. Financial strength ratings are paid a lot of attention in the insurance sector (FSRs). These credit assessments focus on the insurers' fundamental financial stability and their capacity to timely satisfy the obligations and claims of senior policyholders. The fact that FSRs are not security-specific and that insurance firms are often held by holding companies—which may be the issuers of long-term debt—distinguishes them from senior unsecured bond ratings. FSRs take into account market size, profitability, liquidity, capitalization, and competitive advantage (underwriting, distribution, cost control, service, innovation). EBIT coverage and book leverage perform better in these sectors than in most others, even though ratings are less sensitive to financial leverage than to fundamental business risk, firm size, and other variables. Gross underwriting leverage, financial leverage, pretax return on equity, and size have the best predictive value of all the Property and Casualty criteria when it comes to forecasting ratings. Due to issues with statutory data quality and timeliness, our model does not account for a number of significant aspects. Others had coefficients of the incorrect sign, which may have been caused by multicollinearity or being too tiny for adequate sensitivity, making them inapplicable. Ultimately, many qualitative factors are not taken into account.

Leverage from Gross Underwriting

More than any single statistic, gross underwriting leverage (gross premiums issued + gross loss and loss adjustment cost reserves/book equity) explains the difference in FSRs: It measures the amount of overall policy risk that the capital base is able to sustain. A credit is weakened by more policy risk per dollar of capital.

Utilizeyour resources

While include this indicator is crucial for usage as a financial planning tool, financial leverage (total debt and hybrids/average of market and book equity + total debt and hybrids) is substantially less statistically significant across financial organizations. A credit score declines as financial leverage increases.

Income from Equity

The second most important ratio, pretax return on equity (EBIT/book equity), modifies the model's intercept depending on performance in a manner similar to size, i.e., higher profitability and size support higher credit ratings.

Size (ln of book equity) may, in part, be used as a stand-in for relative franchise strength, market presence, and diversity, all of which are crucial elements in the assessment of an insurance credit.

Errors in Applications

The proper selection, use, and interpretation of numerical approaches raises a number of problems that are caused by both the data and the quantitative methods. In spite of changes in

interest rates, the economic cycle and outlook, competitive dynamics, acquisitions, and, of course, force majeure, an acceptable time period must give enough data. For exceptional charges, accounting inconsistencies, off-balance sheet items, and other accounting concerns, the data may need to be normalized.

Gross debt vs net debt

On a gross debt basis as opposed to a net debt one, there might be a significantly higher correlation between leverage and rating. Surplus cash is often best used for debt reduction after an issuer has enough operational liquidity and strategic reserves. Yet, for poorer credits, where companies are often weaker, larger fixed charges must be paid, and income statement gearing generates revenue volatility, operational liquidity requirements do generally increase. Due to limited cash and covenant obligations, cash levels are greater.

Speculative grade vs investment grade

When it comes to speculative-grade credits that exhibit decreasing returns to scale, size is often a more important consideration. Again, below investment grade, debt/EBITDA performs better, and coverage ratios become much more significant. Statistics-wise, profitability measures are more useful when analyzing investment-grade loans (notwithstanding their general importance to Technology credits).

Each rating result depends heavily on the rating method and the agency relationship that surrounds it. Some issuers are better than others at handling this process and treat their agency relationships with the same consideration and care that they may give to important shareholder, employee, or customer connections.

In today's challenging credit environment, best practice issuers are aware of what agencies want from them and treat their relationship with them as favorably and proactive as they would with any other significant insider: Business strategy, legal framework, parent and subsidiary structures, management procedures, including total pay, are explained. The issuer's approach to enterprise risk management and company finance strategy are highlighted in the open discussion of risks and shortcomings. Acquisition philosophy as well as other financial policies (such as leverage, share repurchases, and dividends) that tend to lower ratings should be clearly stated and followed. Updates on operational and financial performance that are timely and detailed, as well as any significant changes to the business climate, a company's performance, or possible M&A or financing deals. A plan for the agency dialogue that must accompany any release of material information needs to be given special consideration because the rating process balances qualitative and quantitative approaches and because quantitative analysis calls for a great deal of discretion and judgment (e.g., ratings must capture underlying creditworthiness throughout an entire cycle).

The yearly review offers the opportunity for a formal, in-depth assessment with an issuer. Typically, agencies meet after the fiscal year ends, although this is not required since agencies are insiders who are responsible for maintaining secrecy and should be regarded as such. The CEO, CFO, Treasurer, and a few members of line management should attend the meeting. It is simpler to include this bigger group and see functioning facilities when the conference is held at the issuer every few years. It is simpler to attract senior agency officials to the meeting when it is held there since they will have access to the credit committee members and agency management. Particularly beneficial in challenging circumstances is this connection. In order to minimize

shocks and offer the necessary justification, best practice organizations often start their quarterly releases with a brief, casual call to their agency connections. This is particularly common in situations when expectations are not reached. Because to the agencies' insider status, notifications of significant developments or occurrences are also handled early to prevent surprises and give them more time to ask questions, explain concerns, and formulate their positions. In best practice partnerships, proactive communication is more common in the other way, where downgrades may be addressed with more in-depth conversation, space for input and clarification, and time to prepare and explain viewpoints. In the case of a downgrade or decreased outlook, the issuer's reaction is crucial to market stability.

The last aspect in best practice partnerships is management access for the issuer and agency; the significance of qualitative variables and the proper interpretation of analytics needs a robust, high-level interaction.

Optimal Capital Structure

Our debt and equity capital markets are indicating that we have entered a reduced rate phase along with the media. Nobody knows how long this will go on for. Senior executives must handle it properly while it is ongoing. We provide numerous doable suggestions to help you adjust your financial plan for this low interest rate environment.

CHAPTER 10

VALUE-BASED FINANCIAL POLICY

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Even big, well-known firms sometimes commit the error of consistency. Which financial plan best aligns with the company's goals? Which financial strategy best aligns with value and market expectations? Companies rush to tactics much too often, failing to take into account an overall financial strategy or the interdependencies between different strategic options and policy components. Finding the ideal settings for optimal financial policy (capital structure, cash and liquidity, and shareholder dividends) is less important than ensuring that these factors are all in line with one another, the firm plan, and market expectations. When acts are unexpected compared to expectations, the share price of a corporation suffers greatly. As an example, Tyco's announced separation and quick abandonment of this strategic pivot caught markets off guard twice. A financial policy's components must be well synchronized with one another, with the management's goals, and with the expectations captured by the company's value a framework for matching the financial policy components of shareholder dividends, financial leverage, and liquidity with corporate strategy and market value. Down stock prices might indicate lower expectations for future cash flows, that is, lower growth values, even if they often represent decreased operational cash flows. The mathematical expectation of long-term growth implied by any stock price necessitates a certain level of financial flexibility. A higher stock price reflects a stronger expectation for positive net present value (NPV) growth, or increase in economic profit, for a given baseline level of performance (EP). Because of today's cheap cost of capital, every amount of operational cash flows has a higher present value. As a result, for a given market value, less value is left to be attributed to positive NPV growth. Yet, enterprise value may be created and maintained through strategic corporate finance. We highlight the strategic implications of your valuation by using the well-known Black-Scholes option valuation model to explain value drivers in corporate finance policy:

Share cost. Increase the value of the underlying assets via organic expansion, acquisitions, and the introduction of new services. Use product and process technologies to enter new markets for goods or regions. Cut Price. Reduce the initial investment needed to pursue growth alternatives by pursuing continuous expansion that generates economies of scale by using network resources and fixed costs, or by pursuing global partnerships and alliances that reduce the initial investment and provide an inexpensive exit strategy. Dividend. Maintaining investments in service dependability and brand strength will help to reduce loss of share and other forms of

value degradation of the underlying asset. To make it more difficult for customers to switch, provide a wide range of services. Term. Raise money for investments on the cheap. Develop and maintain enough capital and liquidity to pay for organic and acquisitional expansion to restock opportunities for the future.

Cut down on dividends and stock buybacks to save money for investments. Volatility. Investments with significant upside potential and a growth strategy that monitors and manages risk rather than completely avoiding it are two ways to generate upside.

The ideal capital structure is still a hotly contested subject in academia. Despite the well-documented trade-offs between debt and equity, a company's paramount demands and the intangible nature of many of the costs and benefits of leverage have confined most of the discussion to academic circles. Although giving some thought to financial theory, practitioners often base their judgments on target credit ratings and other criteria. Debt has several advantages, which have been well-documented. The most practical method of financing expansion that avoids eroding equity holders' ownership interests is debt. A tax-effective use of operational cash flows is debt servicing. Your weighted average cost of capital (WACC) may be decreased by using financial leverage to replace more costly stock with less expensive debt. Leverage improves financial management, which lowers agency costs and encourages the investing community. The total WACC function is more displaced to the left, flatter, and lower overall. The WACC has varied while considering various desired levels of financial leverage. Since 1998, a combination of three variables has led to a steady decline in the ideal percentage of debt in a corporation's capital structure. The cost of leverage is kept high in a low rate environment by a mix of explicit expenses and intangible factors. The amount of debt that is ideal for today's capital structures is decreasing due to three factors: Debt has hidden costs, ratings are more stringent, and equity is now less expensive.

Equity is now less expensive

Our low-rate era's monetary policy helps to cut the cost of equity. There is a much reduced base cost for risk-free capital with long-term U.S. Treasuries in the 5 percent area (compared to 8 to 10 percent just a few years ago). Also, the market risk premium (MRP) for stock has shrunk even if credit spreads over Treasury bonds have increased for debt. Our own projections, present valuations, and research on past excess returns in stocks all point to a lower cost of equity. Investor expectations have been significantly dampened by the recent, sharp market falls. During the peak of the bubble, yearly stock gains of 15% to 20% were the norm to see and anticipate. Irrational enthusiasm has been replaced with more realistic expectations as a result of losses and disappointing returns. Expectations for long-term returns are now more often in the region of 7 to 9 percent annually. So, in the current context, a deleveraging event might generate enormous value for a highly leveraged corporation. Lower trading multiples often indicate that equity prices are frequently limited under heavy leverage. Because of the limitations placed on the chance for positive NPV growth, equity values are lower with greater capital expenses and less financial flexibility. Yet, unless the gain can be realized in a lower interest cost, the majority of the value will go to the bondholders (bonds trade higher on decreased default risk). In a deleveraging event, a liability structure with a shorter period and variable margin (price grid) might boost the wealth transfer to equity holders. Deleveraging should thus be done before to or concurrently with a term extension intended to benefit from historically low interest rates if it is a concern.

Ratings Are More Strict

After the bankruptcy of investment-grade retailer KMart and the unexpected collapse of other well-known loans, the rating agencies—primarily Moody's, Standard & Poor's, and Fitch—have come under attack (e.g., Enron and WorldCom). The agencies' response has been a wave of downgrades as well as improved skills in crucial areas including structured finance, accounting for derivatives, and corporate governance. Much more credit ratings have been downgraded than upgraded. Many businesses feel that the rating criteria have become more stringent, particularly around the essential benchmarks for investment grade (BBB) and A1/P1 commercial paper access (approximately comparable to the long term a rating). More leverage and worse credit quality might restrict market access in today's economy. For better quality debts, the debt and equity markets are bigger and easier to access. Lower credit quality markets have more limited availability of issues in terms of quantity, size, and marketability, and the market is often shut down entirely. Credit quality ensures that funding is available for expansion as well as maybe easy access to the markets for commercial paper. Excessive leverage diminishes financial flexibility and credit quality, which affects loan cost and availability as well as sending a signal of overall financial viability to the markets, clients, and suppliers. When credit quality is emphasized during challenging times, this becomes very obvious. Generally speaking, higher growth projections suggest a larger need for and value in financial flexibility.

Debt Has Unknown Costs

Despite the fact that Treasury rates are still close to historical lows, credit spreads continue to drive up the price of debt with worse credit ratings. Leveraged businesses may have trouble obtaining financing and face increased finance expenses. Access may be restricted, limited, or too costly in challenging markets. Additional expenses range from increased surety and insurance fees to the excessive time drain caused by having to operate within the constraints of high leverage. Due to the combined cost effect of wider credit spreads, higher risk of financial crisis, and decreased tax shield value, excessive leverage may actually raise WACC. Leverage increases the possibility of realizing tax benefits while decreasing the likelihood of making enough money to cover interest costs. Risk of financial crisis reduces the value of tax shields, time value, and loss carryforwards for losses.

At Low Rates, Extend the Duration

A low interest rate environment presents an additional opportunity to add value by optimizing the design of your debt portfolio—liability management—in addition to controlling the total percentage of debt within your capital structure. We assess the cost-risk trade-offs associated with your selection of the fixed-floating mix and the term/duration structure using an efficient frontier technique that relies on portfolio theory with liability management application. Decisions about liability management have historically been based on hazy concepts of asset-liability matching (ALM). The majority of businesses create a stable policy to implicitly match assets and liabilities in a way that reflects the asset mix in their organization. Since fixed assets typically account for 1.5 net working capital, a typical approach is to maintain a fixed-floating mix of 60:40. Yet, even rudimentary ALM techniques don't provide a natural hedge. Networking capital's proportional quantity is essentially stable over time, indicating that it is a long-term asset. Moreover, the rate of return produced by working capital sometimes does not account for the expense of floating-rate debt. A more comprehensive view of floating-rate exposure is necessary, taking into account the effects of cash and other investments, pension assets and

liabilities, and other factors. Trying to strike a balance between operational risk and financial risk is another typical strategy. Companies with consistent volumes and profitability may take on additional debt with short-term variable rates at affordable rates. Businesses that are sensitive to interest rates may employ more long-term fixed rate financing to protect themselves against a confluence of high interest rates in a challenging operating environment. Nevertheless, companies with lower levels of debt, more cash on hand, interest-sensitive assets, or larger profit margins may afford to have more obligations exposed to floating rates. However, our research on the interest rate sensitivity of operational companies is often equivocal. There is a fluctuating risk of increased interest costs during periods of declining operational revenue. The sensitivity of interest rates is erratic and unexpected. Reliability issues arise in attempts to quantify the link. Moreover, basing financing choices on estimated operational risk results in a financial policy that is inconsistent and easily defined.

Ratio Dynamic Fixed-Floating

Every homeowner is aware of the allure of terming out with inexpensive, long-dated paper when interest rates are low. The profits advantage of short-term floating-rate debt, however, may become more alluring than ever in the event of weak operational outcomes and low short-term rates. The efficient frontier idea by displaying financing cost vs funding risk. The curving line depicts the cost-risk trade-off that results from different fixed-floating ratios (ranging from 90% fixed/10% floating to 10% fixed/90% floating). Modeling this across the previous 20 to 50 years of corporate bond rates is common, although the findings might vary greatly depending on the time range used.

Swaps and Treasury Locks

Swap management of the percentage of floating-rate debt should not be a diversion. They are the most effective way to modify fixed-floating ratios. What is basically a better method of managing interest rates in terms of cost and risk is being obscured by unfavorable emotion around derivatives and speculation. Swaps and Treasury locks are examples of techniques that may be used to control interest rate volatility. With interest rates at record lows and future movements more likely to be upward than downward, their usage appears particularly suitable. Floating-rate notes may be exchanged for fixed-rate notes, fixed-to-floating swaps can be lifted, and the terms of any fixed-to-floating rate swaps can be shortened in order to lengthen duration in addition to terming out and lowering the percentage of short-term floating-rate debt. Extending length while retaining or even increasing the notional amount switched to floating may minimize interest rate risk while preserving the low-cost advantages (positive carry) of rolling swaps down the yield curve to shorter maturities. By hedging all or part of the price, Treasury locks and forward-starting swaps reduce the cost of new issuance by a significant amount (T-locks, or rate locks, secure the underlying Treasury rate; forward-starting swaps also lock in the A-rated credit spread, as this is the basis of the swap curve). Treasury bonds provide an additional option for extending term and reducing risk. In comparison to floating-rate debt, new bond offerings for refinancing or expansion might be a greater source of interest rate risk since the exposure period is often too short to allow for an adequate averaging out of risk. As we have seen in the choppy markets of recent years, even intraday risk may be substantial. Ladders, Gaps, and Towers

While constructing your liabilities maturities, stay away from maturity gaps and maturity towers. While the annual interest expense is a rolling average of interest rates, staggered maturities

reduce fluctuation. Laddering maturities reduce financing risk in a manner similar to dollar cost averaging. By boosting issuance, extending terms, avoiding call ability, and terming out while rates are low, cost may be minimized strategically. In order to construct ladders, a certain proportion of the total obligations must mature each year. The best performance in terms of cost and risk is offered by ten- to fifteen-year ladders. Smaller businesses will only have enough liabilities to build a five- to seven-year ladder, whereas larger businesses (with total liabilities above $2 billion) would often employ a 10- to 15-year ladder.

The need of maintaining a solid cash and liquidity position has been highlighted by analysts and agencies, yet low interest rates have resulted in some sizable portfolios of short-term floating-rate debt. Liquidity is improved by a combination of the following actions: Boost base case quarterly cash flows or locate flexible sources of funding (such as deferrable costs, capex, dividends, and working capital), more marketable securities and operational cash, Minimize your exposure to commercial paper while maintaining near-cash equivalents like undrawn lines (beyond what is necessary to backstop a commercial paper program).

There are essentially two sorts of cash draws: anticipated and unanticipated. Operating cash flow and external funding are used to pay for events whose timing and size are predetermined. For instance, paying back a former debt or making legally required payments like postdirect benefits and unfunded pensions. Events that are unpredictable in terms of their magnitude, timing, or occurrence pull on liquidity. Financial and operational leverage increases their influence, but liquidity should be adequate to withstand these occurrences, such as interest rate volatility, price volatility, volume volatility, environmental liability, and legal action.

Financial Liquidity Cost Due to the double taxation of interest income, the low rate of return generated, and the temptation to spend money on poor return investments, the consequences of retaining too much cash are more obvious than ever in current low interest rate environment (agency costs). According to conventional knowledge, businesses go to considerable pains to keep cash holdings as low as possible since you cannot calculate your after-tax WACC on cash amounts. The majority prefer undrawn lines and access to commercial paper (CP) as near-cash substitutes. But, a lot of businesses have billions of dollars in CP that need to be constantly refinanced. Some businesses even issue commercial paper to invest in money markets as an additional way to add to their profits. Yet, short durations include a danger of refinancing. Interest rate risk results from floating rates. Qwest Communications was compelled to use the whole $4 billion of its bank credit in February 2002. It utilized the money to settle the whole $3.2 billion of commercial paper it had. Drawing on bank lines may send the stock markets the wrong message; as a result, in this instance, Qwest's rating was lowered after the announcement. Similar to previous well-known liquidity crisis case studies (such as Lucent, Xerox, and Tyco), the Qwest issue was complicated and encompassed more than simply money. Earnings disappointments, accounting issues, repeated credit rating downgrades, and severe difficulties in refinancing maturing obligations are among the many factors that make things difficult. Yet, significant losses in shareholder value highlight the true cost of inadequate liquidity. In the Qwest situation, the months prior to the liquidity crisis saw the loss of $11 billion, or 75% of the stock value.

For those premium firms with the greatest relative growth values, liquidity is more crucial and its cost even less meaningful. Strong liquidity may sustain economic value at a cost that is just a small portion of that value. The risks associated with markets shutting for the issuer, or refinancing risk, are reduced by liquidity. Volatile operational cash flows and interest rates might

be tempered by high liquidity. Liquidity is more crucial than ever and continues to be inexpensive. Operational cash levels reduce fundraising transaction costs and provide critical investment finance when it may otherwise be unavailable or excessively costly. The signaling value that liquidity delivers to reassure consumers, forewarn rivals, or offer a financial cushion to a difficult work environment might have a strategic justification. It may be used to telegraph in advance a willingness and ability to retaliate against hostile labor action or competitive market intrusion. Southwest Airlines has a history of expanding through challenging times by purchasing equipment and fiercely competing on pricing. The company is always set up for expansion. Despite being the only company in the industry with investment-grade credit, Southwest has a sizable cash reserve. Businesses like Microsoft and Yahoo, where the majority of enterprise value must be ascribed to the present value of operational cash flows beyond their current level, have billions in cash and close to it on hand. While a firm is in its development phases and the majority of its enterprise value is based on growth, the risk of missed opportunities is at its highest. By calculating the likelihood that a speculative-grade industrial business would need outside finance over the next four quarters (due to adverse commodity prices and the foreign exchange or FX), we may assess the worsening liquidity picture. Strong liquidity is indicated by a low chance (less than 1% probability) of requiring external sources of funding during the next four quarters. In our scenario, more volatility and a lower operational estimate increased the likelihood that external sources of cash would be required, from less than 1% to 10–15%, with an increase in the maximum possible draw from $50 million to $75 million. In order to address the issue, the company increased its target cash from $50 million to $100 million in order to maintain a 99 percent confidence level in its liquidity. Additionally, it increased its undrawn available lines from $75 million to $150 million, or twice the maximum draw, in order to cover any potential cash shortfall.

A Modern View on Equities

While a lot of individuals could mistakenly think that the share price equals the cost of equity to the company, the real cost of equity is influenced by the interest rate environment and investor expectations. Both are at record-low levels. The cost of equity has decreased, as was previously mentioned. According to research of historical excess returns and indicated expectations derived from more current stock market valuations, there has been a considerable fall in expectations for the equities capital markets. Equity returns have been decreased as a result of many macroeconomic factors. The consequences of structural change have been objectively evaluated and recorded. We provide the following economic justification:

Size. Bigger markets provide greater liquidity and less risk and volatility. Globalization. Total equity risk has decreased due to global economic expansion and commerce technology and information. The uncertainty and needed returns have decreased because to improved financial reporting, transparency, and information technology. Agency expenses. Common stock is less risky since investors are more engaged in persuading businesses to maximize shareholder value. No matter how persuasive the justification, issuing stock at low share prices results in a severe dilution of the existing ownership interests.

Debt for Stock Swap

The combination of the share price and the unwillingness or inability to expand leverage any more puts many highly leveraged corporations in a bind. In these situations, a debt for equity exchange captures any bond discount as an economic counter to the expense of dilution of stock.

Bondholders and equity holders' concerns may be addressed, and successful exchanges can be designed to distribute the value produced by deleveraging and address them. As a result, the firm will be better capitalized following the exchange.

Future Equity

A forward issue of equities may obtain money now to enable the advantages of rapid deleveraging while deferring the expense of share dilution. In contrast to a rights offering, the obligation to issue stock at a later time is the only choice.

Asset Shelf

Issuers may trickle tiny quantities of stock into the market over a lengthy period of time thanks to equity shelf programs. They are appropriate for today's choppy equities markets since they have all the benefits of dollar cost averaging. They avoid the dilution of a large equity issuance since they are typically small in size.

Hybrids

This is an appealing strategy for strengthening a balance sheet due to recent changes in how rating agencies evaluate some hybrids, such as long-dated junior subordinated bonds with compulsory deferral clauses and limits on refinancing, or replacement wording, as equity (50 to 100 percent). Convertibles continue to be a substantial source of finance. Required convertibles often have a high equity content (50– 80 percent). A hybrid financial instrument known as a convertible is basically a bond plus a warrant (long-dated equity call option). Convertibles have grown in popularity in the current uncertain market in part because they successfully monetize the stock's volatility. The warrant's worth allows for a reduced coupon. Notwithstanding the low expectations that lower straight equity values, more volatility increases the value of the conversion option. Tax improvements are regularly used to provide additional significant advantages. Ratings agencies may assign the instrument some equity content, supporting the credit profile, depending on the particular kind.

Retirement Financing

Large pensions that are unfunded as a result of weak equities markets. With analysts and rating agencies concentrating on this new responsibility, prefunding unfunded pension liabilities is becoming more and more appealing. Convertibles and hybrids are well suited to effectively decrease these obligations and increase equity on the balance sheet.

Less Distribution

Distributions to shareholders (dividends plus buybacks) are the opposite of equity issuance. Regardless of any future changes to dividend taxes, any distribution of extra money to shareholders is just that—more money taken from the company to be distributed to shareholders. If a better use of the cash cannot be identified, distributions should be a last resort. Nonetheless, it may be tempting to increase a stock's attractiveness with unwarranted increases in shareholder payouts given the low interest rates, unpredictability of the equity markets, and low share prices (with dividends or buybacks). Avoiding this temptation (and dispersing less rather than more) is equivalent to issuing stock without the costs and offers a productive source of equity investment for the company. With the use of a case study for the technology industry, we emphasize many of the fundamentals of the ideal capital structure of the present. Many of the problems that organizations are facing are also faced by technology, albeit in greater severity. The allure of low

interest rates prompts the query of whether taking on more debt would be preferable. Substantial and expanding cash holdings make it difficult to determine how much cash is best for operational liquidity and secondary types of liquidity. Nowadays, dividends and buybacks are a regular item on the Board of Directors' agenda for the technology sector. The value proposition is much greater for technology companies to optimize (i.e., reduce) their cash balances and look into other options for secondary liquidity to reduce event risk, even though there may be a case for a modest increase in financial leverage among the larger, more established technology companies (as we outline in our chapter on strategic risk management). The most effective way to transfer this cash to more beneficial and lucrative purposes is via share repurchases and, in certain situations, special dividends. For additional information on dividends and buybacks.

Value Maximization Is Not the Same as WACC Minimization

Purists of intrinsic value often believe that the optimum capital structure conundrum is a WACC minimization problem. According to the underlying assumption, value is maximized when the discount rate is kept as low as possible since firm value is the present value of all expected future cash flows. While this reasoning seems to be sound on the surface, the necessary simplification assumes that future cash flows are constant and unaffected by the enterprise's level of financial leverage. Financial strength declines as financial leverage rises, potentially limiting the company's ability to grow its operating cash flows in the future, especially in extreme situations where, in the face of declining financial strength, R&D may be scaled back, capital expenditures restricted, acquisitions restricted, and long-term sales contracts jeopardized. This is particularly true with technology. Market valuations can involve significant investment since they are frequently based on growth forecasts rather than the present worth of existing operational cash flows. Financial strength may affect one's ability to negotiate, respond competitively, manage risks, and provide cash for consumer financing. WACC is reduced in the B situation but not in the A-rated enterprise. The value of the B firm is maximized when the discount rate is as low as possible since its valuation is mostly based on the present value of future cash flows. In the A situation, financial soundness is more crucial than maximization of current cash flows via WACC reduction. Financial strength, strategic liquidity, and capital access are crucial value drivers since the A firm valuation is mostly based on positive NPV growth beyond the level of existing cash flows.

Optimal Capital Structure Begins with Optimal Financial Strength

Instead of starting with WACC, we establish the necessary financial strength to support the company and its plan in order to develop the best capital structure. Enhanced regulatory interference or limits, litigation risk (e.g., asbestos, product liability, environmental cleanup), animosity from the labor force, or sovereign danger may all necessitate increased financial strength. An alternative method for providing comparable protection against event risk is to employ insurance or contingent capital.

When anticipating or reacting to competitive factors like direct competition, new entrants, or competitive substitutes, financial strength may be favorable. Higher levels of investment, acquisitions, more expensive marketing, aggressive pricing, R&D, and more affordable labor rates may be possible with strong financial standing. Third, having stronger financial standing may be helpful for maintaining price pressure in competitive marketplaces or for giving you more negotiating leverage with suppliers. Project engineering, business process outsourcing, and other enterprises with high counterparty risk might be particularly susceptible to credit ratings.

Debt Value Proposition

Since many of our financial textbooks were first published 20 years ago, the value proposition of debt has undergone a significant change. According to the traditional post-Miller and Modigliani hypothesis, the tax benefits of interest expenditure make it possible to produce significant intrinsic value by replacing equity in a capital structure with debt. The precise amount of intrinsic value generated will depend on the difference between the after-tax cost of debt and the cost of equity. This spread in turn depends on the riskless rate, leveraged beta, the percentage of debt used in place of equity and how it affects credit ratings, as well as credit spreads. Compared to the high rate environment of the 1980s, the value proposition of debt has altered in the low rate climate of this decade. The minimum of the WACC function has moved to the left, making it lower and flatter overall. Contrary to popular belief, using a firm's leverage results in a lower decrease in WACC (and the creation of intrinsic value) than would have been possible in a higher rate environment. In a low cost of capital economy, the value of debt is less appealing. In a low cost of capital environment, the value proposition of debt is less tempting, and there are other value drivers to take into account.

Beta The cost of stock for higher beta firms is greater, which might widen the gap between it and the after-tax cost of debt and raise the value proposition of debt. At the equity end of the leverage continuum, the WACC function is greater and steeper (more concave). Consequently, high beta corporations often have lower cash tax rates and less debt capacity, which results in higher after-tax financing costs and a worse value proposition for debt. Spreads on credit It is impossible to use speculative-grade credit spreads as a basis for long-term financial policy because of their considerable variation. Credit spreads, like beta, may, nevertheless, impact the value proposition of debt. The value proposition of debt grows when spreads are narrower and finance costs are lower, with a smaller WACC curve on the leveraged end of the spectrum. Spreads widen and financing costs increase, causing the WACC curve to climb and its inflection point (i.e., minimum) to shift toward equity.

Considering Technology The literature has several examples of debt's positive economic effects. A significant portion of this proposition is predicated on the intrinsic value of interest expense tax deductibility and a relatively low cost to the corporation for the risk of distress resulting from moderate degrees of financial leverage. These requirements, however, do not hold as strongly in the technology sector as they do for many industrials. Taxes There are low cash tax rates for many technological businesses. Technology startups have not yet achieved profitability. Several others carry over sizable losses. Employee stock options are often granted, which further lowers taxable income. Early globalization of technology enterprises opens up possibilities for effective international tax strategy.

Capacity for Debt The lesser degree of leverageability of technology enterprises further reduces the relative worth of tax shields. For every dollar of profits before interest, taxes, depreciation, and amortization (EBITDA), technology businesses often get less credit than they would from other industries like industrials or electricity. This is because the quality and durability of these cash flows are not as well-liked by rating agencies. Creditors have more reason to be concerned due to perceptions of less definite market outlooks, shorter product cycles, more risk of replacement technologies, fewer and less value assets to dispose, and a generally more unstable operating environment. Technological valuations often place greater emphasis on future development and potential than on the value of existing operational cash flows in the present. Hence, any danger to this increase in future cash flows will have a far greater effect on the value

as a whole. With a more established business, the cost to the firm of distress, illiquidity, or restrictions on development and investment represents a significantly larger share of the overall enterprise value.

Proposal for Worth of Extra Cash

More important than the value proposition of extra loan capacity is the value proposal of surplus cash. While the value proposition of debt is closely examined, the value proposition of cash is often given less consideration (notwithstanding our earlier chapter on cash). Usually speaking, the returns on cash are much lower than the WACC on an after-tax basis, with the difference often being in the range of 5 to 7 percent. In a low rate environment, the penalty to intrinsic value of this gap is likely to be more considerable. Yet many businesses today are dealing with significant and rising cash piles. The value proposition of surplus cash. After taxes, cash returns from the first panel will typically range between 2 and 3 percent. The WACC for most businesses is between 7 and 9 percent, while in reality they could be using a higher internal hurdle rate. When interest rates are higher, when cash returns may be between 4 and 5 percent, WACC may be between 10 and 12 percent. The NPV of $1, held for all time, is shown in the second panel at rates below WACC. When exposed to a corporate WACC of 10% and earning 3% after taxes, one dollar is only worth $0.30. The potential cost of using insufficient leverage is greatly outweighed by this expense. The value destruction of extra cash would theoretically be limited to the bid/ask spread on cash management plus the cost of double taxation, as the WACC of surplus cash is closer to the riskless rate than the corporate WACC. Yet, the existence of surplus cash should increase debt capacity in order for this situation to hold and for the cost of excess cash to equal the matching maturity cost of debt. The actual cost of these funds is not the after-tax cost of matched maturity debt if the extra cash uses up loan capacity that might otherwise be utilized to support general company operations. The cost of extra cash is really the corporate WACC, according to an analysis of credit ratings and credit spreads, which shows that markets often assess loans on a basis of gross debt. (More about money is covered in Chapter 5.) One would expect that the equity markets have a different perspective and provide stocks with extra capital some cushioning. Nevertheless, empirical research indicates that systemic risk is unrelated to cash levels, and there is no evidence to support the claim that cash levels lower betas. Empirically, the whole WACC seems to equal the cost of extra cash. Excess cash does not deplete corporate debt capacity and may be justified as having a cost comparable to the after-tax cost of matched maturity debt in countries, such as Europe and for a few others, where ratings are still based on net debt ratios. Under these circumstances, the gap between the pretax return and the after-tax cost of short-term funds represents the value destruction of surplus cash.

Buybacks and dividends:

Dividend and share buyback programs are being revised in light of recent occurrences. As businesses struggle to cope with stagnant share prices and uncertain prospects, they are announcing more dividend and repurchase plans. Companies are under pressure to boost shareholder payouts because of low interest rates, declining share values, volatile markets, and big and rising cash reserves (dividends and buybacks).

Distributions to shareholders are closely monitored. The initial announcement by Microsoft to start a small dividend (and its subsequent announcements to double and double again its dividend to distribute $75 billion over three years in dividends and buybacks) stood in contrast to an announcement the previous year to reinvest $10 billion in additional research. Notwithstanding

the sector's outstanding growth potential, dividends and share repurchases have reached considerable levels in the technology industry (Figure 8.1). The majority of S&P 500 index firms paid to buy their own shares in 2005. Distributions to shareholders have seen substantial change during the previous ten years.

As a share of stock market value, US repurchase volume more than quadrupled. Throughout the same time span, dividends have decreased. The yields and payout ratios decreased by around 25%. Dividend payments are no longer made in greater quantities by corporations than share buybacks. Despite all of this repurchase activity, corporate leverage has not grown. In spite of repurchase activity, total leverage has been going lower. From the mid-twenties and low-thirties earlier in the decade, the values of the late bull markets decreased the debt-to-enterprise value ratio for S&P 500 corporations. Now that the lackluster market performance of the previous few years is behind us, leverage ratios are once again high. In sectors where the greatest value may be attributed to future growth, shareholder dividends are often the lowest. Growth businesses may have the highest possibilities of investing at returns over their cost of capital since they are most likely to need to reinvest in order to accomplish their growth. Microsoft continues to only distribute a nominal dividend, with the majority of its funds set aside for research and development, purchases, and continuous antitrust litigation. Every distribution of extra money to shareholders is just that—a transfer of more cash from the company to its owners. If a better use of the cash cannot be identified, distributions should be a last resort. After considering cash generation, investment opportunity, capital structure, and liquidity, companies lacking sufficient potential growth to earn returns above their weighted average cost of capital (WACC) can best serve shareholders with cash distributions: some combination of dividends and share repurchases. 1 After determining cash production, investment opportunity, capital structure, and liquidity requirements, the distribution should ideally be decided as a residual. In reality, the choice is partially anchored by preceding year experience, necessitating a kind of incrementalism to prevent unintended market signaling. It follows that company financial policies will be affected:

The need to disburse extra cash becomes more pressing when cash stockpiles expand and become large. After evaluating company requirements, the ideal overall shareholder distribution (dividend and repurchase) amount remains a second-order residual policy. Another policy decision point is the ideal combination of dividends and buybacks. Dividends should only be used for the most certain baseline extra quarterly cash flows, while buybacks and special dividends are better suited for less certain cash flows or surplus amounts. The ideal alternative to dividends is open market buyback plans, which are particularly suitable for unpredictable cash flows. Traditional option-based (i.e., writing puts) buyback schemes are significantly less appealing now that accounting and public perception have changed, but there are new, accounting-friendly structures available. Dutch auction self-tender offers continue to be the most efficient ways to handle quick ownership changes, indicate an undervalued stock, and generate value via increasing leverage (as opposed to set pricing).

The Money Issue

In current low interest rate environment, the drawbacks of retaining too much cash are more obvious than ever: a poor rate of return earned, double taxation of interest income, and the temptation to spend money on low return investments (agency costs). According to conventional thinking, businesses should make every effort to keep cash levels to a minimum since they do not allow for the calculation of WACC after taxes. Most people choose near-cash alternatives

like undrawn lines and access to commercial paper (CP) to offer event risk liquidity. Despite an increasing wave of payouts, cash levels are at record highs and rising. The volatility of operational cash flows or interest rates is tempered by liquidity. Its cost is still low and its importance has increased. Strong liquidity may sustain economic value at a cost that is just a small portion of that value. Operational cash levels reduce fundraising transaction costs and provide critical investment finance when it may otherwise be unavailable or excessively costly. Refinancing risk, which results from markets shutting, is reduced by liquidity for the issuer. The signaling value that liquidity delivers to reassure consumers, forewarn rivals, or offer a financial cushion to a difficult work environment might have a strategic justification. It may be used to telegraph in advance a willingness and ability to retaliate against hostile labor action or competitive market intrusion. For premium firms with the greatest relative growth values, liquidity is more crucial and its cost is less relevant. Large sums of cash are on hand at companies like Microsoft and Yahoo. Early in a company's life cycle, when the majority of the enterprise value is based on growth, the risk of lost opportunity is highest.

Divides have returned

Dividends are now again in vogue. This dividend revival is the result of a number of interacting variables, including as the state of the capital markets, the expansion of governance, and adjustments to the tax and accounting systems. Moreover, Microsoft alone has significantly influenced the world's dividend policy. Despite the fact that it seems to have a unique situation given its high amounts of capital, cash flow, and apparent market dominance, boardrooms in all countries and sectors compare themselves to this company. No matter how diverse their circumstances, the acceptance or increasing of dividends by respected firms has pushed the dividend discussion into Board of Directors agendas where it would not have otherwise been.

Financial Markets

Many investors are seeking for dividend income since interest rates are still historically low. Because of the widespread belief that dividends provide a safe haven in volatile markets, generally speaking, weak equities returns have given this tendency more speed. The massive expansion of the income trust market in Canada, the internationalization of the real estate investment trust (REIT) market, the resurgence of master limited partnerships (MLPs) in the US, and the perceived success of companies that have adopted extreme dividend policies in the US have all given dividend discussions a significant boost. Dividends were started by a number of well-known companies, including Qualcomm, Federal Express, and Microsoft. Each of these businesses claimed reduced capital expenditure needs and a desire to provide investors greater assurance about potential returns.

Governance

Early in the decade, a number of accounting scandals and instances of corporate fraud made investors leery, even of household brands and investment-grade businesses. According to a reputable news publication, the majority of 500 institutional investors surveyed by Cisco wanted a dividend when the tax code changed. Another publication said that while investors' suspicion of accounting-based profits had risen, dividend checks serving as proof of profitability would make them feel more at ease. Another brought up the same point, noting that in 2002, the stock performance of S&P 500 businesses that did not pay dividends was twice as poor as that of those who did.

Options on Stock Stock options lose value as a result of dividends. No matter the valuation methodology used, dividends lower the residual value of the underlying assets, lowering the value of the options. Option holders are not eligible to receive the dividend. Share repurchases increase the cost of the underlying asset while decreasing the number of shares outstanding, which compensates the option holder for their loss. The economic incentive to prefer purchases over dividends increased during the previous ten years as the use of stock option-based compensation plans skyrocketed in popularity. Share repurchases are also often used as a tool to counteract the earnings dilution of stock options. The fall in stock options eliminated the financial cost of dividends and gave businesses more extra cash to invest. When stock prices declined, millions of option awards were worthless and stock options lost popularity. Some businesses cited the unsustainable scenario of a divided staff base made up of haves and have-nots. Stock options were doomed when accounting rules changed to demand that they be expensed, and many businesses followed Microsoft's example and shifted from stock options to restricted stock.

Reduction in Dividend Tax

Dividends and buybacks are now more equal in the United States due to changes to the taxation of dividend income. The tax reduction on dividends was announced in the State of the Union Address in 2003, and it made the dividend element of the overall shareholder return—capital gains plus dividend income—taxed at the same rate as capital gains. But, a lot of shareholders had tax-exempt or tax-deferred status, and often, the marginal bidder boosting the stock price was already in a good tax position. Also, there are restrictions on the tax exemption for each person and challenges for overseas investors. Nonetheless, interest in dividend stocks and certain withdrawals from corporate and municipal bonds have altered the ownership mix.

CHAPTER 11

DIVIDENDS AND BUYBACKS CREATE VALUE

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To decide whether you should distribute money to shareholders and what the right balance of dividends and repurchases should be, you must understand how dividends and share repurchases effect value in addition to your own capital situation and future requirements. On the surface, it seems simple to understand why share repurchases are so popular. A corporation may lower the number of outstanding shares without having an impact on its reported profitability by buying its own stock (ignoring foregone interest income). The company's profits per share (EPS) rise as a result generally, but that is not how buybacks add value. Contrary to popular belief, buybacks do not add value by raising profits per share. After all, the corporation paid cash to buy those shares, and the amount of capital redeployed, as shown by decreases in cash and shares, reduces the company's intrinsic value. In fact, there would be no effect on value if the main justification for buybacks was to increase EPS, but as we have seen, this is not the case. Such incorrect ideas about how to create value for dividends are routinely promoted. The marketability and ownership structure of both newly issued securities and seasoned equities are obviously impacted by dividend policy. Hence, conventional wisdom holds that the fine tweaking of a clever dividend policy may have an impact on long-term supply/demand dynamics. There is often no link between multiples and yields; if there is, it is negative, therefore for the vast majority of equities the amount of dividends has no impact on its value. Companies with sluggish growth and lower values pay out greater dividends. There is no evidence of a positive relationship between dividend yields and trade multiples, whether examined through time or by industry. In fact, since lower growth companies tend to adopt greater payout policies, values and dividends have a negative correlation. Stock volatility, stock liquidity, or systematic risk (beta) do not seem to be significantly impacted. The majority of stock prices are unaffected considerably by dividend increases.

Although while dividend stocks, which tend to have low betas, are a good choice for investors in tumultuous times, issuers are not necessarily advised to raise their dividends during these periods unless they feel doing so would lower their betas, which does not seem to be the case. Moreover, the universe of investors and resulting price elasticity are not sufficiently constrained for price support to be attained with this modification. Empirically, stocks' price elasticity is close to zero. In the strictest sense, dividends and buybacks to shareholders should have a zero net present

value (NPV); any extra money is then returned to investors. Nonetheless, despite the difficulties of reality, dividends and buybacks may and do add value in three different ways:

Capacity Utilization. By dispersing extra capital that would not otherwise provide a sufficient return, value may be preserved. Signaling improved future cash flow prospects that may be included into the share price capital arrangement. An effective way to raise leverage, which may sometimes reduce WACC and raise intrinsic value.

Capitalization Rate

Large and rising cash levels are a problem for many organizations. By preventing value from being destroyed and redistributing money that would otherwise not be earning its opportunity cost, shareholder dividends provide value. The after-tax returns on cash are often much lower than the WACC, averaging about 5 to 7 percent. The potential cost of using insufficient leverage is greatly outweighed by this expense. Moreover, a low rate environment usually has the greatest impact on the cost to inherent value of this deficit. Cash investments will typically provide returns that range from 2 to 3 percent after taxes. The WACC for the majority of businesses today is between 7 and 9 percent, while in reality they could be using a significantly higher internal hurdle rate. When interest rates are higher, when cash returns may be between 4 and 5 percent, WACC may be between 10 and 12 percent. The NPV of $1, subject to a corporate WACC of 10%, maintained in perpetuity, earning 3% after taxes, is only worth $0.30. (30 cents). Empirically, the entire weighted average cost of capital seems to equal the cost of surplus cash. In reality, debt capacity that might be utilized to support general company goals is consumed by surplus cash funded by debt. The cost of extra cash is, empirically speaking, the company weighted average cost of capital, according to an analysis of credit ratings and spreads, which reveals that markets often assess loans on a gross debt basis. Also, stocks with abundant cash are not given any cushioning by the equity markets. Empirically, the presence of cash does not cause betas to decrease. Now, as mentioned in the last chapter, surplus cash does not deplete corporate debt capacity and may be justified as having a cost equivalent to the after-tax cost of matched maturity debt in countries like Europe and for a few others where ratings are still based on net debt ratios. The difference between the pretax return and the after-tax cost of short-term funds, which is the bid-ask spread plus the cost of double taxation, under these circumstances is the value destruction of extra cash.

Signaling

During the last ten years, a great deal of academic study has been devoted to the signaling impact of dividends and share repurchases.

These studies claim that analysts and investors utilize a firm's financial actions as a window into what management really believe about the future of the company. The argument makes the case that the announcement of a share buyback shows management have such faith in their company's future that they think the greatest investment it can make is in its own shares (notwithstanding that any shareholder distribution is a divestment decision and not an investment decision). The Dutch auction and fixed price self-tender offers were shown to be the two greatest indicators of stock undervaluation when the three types of common share repurchases were compared. Share repurchases on the open market were shown to be a poor signal. When insider wealth was in danger, that is, when managers did not tender, the signal was found to be strongest. To counteract the erosion of stock incentive schemes, Symantec, for instance, announced authorisation for a 500,000 share open market buyback in November 1997 and a further 2.8

million shares in June 1998. The value of the company was not significantly impacted by this economic non-event. Nevertheless, considering the low stock price at the time, the Board of Directors approved the purchase of approximately five million more shares in March 1999. In fact, less than a month later, the market corrected the fundamental value difference and fourth quarter profits above forecasts thanks to robust top-line growth in the corporate client category. Non-tendering shareholders received a benefit from the value increase that is now distributed across a lower number of shares. The amount and structure of the distribution, as well as the excess returns often connected with distribution announcements, all have a significant role. Open market buyback announcements have been observed to have an effect on stock prices by roughly 2%. 4 Special dividends, modified Dutch auction self-tenders, and fixed price self-tenders are examples of one-time actions that result in larger sustained stock price premiums and are associated with stronger signals because they are more common to accompany structural changes to the balance sheet, tend to be larger, and represent a greater commitment to execute (rather than just an authorization). These typically go together with adjustments to the corporate plan.

Investors analyze a company's actions in the context of its present situation while also considering a wide range of other cues and signals. An announcement of a dividend or repurchase may not necessarily provide the information that management intended. In our experience, the following five factors may help prevent a potentially harmful signal:

Market forecasts. Similar to earnings releases, dividend and repurchase activities are evaluated according to market expectations rather than in absolute terms. Investor expectations are shaped through direct communications, historical patterns, and accepted industry practices. Market response may be adverse when activities are inconsistent, particularly if they fall well short of expectations operating outcomes. Share repurchases may stabilize market prices and provide liquidity during a brief period of investor turnover, but they are unable to sustain share prices over the long term. Because of market and operational challenges, Computer Data Systems' fourth quarter results in January 1997 fell short of forecasts. The business escalated its open market share buyback program in an apparent effort to boost its share price after it saw a 25% share price decrease. Yet investors were unconvinced, and the stock fell another 15% over the next six months until a finance bidder bought the business in July 1997. Various signs. A planned dividend or repurchase signal may be contradicted by other information, and sometimes overridden by it. A multiyear, multibillion-dollar campaign was started, claims a business news release, with the intention of making opportunistic acquisitions at attractive prices—i.e., prices that they believed undervalued the firm. The repurchase signal, however, was overshadowed by a string of other stories that all sent out stronger and conflicting signals about the company's future: an abandoned acquisition, a drawn-out corporate reorganization, declining financial performance, and a general decline in important markets growth pattern. Dividends and stock buybacks may sometimes be interpreted as a corporation admitting it has few significant investment possibilities. Long-term shareholders could react by selling their shares. This impact is primarily seen in industries that need significant investment due to high expenses associated with product creation, marketing, and client acquisition as well as substantial research and development expenditures.

Internal sales: If insiders decide to take part in a share buyback themselves, signaling is reduced (a regular or special dividend can be a safer choice in this respect). Managers have not, in fact, placed their own money where their mouth is when they choose to sell shares rather than keep them. If insiders do not participate, the advantages may be significant, other things being equal.

According to one research on tender offer buybacks, programs with no management participation had returns that were seven percentage points greater than those with manager participation.

Capital Arrangement

Value may be created via dividends and buybacks by way of a more effective capital structure. In fact, a lot of businesses use them as a long-term strategy to expand their dependence on debt funding. For instance, Payless ShoeSource raised its long-term debt from $127 million to $384 million in 2000 by tender-offering to purchase 25% of its existing shares. From 10% of capital employed to 33%, its debt climbed. The shareholder returns were astounding: The news caused the share price of PayLess to increase from $40 to $52. The value proposition of debt has significantly decreased in the low rate environment of today, as was highlighted in the previous chapter; typical dividend and repurchase leveraged recapitalizations were more common and added more value in the higher rate environment of the 1980s. Decapitalizations via dividends and buybacks, supported by extra cash, have become increasingly prevalent in today's low rate environment. Leverage generally has two major advantages:

Debt protection from taxes: The after-tax cost of debt often falls short of the projected return on equity for shareholders (ROE). Debt may lower a company's weighted average cost of capital when used sparingly. By multiplying the increase in debt by the current corporation tax rate, it is simple to get the approximate value of this tax shelter. The value of the extra tax shelter in the Payless case was around $103 million ($384 million minus $127 million multiplied by 40%). When debt is simply replaced with equity, this value, together with the company's starting worth before to the repurchase, is spread across a reduced number of outstanding shares, raising the value of each share.

Yet debt financing is only advisable if there are sufficient earnings to deduct interest costs from taxes and if doing so can be accomplished without creating a large risk of financial trouble. The time value of money and the danger of financial trouble cause the value of a tax shield to diminish over time when pretax earnings decrease and financial leverage rises. Only if companies can estimate their future cash flows with a decent level of certainty can they know the answers to those questions. When a business operates in a sector where growth occurs in spurts that is challenging. Such a company's market value is determined by investors' opinions on its portfolio of potential future investments, not by projections of future cash flow from ongoing business activities. Companies should depend more on equity content than debt in such dangerous scenarios.

Financial restraint: Debt, as opposed to equity, obligates management to pay out potential cash flows. The necessity to pay cash to bondholders hinders managers from investing in initiatives that provide returns below the company's cost of capital, as many financial economists have claimed. The most common instances of this impact are in leveraged buyout (LBO) scenarios, when the operational performance of the firm typically increases after debt levels have increased. Managers may bind their commitment to pay out future cash flows by creating debt without keeping the sale revenues. As a result, debt may effectively replace dividends. The drivers of financial policy must promote business value maximization even if financial strategy is often understood simply as an exercise in cost of capital reduction. Financial strategy must complement the company's business plan and take into account financial flexibility, agency, signaling, and clientele difficulties in addition to the firm's cost of capital and any subsequent influence on firm value.

Earnings and Equity Dilution

Although buybacks are often used as a technique to mitigate the dilution of stock-based compensation plans, dividends do lower the value of stock options. We demonstrate throughout this book that EPS accretion is by no means a gauge of the generation of intrinsic value, but that the dilution of shareholder wealth is a significant problem. The price-to-earnings ratio (P/E) of the corporation determines whether a repurchase is accretive or dilutive. If a company's P/E is more than 1/[i (1 T)], where I is the marginal rate of borrowing and T is the marginal rate of taxation. A repurchase is thus beneficial to EPS; in contrast, if a P/E is larger, a buyback is detrimental. For instance, a stock buyback would be beneficial for a firm with a 3 percent cost of borrowing and a marginal tax rate of 35 percent as long as its P/E is below 1/[3% (1- 35%)], or 50x. In fact, because the P/E might rise to balance out the dilution, it could be quite sensible to do a buyback that does not increase profits.

Equity issue, however, may reduce the current shareholders' ownership position. Since stock-based pay is so common, companies are compelled to buy shares in order to secure shares for option awards and control equity dilution. As a result, more shares are required to trade for executed options. EPS is diluted by outstanding options, according to the Treasury technique that is often used to calculate EPS (in an amount equal to their intrinsic value). Hence, stock option programs are supported in two ways by share buybacks. They provide businesses Treasury stock for warrant exercises and assist in controlling dilution by lowering the number of outstanding shares.

Dividends offer a lot of advantages: They enable low-cost investor monitoring, generate equity returns, and are a logistically straightforward means to transfer surplus cash. Dividends play a significant role in overall shareholder return across various sectors. We provide a comprehensive strategy to decide the size, mix, and execution of shareholder dividends after determining the existing and prospective capital situation. Three things may be used to design dividend policy: a capacity analysis, empirical data, and market expectations.

Buybacks vs Dividends

The total shareholder yield of cash returned to shareholders by the corporation consists of dividends and share repurchases. The best balance of dividend payments and share repurchases depends on the cash flow quality, volatility, cyclicality, and the requirement for financial flexibility. Dividends and share repurchases need to be balanced in each company's unique way. Buybacks are better suitable for businesses with more unpredictable, seasonal, cyclical, or uncertain cash flows due to the discretionary nature of share repurchases vs the fixed cost of dividends. Dividends, which are difficult to adjust because of the signaling effect, are more of a fixed fee commitment than share purchases, which are less so. Uncertain distributions of extra cash are best suited for a genuine residual shareholder distribution scheme. Ratings agencies should prefer buybacks over dividends since they may be terminated more readily for the same reason. Yet, dividends—that is, a substantial and consistent excess cash flow—tend to indicate financial stability. Over 80% of investment-grade borrowers (credit businesses) pay dividends, whereas most high-yield borrowers do not (about 30 percent of noninvestment-grade borrowers). Rating agencies are also uneasy about the magnitude, timing, and commitment of share repurchases as well as about their popularity among creditors for other risky financial practices including acquisitions and the preference for debt financing over stock financing.

The preference of option holders for buybacks over dividends will not change. The dividend yield reduces an option's value even when option holders do not receive the dividend. Some traders may assert that buyback plans can boost stock volatility, giving option holders more money. Dividends may be a preferable option for companies with low stock liquidity than risking additional dilution of their stock float via a substantial repurchase program. Yet, by creating a natural market for the shares, a modest program of 1 to 2 percent annually may improve stock liquidity.

Dividend Potential

We make a distinction between surplus capital that is on the balance sheet or expected in a one-time gain, excess free cash flow that is very certain, and residual cash flow that is less certain or regular for the purposes of financial planning and policy. Only the most certain baseline extra quarterly cash flow may be distributed as dividends. The companies that can afford to pay bigger dividends are those with low cash flow volatility, strong operational margins, little need for debt servicing, and little investment requirements. Several of our analyses for liquidity and debt capacity may be applied to dividend policy since, in our opinion, the capacity for debt and the capacity for dividends are essentially economic equals. A combined dividend and open market buyback program may be used to disperse surplus operational cash flow. In this program, we split the extra cash flows into two streams: a predictable base for dividends and a less predictable component for share repurchases.

The dividend's calibration to prevent liquidity impairment is one of the factors that goes into determining its size. For instance, based on quarterly cash flow projections and assumed volatilities for sales growth and earnings before interest, taxes, depreciation, and amortization (EBITDA) margins, we may use our stochastic liquidity simulation to ensure the dividend can be funded from quarterly operating cash flows, within a 95% confidence level.

At different dividend levels, scenario stress testing may be used to guide secondary liquidity needs to reduce event risk. Lastly, by include the fixed cost of dividends in coverage and cash flow ratios, the dividend implications for credit quality and debt capacity may be evaluated. For instance, Moody's evaluates creditworthiness in high dividend industries using retained cash-flow-to-debt as a measure of free cash flow after dividends. Continuous share buyback plans are appropriate for allocating extra cash flow where there is some degree of cyclicality, seasonality, or other irregularity. A buyback program may receive the excess above the maximum dividend (or a chosen lower level) over the expected level of discretionary free cash flows. In reality, we would budget less and use the extra money for contingencies. The optimum option for off-balance sheet surplus capital or capital expected from a gain is a special one-time dividend, or if sufficiently big (between 8 and 15 percent), a Dutch auction self-tender share buyback.

Empirical Proof

Both our personal experience and academic studies indicate that dividends have an impact on the ownership composition and that high dividend equities attract more retail and income-focused investors. Also, dividend policy has an impact on stock marketability. Dividend tales, particularly for new issues with a short track record, make it simpler to navigate the equity capital markets.

But, as was previously said, dividends often have little impact on valuations. The market values a firm based on expectations of future cash flows (from the company). Choosing between

dividends and capital gains as the form of a shareholder return is referred to as the dividend choice. If everything else is equal, a bigger dividend indicates a lesser capital gain. As a result, both our own research and academic studies have shown that the market's response to dividend hikes is modest, often amounting to cumulative abnormal returns of less than 1%. Unfortunately, the enormous variance in results is something that these data fail to capture. The most intriguing topic is obscured by the rule of averages: Which stocks gain the most from dividend increases? According to our own research in this area, a universe of businesses with traditional dividend characteristics shows excess returns of between 8 and 10 percent: Weak Valuation. Increases in dividends often had the most positive effects on companies whose valuations were 80 percent or more based on the capitalized value of current operational cash flows.

Increased Profitability. The majority of dividend increases tended to favor companies with relatively high profitability for their industry (increased EBITDA margins by 20% or more). Reduced Volatility. Businesses with relatively low stock volatility for their industry—80 percent or less—tended to reap the benefits of dividend increases the most. Insufficient Dividend. On general, businesses that gained most from dividend hikes had a low dividend for their industry (relative payout ratio and dividend yield of 75 percent or less). Huge Upswing. Businesses that profited most from dividend hikes often saw a sizable boost in their payout (20 percent or more).

Expectations from the market and competitive positioning

Our competitive posture and an examination of market expectations serve as the foundation for both our dividend policy and, more significantly, any modifications to our payout policy. This is more because signaling is important than because investor targeting and ownership composition are issues. Beyond direct communication, analysts, investors, and any emerging consensus on the activities that are required or imminent will affect market expectations. Market expectations are the outcome of long-standing industry behavior by the corporation and other players. Generally speaking, the financial policy practices of respected corporations across many industries are less helpful for financial policy goals. Since earnings anomalies may skew payout ratios and share price problems can skew dividend yields, we measure dividend policy from the simultaneous mapping of payout ratio and dividend yield for competitive positioning considerations. We choose to benchmark payout ratios with funds from operations (FFO) in order to reduce distortion in situations when depreciation is high and not indicative of needed maintenance capital expenditure levels.

With 2 to 3 percent dividend yields and 40 to 50 percent payment ratios, the Dow 30 businesses' preponderance of dividends serves as the current center of mass for blue-chip dividend policy. On pages 175–176, Table 8.1 provides an industrial sector-specific breakdown of aggregate distribution techniques. Even dividend-focused investors like payout levels under 50% to guarantee adequate reinvestment.

Yet, owing to their distinct degrees of profitability, capital requirements, credit profiles, and development prospects, various industries display varied levels. With consideration for the particular instance, in the context of empirical facts, market expectations, and competitive positioning, the ultimate selection of dividend policy may be restricted by capital requirements and dividend capacity. The remaining surplus money may then be used for other optional objectives like share repurchases. The ideal number of shares to be repurchased in a buyback is influenced by a variety of variables, including the amount of surplus cash, stock float, other company-specific elements, and the buyback's intended use.

Capitalization Rate

A modest, consistent, signal-neutral open market program may be the best option for a corporation looking for a method to transfer surplus money. Without worrying about misleading the market, the program may be started and stopped.

A secondary goal of these programs, in addition to basic cash management, is to counteract the equity dilution of stock-related incentive systems. In order to maintain flat to slightly growing cash balances and flat to slightly dropping share counts, these share buyback plans are generally calibrated. These initiatives generally account for 1 to 2 percent of the outstanding shares each year. To meet these objectives for cash and share count, a quarterly budget is often created; nevertheless, implementation is sometimes opportunistic with regard to market price. In reality, there is often no signaling impact from authorization alone since so many corporations announce open market share buyback authorizations. Since open market repurchases often lack a signal, they are more adaptable than dividends for the distribution of leftover funds.

Signaling

The materiality level of a signaling buyback, which evaluates how much of an effect the repurchase will have on the wealth of owners who hold onto their shares, is one criterion for determining the magnitude of a signaling buyback if the main objective is to send a signal to investors. The degree to which the market is seen to be undervaluing that firm determines the materiality level for any particular number of shares that the corporation may repurchase. Think about the fictitious business HypoCo Inc. The company's managers estimate the value of its assets at $100, and there are now 100 outstanding shares. Sadly, the market values these shares at 80 cents apiece, which is 20 percent less than what an insider would estimate to be their real fundamental worth. The CEO of HypoCo chooses to repurchase 10% of the shares in an effort to correct this. The whole discount ($20) is divided among 90 rather than 100 shares, potentially resulting in a price increase of 22 cents per share as opposed to the initial 20 cents per share, or an extra two cents.

The materiality level of the buyback program is two cents, or 2.8 percent of the current share price. This shows the potential magnitude of the wealth transfer for steadfast shareholders who choose not to tender, assuming that nothing else changes. For a buyback to result in any substantial market revaluation of the stock price, it typically has to have a materiality level of about 5%. According to our observations, businesses often underestimate what is required to make a credible statement. degrees of materiality for various program sizes and value reductions. In order to send a convincing signal to the markets, your firm will need to repurchase a certain number of shares, which you may estimate using the table. A 10 percent program, for instance, would have a high materiality threshold in HypoCo's situation if a firm is undervalued by more than 20 percent. Most open market buyback plans are too modest to provide a meaningful signal, in addition to lacking a strong commitment to execution (many go unfulfilled).

With the 25 percent program size and a prebuyback market discount of roughly 20 percent, the estimated materiality threshold in the case of PayLess, for instance, was about 8 percent of the value of its shares prior to the start of the repurchase program. The scale of the potential benefit to devoted owners was big enough to pique investors' interest and cause them to revalue the company's shares by as much as 30%. In contrast, HypoCo's news could not be significant to investors.

Capital Structure

The number of shares will depend on the market value, share price, and target proportion of debt if the main goal is to achieve a target credit rating or target capital structure. It is an easy computation, but sometimes repetitive (iterative because the action is likely to move the share price due to the value of a change in WACC and potentially due to market signaling). Imagine you want to change your company's capital structure from 10% debt to 20% debt on a market-weighted basis, your shares are trading at $20, and your company's total market value (including debt and equity) is $1 billion. In theory, all you need to do is buy back five million shares to convert $100 million in equity into debt. But, as we have shown, the tax benefits of the buyback may increase the value of the company's remaining stock. As a result, you would need to buy more shares to attain 20 percent debt. This example's hypothetical tax advantages, leave alone signaling, are roughly worth $40 million (a $100 million increase in debt multiplied by a 40% tax rate), which would be reflected in a higher pro forma share price. Hence, purchasing the five million shares will not result in the desired debt level of 20%. By iteratively modeling this in Table 8.3, we determine that the corporation must repurchase 5.56 million shares at around $21.50, or close to 12% of the existing shares, and incur $120 million in additional debt. As a result, we are confident that the risk of wealth transfer is low under an 8 percent premium, as opposed to a 5 percent premium that is justified by a tax shield. The 8% premium could be required in order to get 12 percent of the outstanding shares in a self-tender, depending on the stock's trading history, ownership considerations, and corporate prospects.

Businesses that have repurchased their own stock have since reported returns that are between two and twelve percentage points higher than the market average, representing billions of dollars in shareholder value.

Yet, not every repurchase is the same. A share buyback that is poorly planned might be harmful. To boost leverage and enable a financial sponsor to depart, Samsonite, for instance, issued a fixed tender offer in May 1998 for nearly 50% of all outstanding shares at a 30% premium above market. Investors saw their resignation as a bad indication since they didn't think Samsonite's operational results supported such a significant rise in financial leverage. The company's share price originally fell by 50% and then another 50% during the summer as a result of the magnitude and premium of the repurchase. A significant amount of litigation followed the deal, which moved $200 million in wealth from non-tendering to tendering stockholders.

There is often no taxable event if a business trades in its own shares. Gains or losses are not subject to taxes under Internal Revenue Service (IRS) Section 1032. Gains and losses may, however, be taxable if a stock transaction is not excluded under Section 1032 since the costs of carrying out the transaction are often deductible. As of the settlement date of each acquisition, the equity account and cash account represent the accounting implications for a typical buyback.

Repurchases of Open Market Shares

The most popular buyback mechanism is an open market repurchase program, which is appropriate when the company's main goal is to transfer excess cash flow to shareholders. Traditional open market share buyback schemes recycle surplus money that would not yield its cost of capital, much like normal course dividends. To counteract the dilution of equity linked compensation schemes and to offer some level of market liquidity in the stock, open market buyback programs are often used to acquire 1 to 2 percent yearly of the outstanding shares. Businesses that start open market repurchases must disclose publicly the entire amount of shares

or money allowed for prospective repurchases, but they are not obligated to commit to a specific price, timeline, or execution. The company's treasury then carries out deals as it sees fit.

Open market repurchases are easy to do and reasonably priced (in terms of fees and premiums). Managers are easily suspended while maintaining control over time, volume, price, block purchases, and other factors. After the establishment of target price criteria, firms often employ limit orders, daily volume targets, average price objectives, and/or opportunistic purchasing to instruct an agent to repurchase their shares. Many SEC regulations apply to this transaction.

Just one agent may be present in the open market at any one time, even though management may choose one or more to buy shares on its behalf 10b(18) places restrictions on the pricing, time, and volume of a company's own stock trading. Purchasing is limited to 25% of the preceding 60-day average daily trading volume; nevertheless, buying is often maintained within 15% of the average daily trading volume to ensure activity does not alter market price. Likewise, with the exception of previously approved 10b(5)-1 programs, firms may not repurchase their shares while they are subject to a blackout. A safe harbor was developed by the Securities and Exchange Commission (SEC) to provide instructions for stock purchases that are free from any accusations of manipulation.

Open market repurchases are adaptable and unaffected by signals. These initiatives are often signal neutral since they lack the magnitude, dedication to execution, and supporting capital structure changes necessary to qualify as a substantial event, even though they could provide some level of price support during times of ownership turnover or brief price downturn. They are, strictly speaking, a zero NPV choice. Since they remain fully exposed to the market while executing a big transaction, managers may find that they must invest time, effort, and resources into monitoring market movements. Hence, open market repurchases are ineffective for major repurchases (e.g., 10%), such as those needed to significantly alter the capital structure, communicate with the markets, or redeploy a sizable quantity of surplus cash.

CHAPTER 12

STRUCTURED AND OPTION-BASED PROGRAMS

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There are several alternatives to conventional, cash-based open market programs, including option-based programs, expedited blocks, and structured private agreements that might be customized to meet particular company goals (e.g., cost objectives, risk preferences, and price targets). Contrary to standard 10(b)18 programs, opportunistic repurchases may sometimes be carried out by a counterparty during blackout periods.

With these organized strategies, many firms augment their fundamental open market share pursuits. Many of the original option-based strategies (such as the sale of put options) became less accounting-friendly as a result of changes in financial instrument accounting (FAS 133, EITF 00-19, and the FAS 150, also known as liabilities versus equities). These strategies now need to be marked-to-market (MtM) for financial reporting. Yet, new strategies that do not need MtM accounting treatment, are tax-efficient, and allow firms to use options to better accomplish their share buyback program goals have developed recently.

Offers for Bids

Businesses often utilize tender offers when they seek to buy back 10% or more of their outstanding shares, when a change in capital structure must be implemented immediately, or when there is little trading activity in the stock. Fixed price and Dutch auction tenders are the two types of tender offerings. Before launching a tender offer, it is important to assess if doing so will have a negative impact on the stock's float and trading liquidity. They are also proportioned and priced to reduce any possibility of wealth transfer between tendering and non-tendering shareholders, which is even more crucial.

Price-Fixed Tender

Since a set price self-tender enables a substantially bigger percentage of shares to be repurchased (often 10 to 20 percent of outstanding), it is most frequently used as an exit strategy by founders and financial sponsors. Fixed price self-tenders typically had the highest premiums (sometimes 10 to 15 percent) paid and, as a result, the most influence on the announcement's stock price. Fixed price tenders have a more powerful signaling impact than any other share repurchase method, causing a 12 percent average instant increase in share price. Self-tenders offer shares for a significant premium. A corporation will have price certainty but not quantity certainty in a

fixed price tender, which is a key factor to take into account. A firm might easily overcharge or undercharge for a fixed price tender. The share price may significantly collapse after the transaction and drop below pre-buyback levels if a buyback is carried out for the incorrect reason or executed/communicated badly, moving wealth from non-tendering to tendering shareholders. The biggest danger in any self-tender is wealth transfer since it rewards the wrong shareholders and puts the Board of Directors' fiduciary duty at risk.

Shareholders are invited to tender their shares to the firm during a 20- to 30-day period at a predetermined price that indicates a premium, often between 15 percent and 20 percent above the going market price, upon the announcement and filing of a Schedule TO. During any tender and for ten days thereafter, a business must halt its open market buyback program. Shares may be bought back rapidly, but if the corporation prices the shares wrong, the tender may be under or oversubscribed. When more shares are offered than are requested, the corporation purchases the extra shares on a pro rata basis and is required to publish how much the tender was oversubscribed. The business could buy extra shares. The offer must be extended by 10 working days if new shares totaling more than 2% of all outstanding shares of the same class are tendered. The business may elect to just buy shares that are tendered if there are less than desired, or it may decide to raise the bid price to entice more sellers (provided the offer is extended for an additional 10 days). Fixed price self-tenders have mostly become obsolete with the introduction of the safer modified Dutch auction. Stock trading patterns (lower price elasticity and return variance, smaller average daily trading volumes, greater insider and fewer institutional holdings, smaller market capitalization), size of the company (smaller market capitalization), and transaction size frequently influence the decision to use fixed price tenders rather than Dutch auction (larger).

Dutch tender for auction

The most effective way to include all shareholders while reducing the possibility of overpricing in a fixed price tender is via a Dutch auction. The modified Dutch auction self-tender, like Government auctions or the Google IPO, harnesses the forces of supply and demand to effectively and securely price the self-tender and reduce the danger of wealth transfer. At the time of the announcement, auction-based tenders typically result in returns to shareholders of around 8% over the market average, which is significantly less than the 12% realized by businesses that use fixed-price tenders. The share price often rises in the months after the tender, and there are rare instances of share prices falling after the tender clears, according to the long-term performance of auctions. In recent years, Dutch auctions usually have a gradually rising stock price following announcement, whereas fixed price tenders frequently suffer a little weakening after the announcement. While volumes are sometimes significantly lower (8 to 15 percent) than fixed price tenders, many shares are swiftly repurchased, most generally within 20 days. Although while it results in a fair clearing price and lower risk of mispricing, a Dutch tender often creates price uncertainty while providing a better degree of clarity on the quantity of shares to be acquired. The corporation announces at the start of the process that it is looking for shareholder tenders for a certain number of shares and is ready to pay, say, 0 percent to 15 percent over market (the maximum permissible price range). Shareholders react by notifying the corporation of the number of shares they are ready to sell at each price within the range within a certain time frame (the tender must be available for at least 20 business days). The final clearing price is established under Rule 13(e)-4 as the minimal price necessary to acquire the appropriate number of shares after all tenders have been received (from all shareholders who agreed to sell at

or below this clearing price). There are no transaction fees for tendering shareholders and all shares transfer at the same clearing price. The clearing price will probably be set at the low end of the range if there is an oversupply of shares (oversubscription), and the volume from each shareholder may be adjusted to reflect the oversupply. If all shares are offered at the minimum price, then it is just necessary to tell how much of a tender was oversubscribed. In the event that a tender is oversubscribed, the firm may think about raising the amount of shares sought (by no more than 2% of the shares now outstanding or by a bigger increase with a minimum 10-day extension of the offer), which must be disclosed in a press statement. As an alternative, open market buyback activity is often conducted after auctions to correct any residual supply and demand mismatches.

Case Study of a Dutch Auction

The repurchase program started by SPX, a diversified industrial corporation, is an example of a well-executed buyback. A Dutch auction tender offer for 2.7 million shares, or 18% of the total number of outstanding shares, was launched by SPX in April 1997. A 24 to 45 percent premium over the year's beginning price of $38 3/4 and a 12 to 30 percent premium over the previous day's closing price of $43 were included in the tender range of $48 to $56 per share. The buyback's aggressive terms and scale, together with top management' stated promise not to offer their own shares, were a strong declaration of trust in the business. Also, the repurchase helped to deleverage the company's balance sheet since it was funded with debt. The news was well received by the market, and SPX's share price had an unprecedented recovery of 20% during the two days that followed. Investors had such faith in the business that SPX was unable to buy more than 80% of the shares it wished to buyback, even at the $56 maximum price. The business was compelled to keep repurchasing shares on the open market. The stock was trading above $70 after a month.

The Handbook of Stock Liquidity

Investors find it challenging to join or leave a position without having an impact on pricing due to stock illiquidity. Due to the high fixed cost of maintaining research coverage for any one company, it is also difficult to build up a holding in an illiquid stock that is relevant to investors. Investors are faced with practical constraints and inefficiencies brought on by illiquidity, which may eventually take the form of odd ownership profiles and trading patterns, a wider bid-ask gap, a greater cost of equity, a lower stock price, and issues with market access. According to one research, the impacts of liquidity were directly responsible for value discounts: Investors would anticipate a higher rate of return from illiquid assets due to their greater susceptibility to market fluctuations and higher trading expenses, which would increase the cost of equity.

Stock liquidity is becoming increasingly significant as a result of changes in the securities business. 35 percent of all public businesses lack research coverage, and around 682 public companies have lost sell-side coverage since 2002. Now, 2 more businesses must tell their tale in public. According to a report, some CFOs devote up to 50% of their time on investor relations initiatives. The majority of the literature in this field is geared toward the buy side and omits useful advice for issuers in favor of investor measurements of liquidity (such as bid-ask spreads). 4 There isn't much advice or benchmark data on how to gauge liquidity. Illiquid equities often trade at a 10–20% discount, which rises as illiquidity does. Below $1 million in average daily trading volume (ADTV) or a $150 million float, stock liquidity may be compromised. However, for illiquid stocks, the consequences of hedge fund activities may be more evident. Although

though the average daily trading volume (180-day ADTV) of companies on the NYSE and NASDAQ is $20 million per day, it varies from barely $10,000 at the 1st percentile (such as Versata) to $272 million at the 99th percentile (e.g., Verizon). Similarly, floats vary from only $3 million to $52.6 billion, while having an average value of $3.2 billion.

The biggest liquidity issues are seen in smaller exchanges and emerging economies where research coverage and trade liquidity are more problematic. The average daily trading volume (ADTV) on the Toronto Stock Exchange and Frankfurt Stock Exchange is just $2 million and $3 million, compared to $5 million and $11 million on the Tokyo Stock Exchange and London Stock Exchange, respectively. Primary and secondary offerings that are actively promoted increase stock liquidity and provide favorable excess returns among illiquid equities. Illiquid primaries increase stock liquidity by over 200% and are linked to positive excess returns that are 14% greater than those of the cohort with liquid stocks. Liquidity is not greatly improved as a result. Compared to liquid secondary issues, illiquid secondary issues increase stock liquidity by roughly 175% and are linked with positive excess returns that are around 4% greater. Nonetheless, liquid secondary problems predominate. Blocks provide a comparatively negligible gain of 12 percent for illiquid stocks and 7 percent for liquid ones, making them the least effective move for increasing liquidity for illiquid equities. About 18 or 16 percent greater than the 2 percent baseline for liquid blocks are the excess returns for illiquid equities. When equities are divided, the ADTV of illiquid stocks typically improves by a modest 20% while the ADTV of liquid stocks decreases by 5%. Moreover, stock splits are linked to negative excess returns between 1 percent and 9 percent for both liquid and illiquid stocks. Some helpful strategies to adopt include more transparency and a thorough investor relations program to improve stock liquidity and market access, lower the cost of equity, and eliminate any possible liquidity reduction in share prices.

Measuring Stock Liquidity

There are other alternative metrics of absolute and relative stock liquidity (such as ADTV, float, and ADTV/shares outstanding), but until recently there were no market benchmarks to indicate the precise levels at which the impacts of illiquidity typically started to become more pronounced. Despite the fact that we concentrate on liquidity discounts, bid-ask spreads are a sign of liquidity. They tend to broaden as a consequence of underlying liquidity, according to empirical research. While they are well-liked among academics studying investment finance, they are less logical, actionable, and often used in corporate finance. They are also more a byproduct of liquidity than a driver of it. FactSet offers limited access to bid-ask data, which is also not reported in corporate filings.

Absolute liquidity benchmarks are $150 million in float and $1 million ADTV. Based on our own empirical study, we would typically anticipate illiquidity to have an effect at levels below these benchmarks, including possible value degradation, market access issues, and other related trading issues. Yet, additional qualitative elements like transparency and research coverage also have an impact on these issues. The most helpful metrics of stock liquidity are ADTV and float from the standpoint of statistical significance (two-tailed t-test on the relative values in the lowest quintile of stock liquidity vs the top half of stock liquidity). We exclude the relative liquidity metrics because they are negligible and the natural logarithm (ln) of market capitalization since it is a less useful alternative (absolute t-stat greater than 1.96 is statistically meaningful at the 95 percent confidence level).

Average Daily Trading Volume: The average daily trading volume is the daily amount traded divided by 100. Our typical average term is 180 days, while longer periods may be preferable for smaller equities and those with more erratic trading patterns.

For instance, equities with stringent no-guidance rules may display more unpredictable trading volumes, with the majority of the activity occurring at the end of each quarter as a result of a lack of other available information. Long average periods can be the best option in certain situations. In situations when there has been a follow-on, stock split, or change in leverage, dividend policy, or company profile, shorter time periods could be more suitable to exclude the less relevant range of prior history. Despite the fact that 60% of all firms have an ADTV of less than $5 million, this only accounts for 15% of the market capitalization on a dollar basis since so many illiquid stocks belong to tiny businesses. The ADTV benchmark is based on symptoms of illiquidity that have been seen at volumes under $1 million. Even though this represents 1,694 of the 4,457 firms (the 38th percentile), the market share on a dollar basis is just 4%. Similar findings are shown for ADTV in terms of the volume of shares traded, although ADTV's statistical significance is larger when expressed in terms of dollars.

Float

The freely traded equity stake (market capitalization less the equity content of convertible bonds and employee stock options, minus restricted shares and other closely held insider holdings) is referred to as float ($ million), which is a second indicator of absolute liquidity. This measure is averaged over a 180-day window. Due to trading constraints (both company-imposed and legal), a longer-term investment horizon, and a usually positive attitude on the firm, a high insider contingent might lower effective liquidity. Liquidity is not always guaranteed by a bigger float since other investors could also trade less. Although while 64% of all firms have floats under $1 billion, just 5% of the market capitalization is made up of these companies. Floats under $150 million often show indicators of illiquidity. Even though this represents 1,382 of 4,457 firms (the 31st percentile), it represents just 1% of the monetary value of the whole U.S. market capitalization.

ADTV/Float

We also use relative liquidity measurements. Despite the fact that relative liquidity is also beneficial, absolute liquidity is still crucial for effective investor entrance and exit from a company (i.e., without impacting stock price). Institutional investors often use colorful, albeit disparaging, terminology to refer to equities where "you can get in, but you cannot get out." Even with strong relative liquidity, it may still be difficult for investors to build a substantial investment if absolute volumes are low. While it still has some correlation with firm size, our measure of relative liquidity is obtained by dividing ADTV by float. Liquidity issues might arise when ADTV/float is less than 0.10 percent, which is the situation for 593 of 4,457 businesses (13th percentile), or 27% of the market on a dollar basis.

Outstanding ADTV/Shares (%)

The ratio of average daily trading volume to shares outstanding is known as ADTV. When trading activity is extremely low in comparison to the number of shares outstanding, stock liquidity may be compromised. The larger divisor (i.e., total shares outstanding), a modest modification to our previous measure of relative liquidity, is meant to lessen the danger of overstating relative liquidity in situations where there was a significant insider block that reduced

the size of the float. Instances with less than 0.10 percent ADTV/outstanding, or 755 of 4,457 firms (17th percentile), or 27% of the market on a dollar basis, might be troublesome for liquidity.

Outstanding Stock (mm)

Because so many businesses use stock splits to keep their shares at a price point between $20 and $100, total shares outstanding (including restricted shares but omitting the underlying shares for convertible bonds and employee stock options, once more averaged over 180 days) has a tendency to be correlated with firm size. Less than 10 million shares of a company's outstanding stock are often a symptom of illiquidity. Even though this represents 824 of 4,457 firms (19th percentile), it represents just 1% of the market in terms of dollars. More shares outstanding, however, does not always mean greater trade or float. For instance, even if stock splits are linked to very slight gains in liquidity, they often aren't enough to lift these stocks out of the illiquid group.

Livability Discount

A number of measures of absolute and relative liquidity, such as ADTV, float, ADTV/float, ADTV/outstanding, and shares outstanding, can be used to determine the liquidity discount from the relative market premiums or discounts, which are based on trading multiples versus the sub-industry median of the Global Industry Classification Standards (GICS). Since financial leverage distorts price-to-earnings (P/E) multiples and because negative values cause additional data to be lost, we do not accept them. Due to their larger standard error and lesser predictive potential, we disallow EV/sales and EV/capital multiples. Depending on the metric, considerable value discounts might be seen between the first and twenty-fifth percentiles of stock liquidity. Findings are much less significant with ADTV and considerably more trustworthy with ADTV/float (statistical significance under the Wilcoxon sign-rank test at the 95% confidence level). The 10 to 20 percent liquidity discounts on stock prices are proportional to illiquidity and rise as it increases. Higher levels of liquidity do not carry a premium, while greater floats do carry statistically insignificant premiums. The effects of liquidity reach much beyond the 1,800 or so U.S. equities that are below our criteria for liquidity. The stock liquidity on markets outside of the US is usually much weaker, and a greater proportion of listings may experience major discounts or other irregularities.

Differences between Stock Illiquidity

A float of less than $150 million or ADTV of less than $1 million are present in around 1,815 publicly traded U.S. equities. While it occurs in several businesses, stock illiquidity is particularly common in the financial and technological sectors. Smaller firms make up a big portion of illiquid stocks, but other types include American Depositary Receipts (ADRs), dual-class shares, stocks with significant inside ownership positions, and other stocks with unusual ownership profiles. The policy ramifications of stock liquidity are extensive given the extent and ubiquity of a liquidity discount. These are as relevant and maybe even more convincing for exchanges outside the United States, where liquidity issues may be more significant.

The best capital structure

Conventional capital structure factors may need to take a back seat to the paramount liquidity problem. Raising equity might be one of the leverage policy's goals in order to improve stock

liquidity. To offset the expense and challenges of market access, cash policies will be focused on creating and keeping high amounts.

Disclosure

By improved reporting, transparency, and investor interactions, illiquid firms may be able to minimize their cost of equity.

Investor Distributions

Distributions to shareholders (dividends and share repurchases) might be considered a waste of equity in the case of an illiquid stock. A minor program (for example, 1 percent annually) may improve liquidity by giving the stock a natural buyer who creates a market, even if a program that buys too many shares runs the danger of further depleting the float. A tiny dividend may improve a stock's ownership profile by expanding the pool of eligible investors, however this effect is often exaggerated.

Employee perceptions of stock options are lowered due to liquidity and lack of diversity; this is especially true for workers of illiquid corporations.

While limited shares might provide back-door stock issue, cash is preferred. Primary and secondary issuance, block transactions, and stock splits are only a few of the possible capital market remedies to stock liquidity issues, although their effects on stock liquidity and excess returns vary. Compared to liquid equities, illiquid stocks have a distinct influence.

Initial Issue

The main issuance strategy outperformed the other capital market strategies in terms of improving stock liquidity. Although the ADTV of liquid equities improves by only approximately 6%, that of illiquid ones soars by 2000%. Liquidity has improved to the point that 32% of the illiquid equities should be reclassified as liquid stocks. Between 2000 and 2005, there were 1,281 non-IPO main offerings; of these, 203 were illiquid; however, 65 of them were sufficiently liquid within 45 days following the offer to merit reclassification as liquid. Excess returns are correlated with increased liquidity. Primary issuance has been linked to positive excess returns of 22% for illiquid equities, which is 14% higher than the baseline of 8% for liquid stocks (liquid and illiquid excess returns significant at 99 percent confidence level; difference significant at 80 percent). While excess returns were favorable and liquidity increased, usage of funds remains a crucial aspect of stock performance in initial public offerings. Any ambiguous or maybe controversial use of proceeds might give the market the wrong message and lower the stock price.

Primary Issuance and Use of Proceeds

While primary issuance has been linked to negative excess returns, this often does not account for the liquidity of the stock or the advantages of the offer period. Stock prices have generally increased over this time. Illiquid stocks benefit from primary issuance in terms of liquidity and excess returns. With every primary issue, the intended use of the funds is crucial. The market does not handle all instances similarly, according to research. An important research that was recently released reveals that the use of proceeds has a significant impact on how the market responds to news about common stock (i.e., capital expenditures, debt reduction, and general purposes).

Capital Investments While 2-day excess returns at announcement were 3.4 percent, researchers discovered that returns increased to 6.7 percent when the preceding two month runup was taken into account. 10 They also discovered that when money was invested in organic growth, equities did better if businesses had higher valuations and less cash on hand. The acquisition itself, rather than the equity issuance, may be to blame for the negative excess returns associated with acquisition financing. The best and most common option may be to issue stock in order to maintain financial health (i.e., credit rating) and a desired capital structure. Debt elimination Similar to this, 2-day excess returns were 2.9 percent, but when the earlier two-month runup was taken into account, they rose to 2.3 percent. The equities that performed the best were those of more heavily leveraged corporations, where deleveraging was mentioned as the main use of revenues. When issuing equity for deleveraging objectives, the funds may be used to increase negotiating power when refinancing, reduce maturities, retire debt, or tender for undesirable obligations.

Several Purposes Unexpectedly, 2-day excess returns were 1.8 percent, and when the earlier two-month runup was taken into account, they increased to 5.3 percent. While the earlier 2-month runup was not as significant a determinant, equity issued for cash and general company purposes was determined to have the least adverse effect on announcement returns.

Additional Issue

Liquid stocks are the main users of secondary issues. From 2000 to 2005, there were 403 secondary offerings, of which 366 were liquid and 37 were illiquid. Secondary offerings did, however, increase stock liquidity. The ADTV for liquid equities rose 13%, whereas the ADTV for illiquid stocks rose 175%. 35 percent of the illiquid stocks among secondary markets were raised to the level of a liquid stock. For secondary issues, illiquid stock short-term excess returns are 8% and liquid stock short-term excess returns are 4%. The majority of secondary issues are launched by equities that are already pretty liquid by our criteria, making it challenging to make conclusions about the relative efficacy of secondary issues since there is not enough data for the illiquid instances to establish statistical significance. Anecdotally, marketing secondary issuance may significantly increase stock liquidity and value for smaller, less liquid firms. In contrast to primary issuance, it might be challenging to prove significance for positive excess returns related to the marketing period with secondary issuance.

Block Dealing

While most blocks are liquid, block transactions are linked with a little rise in stock liquidity. 16 equities were illiquid in the 419 block transactions between 2001 and 2005, while 403 were liquid. ADTV rises by 12 percent for illiquid equities and 7 percent for liquid ones, 18 percent, or 16 percent greater than the 2 percent baseline, are the excess returns for illiquid stocks. At a 95% confidence level, both liquid and illiquid excess returns are substantial. Block deals and secondary's have a lesser risk of bad signaling since they are not activities conducted by the corporation specifically. These are difficult for illiquid corporations to begin or carry out, however, for the same reason, and are often impacted by third-party tax and estate planning.

Stock splits are a typical occurrence. Historically, despite inflation and actual growth, the share price of publicly listed corporations has remained stable due to the frequent usage of stock splits. Similar to forward splits, reverse splits are employed to maintain pricing points. According to a lengthy analysis of stock splits from 1963 to 1982, 6 percent of corporations divided their shares on average each year at a median presplit price of $43.50. Another analysis revealed that during

the 1930s, the average share price on the NYSE has varied between $30 and $40. 12 During the 1930s, consumer prices have climbed by a factor of 10 and the S&P index by a factor of 16, respectively, yet this price range has remained the same. 726 firms were separated into 21% over the previous 15 years and 5% over the previous 5 years. Yet, since 1990, the average stock price has grown and stock splits have not kept up with the market. The average price of all outstanding shares increased from $18 in 1990 to $40 in 2005 during the years 1990 and 2005. The fraction of shares priced above $50 increased dramatically within the same time frame, rising from roughly 3 percent to more than 9 percent.

Yet, the statistics indicate that there hasn't been much of an increase in the proportion of businesses who are prepared to allow their stock price to rise over $100; this percentage has remained at about 1%. This seems to be mostly a marketing choice since, in investors' minds, $100 represents a significant premium position pricing point. Because splits involve visible expenses (like listing fees, administrative expenditures, and brokerage commissions) but no evident economic advantages (like a positive effect on future cash flows), their predominance has long seemed perplexing.

The Price of Share Splits

Costs associated with stock splits include increased brokerage fees paid by investors as well as greater registration and administrative expenses for the firm. New shares produced by a split for NYSE-listed businesses would suffer an initial listing charge, up to a maximum of $250,000, and perhaps higher yearly listing fees. In order to serve a bigger shareholder community, administrative expenditures can include greater printing and mailing costs. According to one estimate, a stock split for a Dow 30 business would cost more than $1 million. A stock split raises investor expenses in addition to the costs immediately borne by the firm, and brokerage charges often rise with the number of shares moved even though the cash value of the deal stays the same.

Advantages of Stock Splits

The frequency of stock splits is explained by a variety of factors. Ownership, stock liquidity, buy-side signaling, and sell-side promotion are the four categories under which these arguments might be grouped in terms of value generation. Ownership The number and diversity of owners are generally increased through stock splits, presumably by making it simpler for individual investors to buy round numbers of shares and maybe due to the irrational attractiveness of a lower price point. This may result in a more efficient and liquid market for that asset, with value being produced via smaller bid-ask spreads, less risk, and cheaper capital costs. According to a poll, 94% of managers said that decreased round lot expenses and a rise in the number of shareholders were advantages of stock splits. A round lot is less expensive after a stock split. Also, it seems that a stock split will result in more stockholders. When we examine other firms at the same time, a lower stock price is linked to a significant rise in the number of shareholders. We discovered that a greater split factor—that is, the proportion of outstanding post-split shares to pre-split shares—is linked to a significant rise in stockholders. According to one research, the total market value of equity, stock volatility, and stock price all helped to explain 32% of the variance in Compustat businesses' shareholder counts. Keeping size and volatility constant, every $1 decline in stock price resulted in a 1.4 percent rise in the number of shareholders. According to this concept, a two for one split that decreased a stock price by $25 would result in a 42 percent increase in shareholders. Similar results were obtained using a 5-year time series model,

with the split factor, initial equity market value, volatility change, and 5-year price all accounting for 7% of the change in the number of owners. A larger and maybe more supportive shareholder base may be the main advantage of stock splits. Compared to institutional shareholders, individual shareholders are more inclined to support incumbent management (such as via option reserves and director elections). Stock splits may assist companies reach a more receptive shareholder base during proxy votes and lessen the prospect of hostile takeovers.

Stock Availability Stock splits have been shown to lower trading volume in earlier studies. 16 According to one research, a two-for-one split decreased trading activity during a five-year period by 2% of shares outstanding or more than 20% of the ADTV. Stock splits showed the least advantage of all the capital market strategies to boost stock liquidity that we examined. In reality, whereas the ADTV of illiquid equities rises by a modest 20%, it falls by 5% for liquid ones. Just 4% of the illiquid stocks have improved liquidity to the point where they should be reclassified as liquid equities. Since stock splits don't address the fundamental core causes of float and volume, they often don't meaningfully increase liquidity. In addition, after a stock split, illiquid corporations maintain their illiquidity. Also, there is evidence that stock splits increase volatility, although somewhat over the long run. According to this model, a two for one split will only increase stock volatility by 0.005, or less than 2% of normal stock volatility. This results in the following management advantage of stock splits: Existing stock options gain value when market volatility increases, but future option awards may be reduced lower over time to counteract this impact. There is no proof either in favor of or among the separating corporations of a reduced beta (cost of equity). The tax option or liquidity arguments must be supported by a lower beta; more volatility increases the tax option value and decreases the stock's anticipated or needed rate of return. Signaling the stock price might rise as a result of a bigger attribution of growth value thanks to stock splits, which can provide management a means to communicate more promising future possibilities. Yet, signaling is weak for both liquid and illiquid equities; stock splits are connected to negative excess returns of 1% and 9%, respectively. Moreover, research has shown that long-term excess returns are negative. Five years after a split, excess returns were notably negative, according to one long-term research. With a mean 5-year matched buy-and-hold cumulative abnormal return of 16.2%, abnormal stock returns were positive for the first year after the ex-date of a split but negative for the second through fifth years.

Splits are often linked to other developments (such earnings and dividends), making it difficult to distinguish between causes and simple associations. After a stock split, bid-ask spreads rise as a percentage of stock price proportionate to the drop in stock price brought on by the split. Splits may be used by businesses as a positive signal impact. The signaling defense only supports a stock split if it is the split itself that drives the market response, not some other contemporaneous or anticipated event. Yet according to one research, businesses only kept their surplus return if the split was used to enhance the dividend. Businesses who didn't raise their dividends forfeited some or all of their extra return. A failure to raise would not reduce the return if the split, rather than the possibility of an increase, was what created the extra return. According to research, if the profits growth after the first split was below average, the market's response to a second stock split would be lessened. Compared to a stock split, a share buyback probably offers a stronger signaling strategy. Promotion others have suggested that stock splits might result in more sales coverage and additional research since they raise broker-age commissions and produce transaction costs. Bid-ask spreads are wider for equities with lower prices, and brokerage costs are greater for smaller investors and deals. Some people think that these incentives will boost supply and demand and raise stock prices. Yet, according to both our own study and published

studies, splits do not increase trading volume or stock prices, making the sell-side marketing justification for a stock split a tenuous one. If a company decides to split its shares, we advise them to review their dividend policy and think about keeping the same payment per share, which would be an effective dividend increase, especially if the stock split is being done for signaling purposes. We suggest adjusting grant objectives by multiplying target awards by the split factor, as well as adjusting stock options for the split. The set percentage ownership interest can only be maintained with this change, since the fixed share award rules' goal is to harmonize management and owner interests.

CHAPTER 13

STRATEGIC RISK MANAGEMENT

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A major energy business sells its projected oil output today in order to lock in the price and interest rate while using the funds to buy its stock. In order to feel more secure about its choice to minimize the amount of its sizable and expanding cash balance, a well-known technological hardware company expands the size of its bank line and foreign currency (FX) hedging program. A worldwide retailer reduces the risk in its pension plan's investment portfolio to accept higher financial leverage. Enterprise risk management (ERM) and the ideal capital structure have become more entwined. Analysts have noticed that a growing number of businesses are implementing enterprise-level approaches to risk, a more comprehensive and systematic review of potential risks and ways to mitigate them. These initiatives are not necessarily being undertaken to reduce risk, but to more actively manage it. Normally, these evaluations are combined at a corporate level, perhaps with direct involvement from the Board or Audit Committee. Instead than concentrating exclusively on financial risks, these assessments often focused on reputation, litigation, product development, and health and safety issues. We have offered positive feedback whenever we have seen these evaluations put into practice, especially when the Board or Audit Committee is actively participating. While ERM has expanded to take up a significant amount of most Board of Directors agendas, there are several ways to understand its scope and goals. Moreover, the benefit of risk management is seldom quantified, nor are empirical data or connections to the body of corporate finance research made. The majority of the ERM literature continues to be based on qualitative analysis and conceptual frameworks. For the majority of big firms today, risk management is a strategic concern since they must deal with a broad and complicated spectrum of risk reactions. Potentially suitable options, albeit maybe not immediately apparent ones, can include avoiding and mitigating risks, hedging risks, and capital structure solutions for managing residual risk. For instance, the Sarbanes-Oxley Act of 2002 (SOX) and other post-Enron governance changes have increased the focus on identifying and controlling operational risk sources. In order to better align their revenue and cost footprints, many businesses have changed their sourcing and pricing strategies as well as other operational aspects. Yet, operational limitations, competitive responses, and strategic flexibility may necessitate financial hedging when it is inherently undesirable to hedge economic vulnerabilities. The active management of risk positions, hedging instruments, timeframes, and quantities is another aspect of risk management. Transparency, liquidity, capital costs, and the ability to carry out strategic initiatives may all be improved as a result. We have seen a resurgence in interest in

the economic substitution of risk management for equity, such as de-risking business assets as well as cash flows to create more debt capacity to repurchase equity or getting access to contingent capital rather than carrying inordinate cash reserves to manage event risk. This is due to financial sponsors and hedge funds putting more pressure on balance sheet efficiency.

Risk Management

Many strategies exist for enterprise risk management to increase corporate value. ERM may reduce asset and cash flow volatility, which increases strategic liquidity, lowers borrowing costs, raises debt capacity, and improves transparency.

Strategic Flow of Funds

Strategic investments meant to assist bridge liquidity gaps may be delayed or even canceled as a result of cash flow instability. This will lower intrinsic value by lowering growth prospects and future cash flows. A company may decrease or even completely eliminate the likelihood of a cash shortage that delays or scales backs key investment via risk management. As a result, managers will be better able to plan for the degree of investment necessary (across a business cycle) to carry out their strategy and increase shareholder value. As an example, Merck is a well-known case study in risk management, where effective management of foreign exchange and interest rate risk contributes to the maintenance of strategic liquidity for the company's multibillion-dollar R&D investment program. Based on an assessment of natural offsetting exposures, volatility spillovers and correlations, and the cost of hedging, the net economic exposure that is hedged is determined.

Price of Debt

Risk management may improve credit profile, debt capacity, and cost of debt by lowering cash flow volatility and the unsystematic element of overall risk. These components of weighted average cost of capital (WACC), in contrast to beta and the cost of equity, are impacted by diversifiable risk; a decrease in cash flow volatility lowers unsystematic risk and the cost of debt. According to empirical evidence, rating agencies prefer companies with stable cash flow and profit measures. In turn, these better credits are linked to narrower credit spreads and cheaper funding costs. The interdecile range for around 1,900 industrials-rated enterprises is shown by horizontal bars. Sector 20 of the Global Industrial Classification Standards (GICS). A 5-year standard deviation of quarterly net income as a proportion of sales is the cash from operations (CFO) volatility, which is calculated as the 5-year standard deviation of quarterly cash flow from operations as just a percentage of revenue. The 5-year standard error of quarterly EBITDA as a percentage of sales is known as the earnings before interest, taxes, depreciation, and amortization (EBITDA) margin volatility.

Further empirical evidence was supplied by our own univariate regressions of the cash flow and earnings volatility indicators. We discover a link between credit quality and volatility. We would anticipate credit to show in the form of improved ratings to the degree that cash flow volatility can be controlled down via risk management; once the improvement is obvious, this may take some time. By reduced taxes, risk management also decreases the after-tax cost of debt. Reduced earnings volatility may boost the use of the debt's tax-shield. Although many tax codes have such a mechanism for offsetting net operating losses (NOLs), the loss of NOL time value, the asymmetrical alternative minimum tax (AMT), as well as the inherent convexity of a progressive tax rate all lower the value of taxes paid by businesses with less volatile pretax earnings.

Revenues in peak years tend to be taxed at higher rates, and NOLs are consumed throughout low-income post-trough years that would have otherwise been subject to lower tax rates. Risk management may also raise the estimated value of the debt's tax shelter and decrease the likelihood of financial difficulty.

Capacity for Debt

Empirically, more debt capacity is also related to reduced volatility. Credit risk is significantly influenced by volatility. Although keeping equivalent or higher credit ratings, companies with more stable and predictable cash flows tend to be typically able to borrow larger sums than companies with less stable and erratic cash flows. Lowering risk enhances one's ability for taking on risk, which in turn raises debt capacity, debt of better quality, WACC, and intrinsic value. In order to account for volatility, we included an independent variable to our credit model for the mining sector. A more accurate and dependable regression model, based on an extra-sum-of-squares F-test, was produced as a result of our multivariate regression study of 1,908 rated industrials in GICS sector 20. Our capacity to quantitatively forecast credit ratings has greatly increased as a result of the EBITDA margin volatility (at the 99 percent confidence level). Based on 3-year trailing quarterly standard deviation, EBITDA margin volatility was calculated. Based on 10 years of data for 35 similar companies, the estimated credit score is 21.5 1.5 Ln(revenue) 3.5 FFO/debt 16.6 FFO/sales volatility. According to our model, decreased volatility will result in higher debt capacity. In reality, we anticipate that before resulting in increased debt capacity, a change in risk management strategy may need to establish a track record of decreased volatility. We calculated that a decrease in earnings before interest, taxes, depreciation, amortization, and rent (EBITDAR) margin volatility (through risk management) could result in the ability to take on $200 million more in debt and buy back shares at a 3 percent rate while maintaining the current rating, lowering WACC by 5 to 10 bps and implying $400 to $600 million to $800 million in intrinsic value ($1 to $1.50/share). A little loss to VaR ($8.65 / 1) had to be incurred in order to generate near-term profit accretion ($2 EPS). We calculated that a large, investment-grade technology company might also increase its borrowing capacity by about half a notch by reallocating its own pension assets from a riskier mix of 75% equity/25% fixed income to a more conservative 30%/70% mix. This would allow the company to implement a modest increase in leverage with the proceeds going toward share repurchases while maintaining the same credit profile.

As a tax-efficient replacement for stock, one energy business hedged proved developed producing reserves (crude), allowing larger leverage and a cheaper cost of capital. Moreover, for internal SBU performance evaluation and management reasons, they built a value-based management system that incorporated mark-to-market changes in overall estimated value of proved and probable developed and undeveloped resources as well as centrally hedged price exposures.

Governance and Transparency

The noise brought on by price or rate variations may be removed by hedging exposures, which isolate operational performance. This makes it possible for managers and investors to see and react to the underlying company fundamentals more clearly. To lessen the exposure of its own cash flows to market swings, one large industrial corporation uses risk management strategies for commodities, interest rates, and currencies. The firm employs futures contracts to hedge purchases for its aluminum contract hedging program (usually within 3 years). The value

proposition of risk management rises with the price of stock, essentially making it a (tax efficient) alternative for equity. Hence, when stock beta and the riskless rate rise, so does its intrinsic value. The WACC curve is lowered and flattened as a result of reduced interest rates. In addition to the total cost of equity being lower, the relative benefit of being able to raise leverage in terms of WACC (and eventually NPV) is also lower. As a result, risk management's value proposition is diminished. Nevertheless, the favorable credit spreads of today, which raise the value proposition, somewhat offset this impact. Similar to this, smaller betas flatten and decrease the level of the WACC function. Once again, the value proposition is diminished when the curve flattens.

Mapping and modeling risk

A framework (Define, Measure, Analyze, Improve, and Control) suitable for developing a comprehensive ERM control process is offered in the Six Sigma literature. We will describe the first stages in this section: identifying, measuring, and assessing the risks the organization confronts and their causes. The last management component (i.e., enhance and control) of the process will be covered in the remaining sections of this chapter as well as the next chapter. While there are many different definitions of enterprise risk in the literature, we shall define it to cover both operational and financial hazards. Operational hazards are often a result of the organization, internal processes (such as rules and procedures), and the operational environment (such as location) (e.g., its people and organizational structure). Political, economic, labor, regulatory, product liability and litigation, and execution risks are a few examples of these potential dangers. We include liquidity, interest rate, credit, currency, and commodity price risk in our definition of financial risk (often referred to as market risk). Corporate treasury often oversees financial risks, which are heavily scrutinized and subject to quantitative research. Yet a lot of this research is inadequate since some asset types, including pensions and real estate, place the company at significant financial risk and typically fall beyond the purview of corporate treasury. Moreover, distinctions between operational and financial risk are often hazy. Financial risk, for instance, may be a manifestation of Treasury operational risk. To reduce transportation and currency concerns and to better align cost and revenue footprints, manufacturing and sourcing patterns might be changed. If natural matching is not ideal, operational limitations may call for financial hedging. Physical hedging and pass-through pricing may be used in situations when financial markets are unprofitable or illiquid. Even within financial risks, there is blurring since it is possible to more effectively manage economic exposures by netting numerous currency, interest rate, and commodity risks.

Operational Risk Measurement and Analysis

The Six Sigma aim of minimizing variation in a risk management setting transfers to a financial one of lowering the uncertainty and volatility of cash flows, i.e., an enterprise-wide process control to lower risk and raise the caliber of cash flows.

Flowcharts for the process

Process flow diagrams are used at the start of the risk mapping process to assist identify all possible hazards, their underlying causes and risk drivers, and their economic repercussions. Process flow charts direct the basic processes for improvement and control together with root cause analysis. Each risk measure is verified, examined, and improved until it is within acceptable tolerances from its benchmarks using both the existing and the newly established procedures.

Analyses Pareto

Making success with an ERM endeavor requires prioritizing analysis and management initiatives. Pareto analysis is a useful tool for ranking and prioritizing risk mitigation activities, preferably in terms of the estimated possible economic benefit (qualitative or quantitative). By concentrating on the largest risks, this aids in allocating limited resources to their most promising and beneficial applications.

A Fishbone Diagram

The secret to process improvements and risk avoidance or reduction is root cause analysis on possible sources of risk. The method aids in the identification of all possible causes by starting with undesirable consequences like present or projected economic loss. This exercise leads to process redesign initiatives, which are supported by process flow diagrams, so that processes are modified to include improved preventative measures and checks and balances. Major risk factors shall be limited to the extent required for operations to be kept within reasonable margins of predetermined benchmark results.

Financial Risk Analysis and Measuring

Understanding the risk drivers, their spot and forward rates, distribution, volatility, and correlations is necessary for measuring and assessing financial risks. The economics of the risk dynamic may then be captured through stochastic modeling. For instance, using correlation between factor prices, we mapped and assessed the financial risk drivers of the forest products firm to assess their net economic exposure from various input and output factor risks (such as commodity, currency, and interest rate). Cross correlations were seen, however they were often weaker and less persistent than anticipated. While the executives had been working under the notion that their operations and financial market factor inputs were strongly correlated, we discovered that these correlations were weak and unstable, which is an issue we also encounter with national equity risk betas.

In contrast to the main currency and interest rate financial markets, business linkages are often significantly weaker and less stable. As their underlying volatility and correlations are not consistent, huge complicated financial models that integrate stochastic analysis and business volatility drivers can provide the impression of accuracy that is not there. Stress testing for reasonableness under deterministic rate scenarios is the easiest way to handle stochastic model limitations like constant volatility (i.e., a single volatility for each element that does not change across the simulated time) and the absence of drift or mean reversion. Rate of Interest and Credit Risk The value and cash flows associated with financial obligations, such as debt and leases, as well as cash and investments, pension assets and liabilities (and other post-retirement benefits), and certain economic provisions and reserves are all impacted by Treasury rates, term structure, and corporate credit spreads. The majority of businesses evaluate rate risk using a straightforward what-if analysis of the effects of a 1% change in rates and a corresponding shift in the yield curve. Testing the effect of a 1% rise or reduction in rates misses the fact that rate changes are often varied throughout the term structure of the yield curve, despite the fact that it may seem enticing due to its intuitive simplicity. As long rates (and interest expenditure) may increase even if short rates (and interest income) stay low, cash holdings may not act as a natural hedge for obligations with floating rates. Net exposures can be more accurately simulated using stochastic models. To determine anticipated future short rates with a range that enlarges with time, we extract separate shocks from a lognormal distribution. To ensure that the range of

possible spreads remains consistent throughout time, we derive term spread shocks from a normal distribution and apply them to term spreads. Several independent examples of the whole term structure are produced by Monte Carlo simulation of a two-factor form of the Rendelman and Bartter model in a stochastic framework. In the one-factor Rendelman and Bartter model, dr prdt Ordz, where p and O are constants, is the risk-neutral process for short rates. In an interest rate model, credit spread risk may be represented separately. It is possible to build and calibrate a simple model of potential credit spreads using past data. These models may be bootstrapped using spot rates and fitted to any forward curve, with simulated rates limited to zero. We often compare our results to the market implied bond market, a bias-adjusted yield curve, and an interest rate projection that the customer has specified. For base case modeling purposes, yield curve changes based on historical data or mean reversion assumptions are becoming a more frequent divergence from market expectations. Yet, determining the optimal historical era for calculating equity betas and market risk premiums has similar difficulties as determining the relevant range of experience to serve as the basis for any modification. User projections are increasingly common due of uncertainty around interest rates and long-term equilibrium exchange rates.

Commodities and currency risk while they often have a greater economic impact on revenues and expenditures, commodities and currencies are sometimes given less consideration by corporate finance professionals. This could be attributed in part to the risk's apparent complexity as well as a historical obsession with corporate treasury interest rates. The bulk of financial risk arises from currency and commodities exposures in the technology and healthcare industries, which tend to be more international and have minimal debt and small cash flows. Even though there are a lot of nations to keep track of, the majority of businesses only deal with a small number of different currencies; this is particularly true if we use the Pareto principle, which is effectively the 80/20 rule. Many also have relationships with one another. The majority of the risk will be represented by a few key exposure groupings in terms of currencies and commodities. Despite the temptation of illusory accuracy, stochastic models perform best when there are a limited number of active factors. Third, we reduce complication by concentrating on (net) economic exposures; from an economic standpoint, balance sheet exposures (such as translation risk) tend to be less significant until they can be taken into account in future cash flows.

After hazards have been identified, assessed, and modeled, benchmarks must be established. In order to monitor departures from benchmarks, managers examine these risks and define benchmark objectives for risk mitigation. From a policy standpoint, here is where the real challenges start. With regard to benchmarks, we see significant variety and ambiguity in practice; this approach is unlikely to be permitted in the post-SOX climate of today. Important questions that specialists are unable to address there are a few universal elements to bear in mind, even if the solutions to these basic issues differ from instance to case. But first, we list the most popular benchmarks and metrics in use today.

Quantity of commodities or currencies hedged annually and the annual hedge ratio. This metric represents the amount of a financial or physical hedging transaction but often lacks any appropriate baseline or economic justification. Moreover, correlations and organic hedges are disregarded.

Notwithstanding the fact that it does not account for the effect of duration, asset and other natural interest rate exposures, or currency difficulties, the fixed-floating (%) mix dominates discussions

of interest rate management. There are several anecdotal standards (like 30%), but they are unfounded by economic theory, insensitive to changes in rate circumstances, and never updated to take into account dynamic tactics.

Another prominent description is debt length and currency mix, although once again there is no associated best practice standard or justification. Financial responsibilities are thought of in a relative vacuum, ignoring the effects of correlations and natural exposures.

To manage risk, we use value-based goals. Yet, these goals are generally limited by bookkeeping, ratings, and other factors. Given these constraints, we often aim to maximize intrinsic value within a target credit rating, subject to accounting-friendly treatment and procedures that adhere to accepted industry standards. We often view intrinsic value in terms of net economic exposures and consolidated cash flows (or core profits as a substitute) (to facilitate a netting of risks and simplification of the analytical process). One business used the following criteria as a benchmark: In order to maximize net interest income from a risk-return standpoint, manage interest income and cost on a net basis. As its assets now outweigh its obligations, the asset side of the equation is the more important. Nevertheless, a straightforward netting ignores durational mismatches, necessitating simulation analysis and stress testing to assess risk and return from both a short- and long-term viewpoint for financing possibilities. Lastly, planned deleveraging was probably going to minimize the company's exposure to floating rates, which was a bad move. The optimum objective is to maximize intrinsic value while keeping the business's risk exposure within reasonable bounds. Moreover, a simulation's tails may be more essential to study than its predicted results. The best option will rely on the tails, for instance, if two predicted values are generally equal but one alternative has a larger range of possible outcomes. The option with more clarity around its predicted value will be the preferable choice if the majority of the risk is on the downside. Yet not all risk is bad; some risk is good risk. Today's VaR analysis usually misses this fact. The option with less confidence around its predicted value may be preferable if the majority or all of the uncertainty is on the upside, particularly if the negative risk is within acceptable bounds or predefined boundaries. Intrinsic value will be reduced by any risk that significantly lowers liquidity or financial strength (e.g., estimated credit profile or long-term and short-term target credit ratings serve as both a reasonable proxy) to the point where it hinders access to capital, the execution of a business plan, or WACC.

Constraints

While our goal is to manage net economic exposures within a framework that maximizes intrinsic value, there are real-world factors and limitations that must be taken into account in order to operationalize enterprise risk management. Investor positioning and credit rating treatment concerns are the two most crucial ones. While not the goal, any short-term financial effects must be acknowledged and kept within the parameters of a message that can be sent to the financial markets or risk seeing market values decline.

Ranges

Financial policy benchmarks provide a range or tolerance around a goal that may be used to account for normal variations, opportunistic movement away from the aim, and perhaps taking advantage of market views (in the short term or generally). By contrasting the expenditures that were actually incurred (ex post) or anticipated (ex ante) with the costs that would have been realized had the business maintained a benchmark portfolio, any advantage of departing from a goal is determined. It could take some time for ex post monitoring of the effects of deviations

from the benchmark to become detectable with any level of statistical reliability. By estimating different NPVs and the short-term budgetary effect, stochastic modeling allows ex ante informed policy decisions. De-risking pension assets to permit greater financial leverage and share repurchases was explored by one A-rated corporation. With the corporate pension assets for this corporation shifting from 75% to 30% equity, the 5-year present value (PV) of earnings per share, or EPS, (notionally a VaR method), fell by 7% from $9.00/1.39 to $8.35/1.02, and the near-term EPS dilution increased by 6% (from $2.00 to $1.88). 4 The company could theoretically add almost $400 million in new debt and repurchase 6% of its own stock, which would increase EPS to $2.20 and the 5-year PV of EPS to $8.49, but while ratings treatment may limit this size. However, the cost to VaR and EPS could be offset by the increased leverage and the share repurchase.

External Thoughts and Restrictions

Whilst not a goal, the near-term financial effect must be recognized and kept within the parameters of a message that can be communicated to the financial markets or there is a danger that market values will not fully capitalize on the development of intrinsic value. With particular attention paid to accounting treatment, practice in the industry, rating agency treatment, and investor opinions, we analyze the impact:

Accounting Procedures. The degree of mark-to-market accounting has significantly grown as a result of changes in the accounting for financial assets and liabilities (e.g., FAS133), which has led to higher earnings volatility for certain risk management techniques. Balance sheet and noncash earnings hedges, however, have often been made less accounting friendly. Generally speaking, cash-oriented economic hedges are treated more favorably, although qualifying for these hedges takes some effort.

Industrial Customs. To make analysts, agencies, and investors comfortable with the shift and to prevent a negative influence on external views, a considerable divergence from prior practice or the norms of established industry practice is likely to need extra communication, education, and reasoning. Peer comparisons on relevant VaR indicators are unfortunately almost impossible due to the limited public availability. Hedge ratios, currency mix, fixed-floating percentages, duration, financial ratios, and qualitative policy statements are increasingly often compared.

Investors and agencies. The way rating agencies are handled directly impacts how realistically the value proposition for risk management can be implemented. Being able to use the debt capacity established is typically a need for creating intrinsic value. If any inherent value creation is to be included into the actual market values realized, investor response is equally crucial.

About Rating Agencies

The purpose of value maximization will typically be constrained by target ratings and the qualitative and quantitative profiles that go along with them. Nonetheless, such goals provide a company plan's financial needs and competitive dynamics the necessary financial power. The rating agencies often have a favourable outlook on comprehensive risk management programs, provided that the program's goal is to stabilize cash flows and improve outcomes predictability. When enhanced credit measure stability is shown, debt capacity may be generated, however the agency may choose to wait and see.

Specifically speaking, Standard & Poor's (S&P) remarks on hedging programs and advantages, A major driving force behind hedging from the perspective of ratings is to guarantee cash flows

for related debt issues. The creation of steady and secure cash flow coverage for interest and principal payments results from entering hedging arrangements for a part of the output. Yet, since opportunistic hedging schemes are often seen as sources of risk (i.e., speculative) rather than a strategy to minimize risk, agencies frequently offer no credit and may respond harshly in circumstances where corporations use them. It's interesting to note that S&P thinks the value of a risk management program depends in part on the size of the organization. As their strength, size, and variety are taken into account in the ratings, bigger, higher-rated enterprises' lack of hedging is not seen as a drawback. The way S&P treats hedging shows that it is committed to rating companies based on their capacity to pay off debt rather than on the quality of their asset base and overall business profile. Therefore, risk management by itself cannot make up for a poor overall company position (e.g., a high-cost position in a commodity industry). According to agencies, a low cost position and little debt are crucial for a commodity producer dealing with unpredictable pricing. As a result, implementing an extensive risk management program may not result in a change in rating or an increase in debt capacity for a credit profile. In certain circumstances, risk management may maintain (as opposed to increase) ratings for a brief to medium amount of time. In the ratings process, hedging for specific project financing or even other debt-financed expenses is likely to be given positive treatment. Companies planning a large debt-financed acquisition, for instance, might allay the fears of rating agencies by hedging a significant portion of the firm's commodity-sensitive activities for a period of one to three years in order to improve the stability of cash flows (i.e., providing a transparent path to consistent debt reduction). This happens often in the energy and petroleum (E&P) industry, especially when gas and oil prices are high. With the increased degree of confidence in returning to the target capital structure in such circumstances, a firm may be able to stretch its debt load over levels that would normally be compatible with its rating by executing a short-term hedging plan. In order to demonstrate dedication to obtaining ratios that are more in line with the grade, the corporation must combine this with the proper posture. The control of currency, commodity, and interest rate risk in project financing enables much higher debt loads than would otherwise be permitted within a given credit grade.

Hard stop restrictions are often provided by lender covenants and rating agencies, including target leverage ratios like debt/EBITDA, interest coverage, FFO/debt, including debt/capital, as well as volatility measurements like EBITDA margin volatility or FFO volatility.

Analyst and Investor Perspectives

While resource businesses use the most advanced risk management techniques, equities analysts and investors find this industry to be the most contentious when it comes to its application. Others are not interested in intrinsic value, despite the fact that many people agree with the intrinsic value defense of risk management. By moving in and out of commodity producer stocks, many shareholders choose to profit from fluctuations in commodity prices. While exchange-traded options (such those offered by the London Metal Exchange or LME) provide a clearer exposure to these economics, many investors appear unwilling or unable to do so (for example, because their charter forbids them from trading in derivatives and other asset classes). One of the top mining companies in the world, Rio Tinto, for instance, has a diverse portfolio of mining operations both in terms of minerals and locations. Hedging against changes in commodity prices, in the company's opinion, would not benefit shareholders over the long run. The corporation is also subject to changes in the currency rate between the Australian dollar and the South African rand in terms of U.S. dollars (USD). According to corporate reports, a 10%

shift in the average yearly market prices of copper, aluminum, and gold would have a $160 million, $110 million, and $40 million effect on the business's net profits, correspondingly.

Managers of companies and their boards of directors must choose whether to run the firm for traders or investors. A Moody's analyst outlines the contrasting viewpoints as follows: Investors are basically looking for high profits in a market with growing commodity prices but keeping the ability to exit if prices decline. Substantial hedge layers decrease price risk but may not be as appealing to all shareholders. In addition, the potential of hedge positions to safeguard capital expenditure plans or secure acquisition economics generates value for shareholders. The investor communications work in ERM is not straightforward; it involves a disclosure function, as well as education and program justification. Shareholders often get too little information too rarely, despite the fact that a risk management yearly communication is normally issued to shareholders. According to a poll, CEOs did not address company risk management with investors as regularly as they did with senior management and the board of directors.

The 14th biggest industrial corporation in Germany, Metallgesellschaft (MG), established a risk management program in 1992. The corporation planned to protect itself from the danger of an increase in the price of oil by taking a natural long position in petroleum products. Under what is known as a "stacked hedging strategy," the corporation promised to sell certain volumes of petroleum products on a monthly basis, at set prices that were higher than the current market pricing, for up to 10 years in the future. Their plan was for the hedge to lose money if oil prices dropped because the fixed-rate position would appreciate in value; if oil prices climbed, the hedge profits would make up for the fixed-rate position's losses. Nevertheless, when oil prices fell during 1993 as a result of the war in Kuwait, a flaw in this method became apparent. The corporation was exposed to two significant risks as a result of the short-dated stack hedging strategy: credit risk and liquidity risk. Liquidity risk developed since losses on the hedges were recognized immediately, the offsetting gain was longer dated, and cash flows for margin calls became more onerous when oil prices plummeted and markets entered a cantango (spot prices below future prices). Despite having unrealized profits on long-term contracts, the firm had negative cash flow as a result of the hedge tenor mismatch, and a financial issue developed in late 1993. As the cost of rolling over the short-dated futures contracts increased dramatically as cantango persisted, credit risk materialized. It was difficult to liquidate the company's position since it constituted a significant portion of the total open interest on the New York Mercantile Exchange (NYMEX). MG reported enormous losses on its futures contracts at the end of 1993. The main business was only rescued by 150 banks in a huge $1.9 billion rescue effort. The failure of MG serves as a warning about the dangers of misreading inherent risk exposures and hedge positions rather than serving as evidence why hedging is problematic. Every risk management approach should take into account significant variables such as liquidity risk, rollover risk, financing risk, basis risk, credit risk, and counterparty risk. Despite their obvious expense, options should be used in this situation more seriously than forwards and futures, particularly if long-term catastrophe insurance is the main goal of a risk management program.

CHAPTER 14

CAPITAL STRUCTURE SOLUTIONS

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Because to the interchangeability of these options, businesses have a broad range of possible responses to risk, all of which have an impact on capital structures. These include minimizing and eliminating risks, hedging risks, and capital structure adjustments to deal with residual risk. Just retaining more (extra cash/equity reserves) capital, utilizing more cost-effective hybrid capital, or providing options on contingent capital are all possible capital structure methods to minimize event risk. The economic substitution of risk management for equity, which de-risks business assets and cash flows to increase debt capacity to repurchase equity, has recently gained popularity thanks to advancements in capital markets technologies. The economic substitution of risk management for equity is discussed in more detail for the case of corporate pensions in the final chapter of this book.

Organize (Avoid/Mitigate)

The first option to take into account is reducing or eliminating risk exposures, despite the fact that the demands of the company often make this option unworkable. By implementing the Six Sigma process control measures briefly described previously, many operational risks may be avoided or reduced. Financial risks are often harder to avoid for business reasons, and exposure to commercial markets will inevitably result in exposures to currencies, commodities, and rates. Opportunities for business, though, may let these dangers pass. (Lay-Off/Pass Through) Re-Insure Through operational decisions that naturally and economically transfer the risk to a counterparty or pass the exposure through to a counterparty upstream or downstream in the value chain, risk may be reinsured. To transfer commodity risk to a downstream consumer, for instance, cost-plus pricing represented as a spread is widely utilized. Implicit USD pricing is widespread in Latin American markets, transferring currency risks between suppliers and purchasers. Explicit USD pricing is often used in the commodities and transportation industries. In a similar vein, operational choices could provide built-in safeguards for improved risk management.

Hedge (Physical and Financial) (Physical and Financial) The most prevalent kind of hedge is the natural hedge, which entails borrowing money in the local currency to create a liability that corresponds to an asset and, more significantly, a local use of funds that corresponds to operational cash flows to provide a net economic exposure that is almost zero. Yet, operational

choices could provide built-in safeguards against risk exposures. For instance, local sourcing and foreign direct investment provide a cost footprint that could better match the income potential of an international market. The production volumes of multinational companies (MNCs) may be opportunistically changed in order to benefit from unusual pricing in currencies, labor markets, or other input variables, going beyond the scope of natural hedges. The most often used strategy in risk management is financial hedging, which involves reducing the net exposures of revenues and expenses. Commodity exposure hedges are another popular strategy. Financial hedging is widely used by multinational industrial, technological, and commodities firms. Yet, rather than being influenced by risk management, managers' opportunistic market views usually drive interest rate management.

Hold more cash and stock

The natural default for most businesses is to maintain more equity capital, which is one approach to manage all the ongoing risks a company encounters. This capital is often in the form of surplus cash and liquid assets. For instance, many technological businesses still have the founders actively involved who can recall the early times when they had to deal with unfriendly financial markets, increased uncertainty, and money constraints. Given their high opportunity cost for any capital shortages and the undiversified nature of the assets of its founders, it makes sense that these firms, who are now flush with cash, are hesitant to manage their balance sheets more effectively. In order to pay for their unpaid pensions and unfunded post-retirement health benefits as well as to cushion the fluctuating economics of uncertain revenues combined with a high fixed cost structure, American auto assemblers Ford and GM have a tendency to keep sizable surplus cash reserves. Other sources of capital, as opposed to pure equity, could be more desirable in situations when uncontrolled residual risk has to be mitigated by more capital.

Hybrid Finance

The phrase "hybrid capital" refers to a broad category of financial instruments that include elements of both loan and equity. These products are intended to act and look as much like equity as feasible while retaining debt's tax advantages. Corporate hybrids have grown in popularity as a capital option, despite previously only being available to financial institutions where hybrid instruments have long been a component of the capital structure. As compared to pure equity, hybrid capital may be much less costly while yet providing some advantage to credit ratings. Hybrid products provide businesses with restricted access to the equity markets a chance to generate flexible non-equity funding. The majority of traditional hybrid instruments are heavily subordinated, long-term debt with deferrable coupons. While being issued at a cost of debt, the instrument has aspects of preferred stock due to its extended duration and deferrable payments (akin to a trust preferred). Similar to preferred equity, coupon payments come first before stock dividends, but the issuer has the option to delay them on a cumulative or noncumulative basis. Covenants often include triggers that, when triggered, force a need for coupon deferral. Depending on the final characteristics included in the covenants, rating agencies give partial equity credit.

Particular Risk Capital

Issuers may reinsure risk by transferring exposures through to the capital markets on limited, specialized marketplaces. Catastrophe bonds in the insurance industry are one example of transferring particular event risk to investors. Similar to pricing strategies intended to shift price risk to consumers, commodity producers have utilized commodity-linked notes to transfer price

risk through to their investors. Commodity-denominated dividends have been utilized for similar risk management goals on the equities side.

The bank line is the most straightforward capital structure remedy for ERM. Undrawn lines have long been employed as a direct source of secondary liquidity or as a safety net for business credit programs. This kind of contingent capital has a large, cost-effective market that is still simple to deploy and is sometimes underpriced.

Undefined Line

Actual Capital (Capital on Demand)

The breadth of capital product innovations now includes option-based capital arrangements in addition to conventional hybrids. Real-time capital, also known as contingent capital, capital on demand, and off-balance sheet capital, refers to the ability to access money that is produced today but is not yet recorded on the balance sheet. Real-time capital is given high equity credit by rating agencies since it provides a corporation with a rapid supply of funding. Real-time capital has been used by insurance and reinsurance firms initially, but it may also be a good match for technology startups and other businesses that want to lean out their balance sheets. Here is how the product functions: An organization (such as a partnership or special purpose trust) is created with the express intent of generating money that will be utilized by another firm at a later time. The cost of the right to employ capital, when and if required, is borne by the corporation. Call options are used to repay capital share repurchases in the case of pure equity or preferred stock. The return to investors will be decided at the start of the transaction, for instance, if a special purpose trust obtains $500 million by issuing trust certificates to institutional investors. Investors will get the special purpose trust's stated yield. The funds are invested by the special purpose trust in a short-term Al/P-1 CP portfolio with a cash equivalent yielding income at a 30-day CP rate.

In order to provide the company access to the funds held by the special purpose trust at any time and without conditions in return for the delivery of pre-agreed securities, the company and the special purpose trust engage into a put option agreement. The yield on the securities and the yield on the trust certificates will be the same. The difference between the income on the CP portfolio and the monthly coupon due to investors will be paid by the corporation as a put premium to the special purpose trust each month. The corporation issues the pre-agreed securities to the special purpose trust when the put option is executed. The agreed-upon securities issued by the corporation are purchased by the special purpose trust using the proceeds from the CP portfolio redemptions. The corporation will now pay the stipulated coupon on any company securities given to the special purpose trust, and the trust will subsequently pay investors according to the terms of the trust certificates. Within the capital structure, real-time capital is a useful risk management tool. When a company employs real-time capital, it may more effectively and closely match its actual capital requirements. The opportunity cost of having surplus capital may be less costly than real-time capital. The ability to access surplus capital is not required. More capital may be accessed in real time at a price that represents the existing risk position if a business predicts a new risk or expects to alter its risk profile.

Ideal Techniques the high cost of gasoline has contributed to the insolvency of airlines in Hedging. Severe currency fluctuations have significantly impacted company profitability. For instance, DaimlerChrysler stated that half of its second quarter 2003 profits were attributable to a favorable currency situation. The movement of the U.S. dollar (USD) versus the Euro, Yen, and

the Canadian currency (CAD) has compelled CEOs and CFOs to reevaluate out-of-date risk management policies and procedures and to think more strategically about them. Companies are increasingly looking at exposures from a variety of sources, including mergers and acquisitions (M&A), international assets and liabilities, expenses and profits sourced abroad, and current hedging agreements.

Regardless of the specifics of how we define and measure exposures, they play a significant and expanding role in modern business models. Global sourcing, global expansion, and international direct investment, for instance, often provide worthwhile options. Yet they also increase the risks related to interest rates, currencies, and sovereigns. Despite the fact that many businesses try to change their sourcing or other operational aspects to better match their revenue and cost footprints, operational limitations, competitive responses, and strategic flexibility may necessitate financial hedging in cases where natural hedging is not the best option. Mismatches between anticipated financial sources and uses reflect real economic vulnerability, as was covered in the previous chapter. Hedging may lessen the cash flows' reactivity to risk factors like rate changes. This might improve the firm's ability to carry out strategic goals, as well as transparency, liquidity, and weighted average cost of capital (WACC). A strategy to partially hedge some of a company's short- to medium-term net economic exposures may lower cash flow volatility and increase firm value. Making decisions on goals, exposures, benchmarks and limits, quantities, timeframes, tools, execution, and control procedures are all part of a hedging program. Designing a program starts with goals, such cutting finance costs, reducing cash flow volatility, boosting debt capacity, or protecting against negative consequences. The program's goals could include tolerance limits, the ability for discretion, and restrictions like the need to fulfill a business purpose and not generate any new exposures. The five main characteristics of hedging, including what to hedge, the horizon for hedging, hedge ratios and discretion, forwards versus options and other structures, and execution, are all specified by hedging policy. And lastly, a strong reporting and control procedure is part of best practice. A hedging strategy's effects on the operating, investment, and financing components of company cash flows may be tracked against a benchmark. Variations in risk factors will make each of these components of a company's cash flow volatile.

Many businesses have expanded their resources (i.e., people and money) committed to risk management in response to rising exposures and risk. Yet, agreement on the definition and estimation of the exposures is a prerequisite for the development of a successful risk management plan. Yet, the definition of an exposure differs significantly between accounting practice and economic reality. In reality, there is still a lot of room for interpretation when it comes to the phrase "exposure," which usually results in disagreements among board members over the best course of action. The most common exposure categories (transaction, translation, and economic) are described here.

Hedge transactions

Revenues and expenses incurred in foreign currencies are the most common cause of transaction vulnerability. Hedging against anticipated transaction currency risk is a frequent practice that Financial Accounting Standards (FAS) 133 permits and treats positively provided it is appropriately constructed. But, recent volatility in the USD's value relative to other major currencies may have pushed some hedges either into or far out of the money, making them less useful. To prevent unwelcome cash flow and earnings occurrences, businesses may think about restructuring their hedge books.

The majority of businesses begin with straightforward transaction exposures that result from the potential for upcoming exchange gains or losses on transactions entered into (booked) and in foreign currency. Currency by currency, transaction exposure is calculated as the difference between contractually specified future cash inflows and outflows in each currency. Across the organization, these risks are often adequately hedged on a transaction-by-transaction basis.

This method disregards the enormous potential for efficiency gains from hedging economies of scale as well as the likelihood that offsetting exposures would become apparent from an aggregate perspective. Real net exposures may be hidden in a transaction approach due to cost-based risks being concealed by the difficulties of cost accounting and functional currency procedures. Transaction exposures only deal with firm commitments, but significant exposure may result from predicted future uncooked transactions; as a result, rate fluctuation impacts the value of the business via contingent exposure. Moreover, induced changes in sales, market share, and net cash flows result in competitive risks. Transactions only make up a small portion of overall exposure. Transaction exposure also doesn't make the accountants pleased. Some liabilities (future sales and operational leases) are not on the balance sheet, despite the fact that certain unresolved transactions are (foreign currency denominated debt and accounts receivable). Both accounting exposure and economic risk are not fully accounted for by transaction exposure.

Accounting Viewpoint

The accounting point of view is to lessen the effect of risk on reported profits and, to a lesser degree, balance sheet ratios. Accounting hedges are used to control non-cash expenses like profits or losses from currency conversion. Exposure to balance sheet translation results from net investments in overseas businesses. A hedged balance sheet makes an effort to prevent unforeseen changes in the ratios on the balance sheet. Given how weak the USD is compared to previous peaks, many businesses may want to safeguard the USD worth of overseas assets or establish fresh foreign debt holdings.

Future reported profits are at risk due to the value fluctuation of unhedged overseas earnings. This uncertainty may be eliminated and analyst shocks can be prevented by securing current rates for future foreign net income. For profit hedging to be successful from an accounting standpoint, unique structures are typically needed. Often, they are only effective in the short term.

The common historical association between accounting translation techniques and company hedging procedures may be partially explained by the fact that many businesses want to produce a consistent trend of expanding profitability.

The emphasis of accounting measures like translation is on how risk affects the book values of assets and liabilities. Therefore, economic value indicates projected cash flows, whereas book values reflect previous expenses. It's possible that the risk to a company's future cash flows and operating results has nothing to do with retrospective accounting methods. The real economic performance and value of a business may be negatively impacted by decisions and hedges made based on accounting information.

A French subsidiary of an American company, for instance, was asked to reduce sales in order to lower the accounting exposure to devaluation, despite the fact that sales should have increased under a weakening French franc. This illustrates the issue with acting on the basis of balance sheet exposure rather than economic exposure. The reduction of accounting hedging has been

one of FAS133's unintended advantages. When marked-to-market, balance sheet and other noncash hedges often do not meet the criteria for hedge accounting and must pass through the income statement.

Financial Exposed

Economic exposure is the degree to which a risk driver's fluctuations may alter the firm's worth as determined by the present value of anticipated future cash flows. Hedging economic risk, including risk relating to the anticipated rather than recorded sources and uses of future cash flows, may significantly reduce cash flow volatility and increase company value. One industrial business, as an example, supplied items with pricing fixed in USD as is typical in many commodities sectors, and over 85% of its sales were in USD. Just 25% (USD 200 million) of the company's cash operational costs, which include labor, raw materials, and other production costs, were in US dollars; nevertheless, the debt, which was mostly denominated in USD, provided an extra natural hedging, which increased the interest expense. The company had a USD 1 billion net USD/CAD economic exposure, which extended to Best practice companies, which specifically take currency issues into account because currency fluctuations can significantly affect transaction net present value (NPV), cost of funds, and the degree of volatility of future financial performance. The conversion of money not raised in the target currency, continuous exposure from foreign profits, and cash flow exposure on the combined firms all contribute to transaction risk, which bidders will take into consideration when hedging a deal. When currency rates and outlooks change, hedging strategies are evaluated within the context of a larger hedging program.

According to our experience, business attitudes on transaction exposure and risk heavily influence the risk management strategy used to address exposures resulting from M&A. Any additional interest rate exposure is often not managed within a framework for managing risks, but instead is managed to increase the accounting effect, or EPS accretion, or as an expansion of the company's present interest rate policy, which is mostly based on its opinions on interest rates. Due to their own exposures from personal mortgages and other sources, managers may very well be more aware with interest rate circumstances and outlooks, which may explain why this widespread practice exists. For the handling of rate risk in international mergers and acquisitions, we envision three main strategies. The first includes the treasurer taking early steps to ensure a stable exchange rate throughout the deal's negotiation. In the second, the treasurer will hedge the once the transaction is closed. The third strategy is to spread the risk across more time once the purchase is closed. The tools used for the first approach are more complicated than those used for the later two since talks often last anywhere between one month and one year. For instance, a declining target currency reduces the present value (PV) of all future cash flows when converted into the currency of the bidder, lowering the target's economic worth to the bidder. A transaction's net economic risk might be completely hedged, which would reduce the acquirer's exposure to a declining currency. It may result in EPS dilution of 8.6% in an all-cash agreement or 4.3 percent in an all-stock deal if the Euro/USD starts out at 1.28 but falls to 1.40. On the other hand, if the USD gains and exchange rates go back near 1.20, a longer-term equilibrium, the Euro bidder's return on a USD buy will rise. An all-share or all-cash transaction should be earnings neutral for the bidder if the bidder and target (with premium) are at price-to-earnings ratio (P/E) parity, that is, at the current rate of exchange. Upon transaction completion, the target currency's appreciation will increase the bidder's profits in bidder currency. The change in accretion and dilution in a cash transaction is proportional to the changes in the exchange rate,

supposing the transaction is funded in the bidding currency. Since Euro operational cash flows are utilized to pay for Euro debt, a substantial portion of the debt generated in the context of an into-Euro transaction will be raised locally to function as a natural buffer against currency fluctuations. The impact of translating the target's profits at various exchange rates will be countered to the degree that a bidder borrows in local currency. However a U.S. buyer may think about swapping near-term servicing to USD in order to take advantage of USD weakening. Such a choice need to be assessed in the context of the transaction dynamics, taking into account the bidder's risk appetite and propensity, time horizon, capital market circumstances, longer-term equilibrium exchange rates, and thorough risk analysis of the pro forma assets, liabilities, and cash flows. In a share transaction, the issue of bidder shares partially offsets the effect on EPS. For instance, the effect of currency movements on EPS is half if both parties are of same market value at offer. The announcement of an M&A deal might cause movement in the currency rate even if it is not accompanied by big transactions at the time, despite the fact that the choice of hedging instrument (such as forward contracts, options, or simple spot transactions) will have no impact on the exchange rate (as might be expected in a forward-looking market). Yet, the impact of an M&A transaction on cash flow is often exaggerated. Exchange rates might only be impacted by very big transactions or transactions made on illiquid currency markets. A review of the whole program is necessary since any significant cross-border M&A transaction is likely to significantly alter the nature of the company's total exposure profile. Whether risk has grown or reduced (and where), how current positions may be netted against newly acquired ones, and what adjustments are needed to positions, rules, and processes will all be revealed by a recentralization of the exposure assessment and management. It considerably surpassed their USD600 million profit in the distant future. (At the time, we used a 0.73 CAD/USD exchange rate; Canadian sales of 275 million, expenses of 825 million, and a net loss of 550 million Canadian dollars; American revenues of 1,200 million, costs of 200 million, and a net profit of 1,000 million American dollars. USD revenues/Total revenues $1,200/(1,200 C$275 0.73); USD costs/Total costs $200/(200 C$825 0.73); 25%; Net profit $1,000 (C$550 0.73; $600); and USD revenues/Total costs $200 (C$825 0.73). The company's high levels of financial and operational leverage made it difficult for it to afford this exposure and cash flow volatility, which hurt its ability to take on debt, limited its ability to invest, increased capital expenses, and distracted management and the board of directors a lot.

A significant mining company in Australia has a thorough strategic risk management program to track and control its net exposure to changes in commodity prices and currency rates. The commodities division of this corporation offers a natural diversification that lessens the impact of changes in production inputs and outputs. To support its larger strategic goals, the firm employs a Cash-Flow-at-Risk (CFaR) approach. Under normal circumstances, CFaR indicates the worst predicted loss in relation to forecasted business plan cash flows over a one-year horizon. Although while this time frame is the most typical, many businesses manage out three years, but with lower hedging ratios on the longer end of their time frame.

Hedge Horizon

Best practice risk management programs that involve a spectrum of expo- sures provide guidance around hedge horizons. Depending on the nature of the exposures and their hedge markets, many companies hedge between 1 and 3 years of exposure, with a declining proportion of net exposure hedged further out in time. There are three reasons for this approach:

There is less certainty around the size of the exposure further into the future. Though most forecasts anticipate top-line growth and declining costs, treasurers show a pragmatic reluctance to rush out and hedge the exposures implied by these financial plans. There is less certainty around expectations for hedge markets and the prices of their underlying assets further into the future. Greater consensus around nearer term rates makes nearer-term hedges seem safer and less controversial than long-dated ones, where there is a greater risk of a hedge going underwater. The bid-ask spread and cost of hedge, increases with the hedge horizon. Long-dated markets are less liquid and more expensive. In many cases, uncertainty about the future composition of cost and revenue streams, exchange rates, and thinner markets for longer-dated contracts, constrain companies' ability to hedge far into the future. The commonly employed laddered hedge tactic. Akin to a dollar cost averaging approach, laddering affords a practical method to reduce hedging cost and the volatility of the achieved effective rate. The company achieves a higher hedge ratio as the exposure nears in time by layering on new tranches of hedge each month or quarter. Layering hedges a higher proportion of the near-term exposures than of the long-term exposures by increasing the hedge ratio of distant results as they move closer in time. For example, a company with USD/CAD net exposure of USD1 billion could ladder its hedges over a 12-quarter horizon by adding a hedge with a USD50 million hedge each quarter, starting from 12 quarters out, to achieve a 65 percent hedge ratio on next quarter's results, starting from a 10 percent hedge ratio on their estimated exposure 12 quarters forward. Assuming the third-year hedges are executed as out-of-the-money options, rather than as forwards, then the layering process will involve rolling the options into forwards as they approach years one and two. To prevent the chance of notional amounts hedged exceeding the expo- sure, notional amount hedged should decline as hedging horizon increases. Longer horizons magnify volatility and introduce increased uncertainty into the forecast exposure. The slope of the ladder should be steeper for more volatile exposures. The notional amount hedged should be realigned every quarter based on a new forecast. Though the hedging level could remain the same (e.g., 70, 60, or 50 percent), the implied hedge amount will change as the forecast fluctuates. The notional amount of forward hedges should only be adjusted for significant changes in the implied hedge amount (e.g., 10 to 15 percent of net exposure), which may include increasing the notional amount through entering into a greater number of contracts or decreasing it via curbing the existing positions. One gold company actively hedges its output with the forward sale of production of existing gold reserves in layers up to 3 years out, with relatively high hedge ratios, though these levels do tend to vary somewhat opportunistically with the pricing environment. Similarly, one case study outlines how this approach has been employed to raise off-balance sheet debt.

Hedge Ratio

Reducing exposure mitigates volatility but only to a certain level. We have found that hedging an exposure exhibits a characteristic of diminished marginal returns, implying that full hedging is neither beneficial nor eco- nomic. Again, this depends on the company, its exposures, and its markets, but most hedges do not exceed 80 percent (i.e., 80 percent hedge ratio) of near-term exposure, about 50 percent 1 year forward and about 30 percent 2 years forward. Longer-term hedges (e.g., 3 years) tend to be small (e.g., 10 percent hedge ratio), out-of-the-money (i.e., option-based): positions that provide a form of disaster insurance and a toehold on a larger hedge as the exposure gets closer in time. Just as companies are opportunistic in issuing or buying back stock, so will they be with risk management. Unfortunately, as is often the case with interest rate management, this can lead to practice that is too ad hoc and unsystematic to be able to be documented or articulated as any form of financial policy. From a corporate governance

perspective, Boards of Directors will recognize this is a process in need of objectives, constraints, and tolerance ranges for better control.

As outlined for the case of interest rate management in an earlier chapter, a dynamic hedging strategy that incorporates market information can significantly reduce cost and risk. Hedge ratios may be managed to preset guidelines but not constant ones; they must be managed dynamically in accordance with market conditions (e.g., level, volatility, and outlook). Many companies alter the timing and notional amount of their hedge positions in light of their views.

Hedges may be layered with hedge ratio bands that afford some manager discretion within the band of tolerance (e.g., 70 to 80 percent today, 40 to 55 percent 1 year out, 20 to 40 percent 2 years out, and 0 to 25 percent 3 years out). Regular reporting helps ensure effective control. For example, one large company hedges 70 to 100 percent of the corn and soybean inventory value that the company purchases from growers, depending on the crop and grower pricing.

Options versus Forwards

Best practice companies incorporate a combination of operational process controls, natural hedges, and capital structure solutions within their enterprise risk management (ERM) programs, and they employ a combination of financial hedging tools (e.g., options, swaps, and forwards) to match their objectives, constraints, views, exposures, and risk preferences. The pros and cons of each tool include its cost and degree of downside protection and its potential for upside, risk profile and behavior in extreme outcomes, accounting treatment, counterparty risk, ease of execution, and compatibility with control processes. Best practice hedging programs combine symmetric and asymmetric strategies to enhance overall effectiveness. Hedging exposures using futures or forward contracts are examples of symmetric hedging, where outcomes are locked in and downside protection is purchased at the implicit cost of upside exposure (i.e., eliminating exposure to the upside and the downside). Asymmetric hedging is achieved through the use of options, where downside protection is purchased at an explicit cash cost and upside exposure is retained. For example, a large diversified industrial is a well-known, conservative, commodity-driven business with exposure to emerging markets through diverse geographic location of assets and end markets. Most of their commodity hedging is performed with respect to gold prices. The company largely hedges its interest rate and currency exposure using derivative instruments to protect against movements in the South African rand, Australian dollar, Euro, and British sterling against the U.S. dollar. The company engages in hedging from time to time of its commodity, interest rate, and exchange rate price fluctuations using forwards, spot deferred contracts, futures, swaps, and options.

Symmetric Hedging

In practice, the explicit cost of options makes them far less popular. Many companies do not use financial hedges at all or they only use forward contracts to avoid any explicit cash costs for risk management as they insulate themselves from price volatility. The cost of such hedging is relatively nominal (e.g., margin and cost of carry) as there is no premium to be paid for a contract. Instead, these companies face other costs (opportunity costs); symmetric hedging eliminates the downside risk at the cost of foregone upside. But this is problematic. The first problem with forwards is that of a foregone upside. Many com- panies are reluctant to hedge (e.g., long commodity positions) because they do wish to retain upside exposure to the underlying asset price. However, to avoid hedging altogether can needlessly expose the company to consid- erable downside risk and miss the benefits of strategic risk management we outlined in

the prior chapter. These companies could use options to guard against extreme downside while retaining considerable upside opportunity. Forwards also create management problems. When the risk being hedged does not occur and the risk driver moves favorably in the other direction, the offsetting hedge can move into a large loss position that must be marked-to-market (MtM), reported, and disclosed. Effectively a contingent liability, these items are invariably not viewed on a net basis against the offsetting gain. This creates immeasurable internal anxiety. These underwater hedges are frequently unwound at this point, the wrong time to do so, because of the intense scrutiny and controversy involved. Option hedges, on the other hand, quietly go out-of-the-money but never create the stir of an underwater forward.

Asymmetric Hedging

The amount and profile of a hedge may be more precisely managed with options. Options provide a practical way to manage the trade-offs among cost, risk, and any potential view. Even a forward may be simulated with puts paid for by calls, effectively a zero width collar. Asymmetric hedging is consistent with the fundamental goals of corporate risk management. Eliminating extreme left-tail outcomes can be achieved with the purchase of out-of-the-money put options (i.e., assuming we hedge a long position) that eliminate the worst downside cases but preserve as much upside as the company can appropriately assume.

Going long, a put option can provide similar payoff to an insurance con- tract, where the insurance premium is the put option premium, the insurance deductible is the put option exercise price, and downside protection exists without impairing upside. Though the expected values of most insurance contracts may be negative, they protect the insured from a catastrophic event at an affordable cost and no impairment to the upside. For example, though many airlines were pushed into, or remained in, bankruptcy by high fuel prices, the widely acknowledged leader of this industry continued to employ successful hedging strategies for its second largest factor input, fuel. The airline disclosed that it had a mixture of purchased call options, collar structures, and fixed price swap agreements in place to hedge approximately 83 percent of its next year's total anticipated jet fuel requirements.

Accounting Considerations

Global accounting standards for financial assets and liabilities now generally require derivative positions to be MtM, with resulting gains and losses forced through the income statement. However, hedge accounting allows deferring MtM flows until the hedged item hits the accounts. For example, FAS 133 hedge accounting rules define three types of hedges: Fair value: recognized assets or liabilities, and unrecognized firm commitments, Cash flow: forecast unrecognized transactions, Net investment: foreign net assets.

Exposures that qualify for hedge accounting treatment include foreign currency assets and liabilities, forecast sales or costs, cash profits, including intercompany transactions, and other exposures that could affect the company's income statement. Yet a broad range of other types of exposures do not qualify, such as undeclared dividends, foreign accounting earnings, and future M&A transactions. The following parameters have generally been deemed consistent with hedge accounting treatment:

Amount. At the start, the company must be able to specify the amount being hedged and the worst-case rate. Contingent instruments, such as knockout options and accrual forwards are not permitted.

Options. The hedge cannot be subsidized with a net sold option. The amount of options sold must be equal to or less than the amount bought. And the maturity of the short position should be shorter than the maturity of the corresponding long position.

Effectiveness. The hedge must be expected to be highly effective, defined as a requirement that the MtM on the hedging instrument should be in the 80 to 125 percent range of the hedged item MtM.

Documentation. The transaction must be documented at the inception describing what is being hedged and how it is measured and monitored.

There are ways to achieve FAS 133 compliance by supplementing hedging strategies with cheap, deep-out-of-the-money options, or by potentially splitting a structure into multiple parts, some of which may qualify for hedge accounting treatment.

Implementation

From the foundation of a strategy, each company must develop a tactical action plan to execute its strategy. As a best practice, we see companies broadly follow these steps: Determine objectives, priorities, and constraints. Common examples are to enhance liquidity and debt capacity by reducing the volatility of funds from operations, improve transparency of operating performance, or to reduce the chance of an adverse event. Establish relevant risk guidelines. Identify maximum tolerable amount of positioning (e.g., all hedges serve a business purpose, no new risks or exposures will be created, hedge ratio tolerance ranges). Centralize decision making to avoid double hedging, facilitate risk netting, and improve bank bids. Evaluate potential conflicts with all incentive compensation programs. Assess net exposure to be hedged. Define, measure and analyze all exposures to be managed, paying particular attention to any correlations and natural hedges. Determine the extent to which each exposure needs to be hedged and can reasonably be hedged, as well as the main attributes of the hedging program (e.g., hedged exposures, hedge horizon, hedge amounts, and hedge ratios).

Compare suitability of various hedging tools. Determine how various hedging tools (i.e., options, swaps, and forwards) are to be incorporated into the program to meet stated goals, views, and risk preferences for each exposure. Assess the pros and cons of hedging instruments, beyond simple cost, such as risk profile, upside exposure, and so forth. Execute trades timely and efficiently. Identify a trading platform that answers the organizational needs and provides the necessary analytical support. Keep the group of counterparties to a manageable number. Control. Streamline your approval and control process while ensuring timely and accurate reporting.

QUESTIONNAIRE

1. What are the main functions of strategic finance?
2. How much time per week or month do you invest in strategic planning?
3. How do you inform your team and other departments within your company about your strategic decisions?
4. Describe a time when you proactively identified and addressed an issue at your company.
5. How do you set long-term goals for your team?
6. How often do you check and review these goals?
7. Describe a time when you failed to achieve your goals and had to follow a different approach. What happened?
8. What are the key factors you take into consideration when building an action plan?
9. How do you measure a strategy's effectiveness?
