

CHAPTER 1

Understanding and Navigating the Financial Revolution

Introduction: The Need for Transformational Thinking

The world of modern finance is beset with complexity, dynamism, and risk. On a path of ever-intensifying evolution, it presents a landscape of significant uncertainty but also of rapid innovation and opportunity. More so than ever before, success rests on the ability to make sense of the evolutionary changes, link up seemingly unrelated phenomena, and understand the global forces at play. There is a lot to absorb indeed. Once-comfortable financial businesses are confronted with the increased competition and lower margins. Time-tested strategies are being threatened by disruptive technologies and globalization. Financial crises that are deemed “once-in-a-lifetime” by financial models seem to be occurring with an alarming regularity. Sensationalist news headlines and prognostications of financial pundits are obscuring, rather than illuminating, the reality. Worse yet, there is no coherent paradigm to help financial executives, investors, practitioners, and regulators around the world wrestle with these universal challenges and navigate the ongoing tectonic financial shift.

During a recent Harvard Business School seminar, a well-known investor observed that “traditional asset-allocation strategies are having trouble in today’s world.” A Wall Street executive echoed the sentiment during a TV interview: “being a great M & A advisor alone doesn’t cut it anymore. Unless you can also provide a client with a [multibillion dollar] financing package, you’re irrelevant.” “If you want to stay alive in the asset management business,” an equity analyst wrote in a research note, “you have to go into unique products and go out on the risk spectrum.” “We’ve had a tremendous golden age of [commercial] banking, and we are not going to continue to see that kind of performance,” concluded the head of a government agency in the United States.¹ Similar urgency is often conveyed behind closed doors of

executive offices and boardrooms—in relation to lending activities, the fight for bank deposits, secular fee compression, declining margins of traditional financial businesses, tougher global competition, and increasingly discerning and informed consumers. The resistance to acknowledge the dramatic and permanent structural transformation of the world of finance—along with the seemingly accelerating pace of change and innovation—is entirely understandable: Change is hard work. Deep down, however, executives and investors know—some more viscerally than others—that the new financial order demands decisive actions on the part of those who want to avoid becoming casualties of financial natural selection.

My purpose in writing this book was to make sense of this new realm in which financial institutions and investors find themselves and to describe—in both theoretical and practical terms—how they can adapt and prosper. The more conceptual portion of this work is *Dynamic Finance*—an evolutionary thesis about the origins, the drivers, and the implications of the ongoing financial revolution. The practical part of this work is *Financial Darwinism*—an actionable decision-making framework that draws on this evolutionary perspective to help financial executives and investors navigate the dynamic new world. This chapter is a nontechnical overview of the entire book that is designed to introduce the underlying ideas in broad conceptual strokes. Figure 1.1 presents this book at a glance.

The Transformation (Chapters 1 and 2)

Today, huge pools of capital freely roam about the global financial system in search for investment returns. Capital markets and financial institutions play

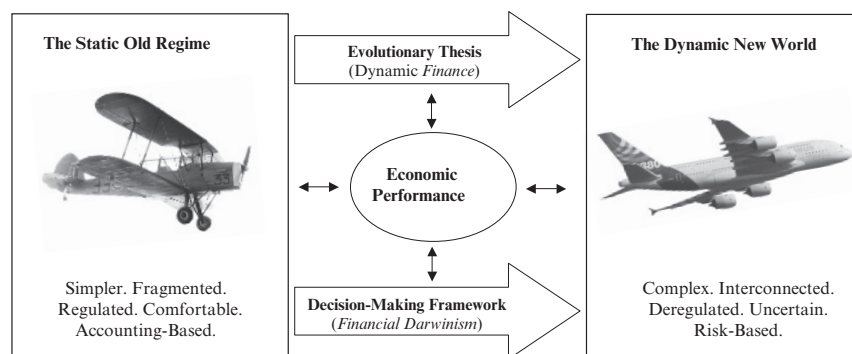


FIGURE 1.1 The Book at a Glance

an increasingly important role in the lives of consumers and real economies. Financial markets are more efficient and interconnected than ever before. Financial instruments and financial institutions are opaque and complex. The static, fragmented, heavily regulated, simpler, comfortable, and accounting-based financial regime has given way to a dynamic, chaotic, globalized, heavily interconnected, deregulated, complex, uncertain, and risk-based realm.

The Evolutionary Thesis (Chapters 2 and 3)

It has been argued that financial services represent an evolutionary system in which no formula works forever: “today’s successes will be tomorrow’s failures unless they adapt and innovate.”² In this spirit, *Dynamic Finance* endeavors to comprehensively explain the process of economic value creation by financial institutions. With the ultimate objective of guiding strategic decisions, it examines how financial institutions used to create economic value in the past and then uses financial theory to offer a concise new approach to thinking about economic performance in today’s world. In the process, as the multitude of drivers that put pressures on traditional financial businesses is discussed, I argue that many of these forces are secular in nature i.e., expected to last over very long time frames. This makes the return to the comfortable old world of finance highly unlikely.

The Decision-Making Framework (Chapters 4 and 5)

By drawing upon this evolutionary perspective, *Financial Darwinism* blends business strategy, corporate finance, investment analysis, and risk management to give financial executives a menu of broad choices on how to create or enhance economic value. Complexity is filtered out, while the richness of unique circumstances and institutional landscapes is preserved. Throughout, I argue that the strategic vision of today’s executives must encompass business strategy, dynamic risk taking, and business model transformations—the new concept introduced in the book. This, in turn, requires an expanded skill set on the part of senior decision makers as well as their command of the entire arsenal of advanced financial tools. Importantly, many leading companies are already adapting to the changed financial landscape in the general spirit of this book’s ideas, even in the absence of a comprehensive framework. These desirable evolutionary responses pose a stark contrast to the notable failures to recognize the new realities and adapt accordingly, as demonstrated by modern financial crises and other institutional experiences with sad endings.

The Conceptual Anchor

In the center of it all—linking the seemingly disparate macroeconomic and financial market phenomena as well as institutional behaviors—is the concept of *economic performance* and its own evolutionary transformation. The old-fashioned, accounting-earnings-inspired formula for economic performance was reflective of the buy-and-hold nature of traditional financial businesses. I propose that the basic key to understanding the behavior of modern financial institutions and capital markets lies in the recognition of the fact that the process of economic value creation in finance has undergone a fundamental transformation. More specifically, due to significant margin pressures on basic financial businesses, active risk taking has begun to play an increasingly dominant role in how financial institutions create and destroy shareholder value. Therefore, the analytical expression for economic performance should change accordingly. The introduction of the *risk-based economic performance equation* enables the development of both the evolutionary thesis and the resulting practical decision-making framework underlying this book.

The Role of Risk Management

One of the important motifs of this book is the convergence of business strategy, corporate finance, investment activities, and risk management under the umbrella of executive decision making. Risk has always been a major factor in financial transactions and the lives of financial institutions. However, as any practitioner would attest, a palpable disconnect between risk management and executive decision making has largely persisted with risk management often viewed as a policing function or a passive safety-and-soundness verification. More often than not, the risk manager continues to be brought in *after* major strategic decisions had already been made. It is, therefore, not surprising that despite the advances in financial theory, analytics, and technology that afforded an increasingly rigorous understanding of complex portfolios and balance sheets, elevating risk management to be an important decision tool has proven challenging. On the pages that follow, I explain why pressures on traditional financial businesses are likely to become a catalyst for changing the mental paradigm underlying executive decisions, with active risk taking and risk management becoming explicitly linked to the process of economic value creation. It is imperative that risk management becomes the very language of enterprise-wide strategic decisions going forward and that the chief risk officer becomes an executive who gets an equal seat at the table where corporate strategy is decided.

In order to set the stage for the discussion of the old financial regime and the way it worked, let us look next at a classic American film that takes us back to the origins of the world of finance as we know it.

From George Bailey to the Golden Age

My students and colleagues are often puzzled with the frequency of my references to one of the most beloved American cinema classics, *It's a Wonderful Life* (1946). To me, however, in addition to bringing reflection and a sense of purpose to so many viewers every holiday season, this film is indispensable in any discussion on the evolution of the financial system and the nature of financial intermediation. Next time you immerse yourself in the film's nostalgic snow-covered world of Bedford Falls, you just might see certain aspects of this life-affirming story through a different lens.

The life of George Bailey (Jimmy Stewart) is neither prosperous nor carefree. In fact, we first learn about him on a Christmas Eve through the prayers of Bedford Falls' residents. Overwhelmed by his misfortunes and "worth more dead than alive," George is contemplating a suicide. As the movie progresses, we realize that George's life—as that of his father who started and ran the Bailey Brothers Building and Loan Association—is a far cry from "lassoing the moon and bringing it down." More than anything, George wants to leave the "crummy little town," see the world, go to college to "see what they know," and then do something big and important. Instead, he devotes his life to running the "measly, one-horse institution" where people can come to borrow money. George sends his brother to college in his place, marries his childhood sweetheart, spends his honeymoon money on averting a bank run, and fights the "the richest and meanest" man in town, Mr. Potter (Lionel Barrymore), to keep the building and loan association going. What drives him is a deep-seated belief that hard-working people deserve to "work and pay and live and die in a couple of decent rooms and a bath."

An angel (Second Class) is dispatched to save George by showing him how much he has contributed to the lives of so many. As they walk through the town seeing what life would be like if George had never been born, they discover that Bedford Falls (named Pottersville, instead) is a dystopian nightmare. The Bailey Brothers Building and Loan Association is long closed, Bailey Park with pretty homes for the working families has never been built, and Ma Bailey, his mother, is running a boarding house. As George realizes that his life has had a profound effect on the town and returns to his family, the Bedford Falls residents rush to his rescue with their savings—more than making up for the funds his uncle mistakenly lost. In an inspirational and deeply spiritual ending, as the camera glances over the

pile of money on the table, we see George—happy and at peace—with his little daughter in his arms (and her flower petals in his pocket). In the way that matters, he truly is “the richest man in town.”

The world of finance—along with its evolution toward the Golden Age witnessed toward the end of the twentieth century—has come a long way from the time depicted in “It’s a Wonderful Life.” George could not have known that home ownership would become a major public policy objective in the United States and an amazing source of wealth creation for the population as a whole. Nor could he have imagined that 60 years later a complex network of securities firms, commercial banks, and government-sponsored enterprises would pool together, securitize, guarantee, make markets, slice and dice, and sell mortgages, credit card receivables, and student loans of Bedford Falls’ residents to investors in Rio de Janeiro, Abu Dhabi, Beijing, and Moscow.

Gradually, throughout the latter half of the twentieth century, macroeconomic and financial landscapes evolved toward more sophisticated regulation as well as more deliberate public and economic policies. Toward the end of the century, financial businesses became more institutionalized. Risk-management practices and tools improved. Economic volatilities—swings in unemployment, output, inflation, and interest rates—declined. Regulation greatly enhanced the safety and soundness of financial intermediaries, protecting their clients and stakeholders. The power of the informed and discerning consumers steadily increased, and client service became one of the key ingredients of success (*pace*, Mr. Potter).

Among other benefits and apart from rare exceptions, this allowed executives running financial institutions to spend honeymoon money on honeymoons as opposed to averting bank runs. While the good times were occasionally interrupted by rocky periods—such as the inflationary experience of the 1970s, the Savings and Loan crisis of the 1980s, and the Asian and the Long-Term Capital Management crises of the late 1990s—everything culminated in what can be described as a Golden Age of financial intermediation. Why is that? While the external environment dramatically improved, *fees and other forms of compensation for basic financial services generally remained handsome*, inspiring such old saws about the banking businesses as: “Borrow at 2 percent, lend at 6 percent, and be on the golf course by 3:00 pm.” George Bailey would have liked that!

Interestingly, as financial intermediaries were becoming convinced that the Golden Age would never end, a tectonic shift was already underway. The financial landscape changed significantly—slowly at first, and then gaining speed—and a vast array of new financial products and services began competing in an increasingly complex and global marketplace. Margins on traditional businesses began to decline, forcing financial institutions everywhere to start exploring ways to adapt to the unfamiliar new world.

Accounting for Profits the Old-Fashioned Way

Before I turn to the discussion of the tectonic financial shift itself and the evolutionary changes that it brought about, I want to look more closely at the process of shareholder value creation by financial institutions during the old regime. On the surface, of course, success was measured by their ability to generate stable and growing *accounting* earnings. Deep down, not surprisingly, powerful economic considerations were at play. They represent a critical building block of this book's evolutionary perspective.

It all starts with the so-called flows of funds and risks that describe the mechanism according to which assets of consumers and companies become liabilities of others, and vice versa.³ For instance, a commercial bank may take in customer savings as deposits. These deposits (consumer assets) thus become this bank's liabilities. In turn, the bank may take the funds received through deposits and loan them out as mortgages, at which point these loans become the assets of the bank and liabilities of the corresponding borrowers. Insurance companies may take in premiums from insurance policies (assets of the insured parties and liabilities of insurance companies) and invest them in bonds or stocks issued by non-financial corporations. Pension plans would receive sponsor contributions and invest them in various assets with the intent to satisfy liabilities to their beneficiaries in the future. In the process, most financial institutions would charge their customers various fees. Banks would collect deposit account charges as well as loan and servicing origination fees. Meanwhile, insurance companies would impose policy surrender charges and asset management fees, brokers would collect trading commissions, while investment banks would earn underwriting and advisory fees.

Notice the following dominant feature of the basic financial activities during the Golden Age depicted in Figure 1.2. A financial institution's profitability is largely determined by (a) the difference between how much is earned on the assets net of how much is paid on its liabilities, (b) plus the fees it earns, (c) minus its operating expenses, and (d) minus its cost of capital. Importantly, profits over the long haul—and the very viability of financial institutions—depend on the difference in *economic* returns between assets and liabilities. The focus on economic—as opposed to accounting—returns here is critical: The shortcomings of accounting earnings have been widely commented on in the business press and in the financial literature,⁴ and the potential for divergence between accounting and economic realities can be especially dangerous, as I describe more fully in Appendix B.

Given the nature of traditional financial businesses the economic performance of financial institutions during the old regime can be thought of as the following simple expression:

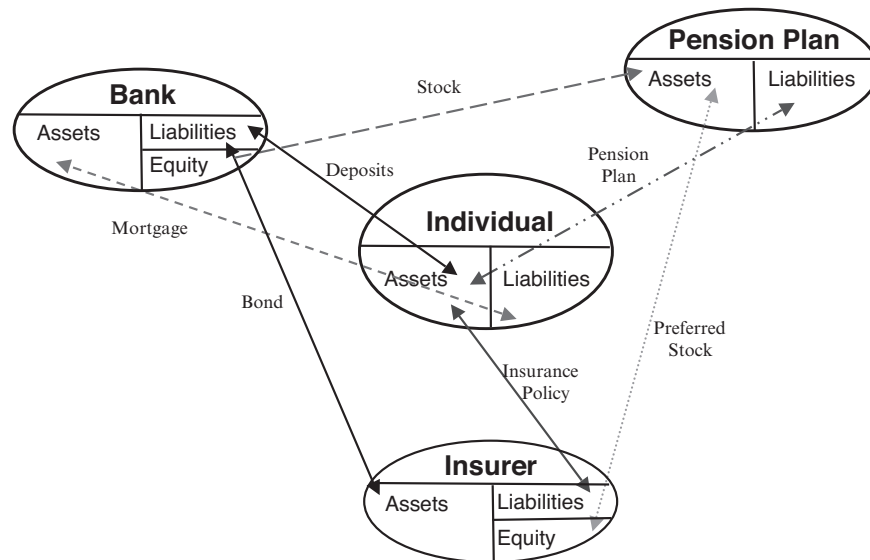


FIGURE 1.2 An Illustrative Old-Regime Closed Financial System

$$\text{Economic performance} = \text{return on assets} - \text{cost of liabilities} + \text{fees} \\ - \text{expenses} - \text{cost of capital}$$

Despite its simplicity, this economic performance equation provides interesting insights into the past practices of financial institutions—and the corresponding ways of thinking. First, notice that for institutions that create economic value in this fashion to be viable and profitable, *the combination of fees and differential asset/liability returns needs to be sufficiently high relative to expenses and cost of capital*. This was indeed the case during the Golden Age of financial intermediation. The implication of the banker joke, for instance, is that what an institution earns on assets (6 percent) is so much larger than what it pays on its liabilities (2 percent) that it more than makes up for other expenses, producing a handsome return on capital.

A more general description of the mode of operation that is based on differential returns between assets and liabilities is known in the financial industry as the *carry trade*. Carry trades are infamous and very simple indeed: An investor or a financial institution borrows money *cheaply* (e.g.,

in the countries where interest rates may be low at the time) and invests it in higher yielding loans or securities, pocketing the profit. The deceiving ease with which earnings can be delivered through carry trades has been deeply ingrained in the minds of investors and professionals across financial sectors. Banks, insurance companies, real estate investment trusts, money managers, investment banks, and even pension plans and non-financial companies often think about certain segments of their businesses as carry trades. The term itself is very visual. While the asset is simply being *carried* on the books—without any hedging or dynamic management—the owner has the privilege of receiving the difference between the asset's yield and the cost of funds. Imagine a check just showing up in the mail every month—a bonus of sorts.

Given the very nature of basic financial activities described above, the *strategic vision* of executives at that time was related to their *business strategy and corporate finance* activities, whereby they sought answers to questions like these: What parts of the business should we invest in for optimum growth? What is our desired business mix? When should we retrench and when should we become aggressive in sizing up our balance sheet or our customer activities? How can we improve customer service and the underwriting process in order to reduce credit losses, maximize asset/liability returns and fees, and control expenses?

As a consequence, the risks taken on by financial institutions remained generally the same over time. That is, *from the risk-management perspective, business models of financial institutions during the Golden Age can be characterized as static*. In this case, the word *static* refers to the traditional ways in which financial institutions deployed their balance sheets to fulfill their chartered roles in the financial system. Static also indicates the absence of dynamic risk-taking behavior and is not to be confused with management's innovative uses of M & A, customer service or retention strategies, new product development, cross-selling, or expense management—all directed at growing static businesses in a cost-efficient manner. The focus on the delivery of stable and increasing accounting earnings through the growth of static (from the risk-management perspective) businesses implied that accounting earnings and business strategy combined with corporate finance represented the two pillars of strategic decision making during the old regime, which is summarized in Figure 1.3.

Why are the previously-mentioned economic performance equation, the banker joke, carry trades, and focus on accounting earnings all the artifacts of the old regime and outdated ways of thinking? It is because lurking behind the differential returns between assets and liabilities—the cornerstone of the prevailing mental paradigm—is a plethora of hidden financial risks! More often than not, it is these underlying financial risks that

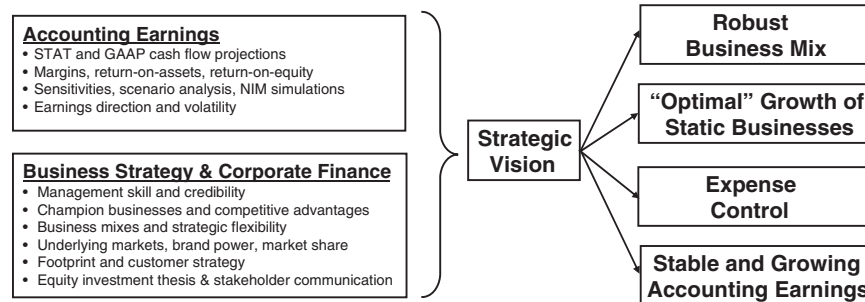


FIGURE 1.3 The Two Pillars of Strategic Decisions in the Static World

lead to the differences in returns between assets and liabilities—a far cry from a riskless check in the mail.

What can be inferred about these hidden risks inherent in static business models during the old regime?

- These risks were direct consequences of a financial institution's role as an intermediary within the financial system.
- They were masked by accounting earnings, not always understood, and not actively managed over time.
- Since many of these risks are inherently cyclical—related to cycles in the economy as a whole—the earnings of financial institutions often experience an attendant cyclicity.

Risk taking has always played a very important role in the lives of financial institutions. However, accounting standards, buy-and-hold practices, and the old mental paradigms often obscured the true nature of risks inside of static business models. That may have been adequate when competitive pressures were lower while fees and the compensation for taking financial risks were high, as was indeed the case during the Golden Age. However, when fees and arbitrage opportunities decline and the compensation for risk taking compresses, the room for error declines accordingly, revealing the cyclicity and volatility of static business models and at times forcing financial institutions and investors into vicious circles of greater leverage and risk taking.

Last, static business models also help explain the historical disconnect between executive decision making and risk management. Consistent with the nature of strategic objectives during the old regime (Fig. 1.3), risk management was not a strategic tool but rather a process brought in *after* business decisions had been made to check on their potential risks. Thus, as risk measurement and management tools became progressively more

sophisticated, so did the after-the-fact safety-and-soundness exercises. Yet the decision-making paradigm remained largely unchanged.

The “Great Moderation” As an Evolutionary Catalyst

The following quote from the recent work by Niall Ferguson and Oliver Wyman helps set the stage for this book’s evolutionary perspective on finance:

Financial history is, in sum, the result of institutional mutation and natural selection. . . . Financial organisms are in competition with one another for finite resources (customers, clients, market share). At certain times and in certain places, certain financial species may become dominant. But innovations by competitor species, or the emergence of altogether new species, prevent any permanent hierarchy . . . from emerging. . . . Institutions with a “selfish gene” . . . will tend to endure and proliferate. . . .

Nevertheless, this process is not wholly endogenous. Periodic exogenous shocks can radically alter the evolutionary environment, rendering certain evolved traits disadvantageous that previously had been advantageous, and vice versa. Financial disruptions (like the Great Depression of the 1930s or the Great Inflation of the 1970s) are like the asteroid strikes and ice ages that periodically intervened in the evolutionary story of life on earth. In extreme cases, they can cause mass extinctions of financial species; in milder cases, when environmental change is more gradual . . . they eliminate the less fit members.⁵

In order to rigorously explore the challenges facing modern financial institutions, this book proposes the following *evolutionary thesis* referred to as *Dynamic Finance*. During the benign macroeconomic and inflationary environment dubbed the “Great Moderation”⁶ (approximately 1985–present), a set of powerful forces that I will describe in a moment changed the financial landscape significantly, diminishing the viability of static business models and putting pressures on traditional financial businesses. In the process, active risk taking became an increasingly influential contributor to how financial institutions create and destroy shareholder value.

Importantly, unlike such prior evolutionary catalysts as the Great Depression of the 1930s and the Great Inflation of the 1970s, the Great Moderation has been a long and gradual environmental change accompanied by a marked decrease in economic volatility—at least, that appeared to be

the case until the 2007–2008 financial crisis. Wild swings in unemployment, economic output, inflation, and interest rates have been seemingly tamed by globalization, financial innovation, risk management, and skillful monetary policies. The tranquility of the macroeconomic environment, the gradual nature of the tectonic financial shift, and the record profits of the Golden Age all obscured the profound nature of the change and provided little urgency to even acknowledge it, not to mention adapt to it.

Similar to the aftermath of previous financial “asteroid strikes and ice ages,” those financial institutions that will survive and prosper this time around will do so by adapting to the new environment in a way that parallels the natural selection of Darwin’s biological organisms. In this regard, the *dynamism* of risk-taking and business decisions in finance is a distinguishing characteristic of the new world compared to the old financial regime and a major determinant of success in the future.

As the first step in describing the pressures on basic financial services and identifying desirable evolutionary responses on the part of financial institutions, it is important to understand the conglomeration of powerful global forces that came to the forefront during the Great Moderation. I classify these forces into three distinct groups—secular, period-specific, and cyclical—and briefly outline them below. They are discussed in further detail in Chapter 2.

First, I examine the group of 10 secular forces that affected financial institutions during the Great Moderation. As before, in this context, *secular* refers to the long time frame over which these factors are expected to influence the global financial system.

1. *Globalization of capital markets and financial services* has turned a collection of “heavily controlled, segmented, and sleepy domestic financial systems” into “lightly regulated, open, and vibrant global financial system.”⁷
2. *Inflation targeting* and control by central banks around the world contributed to the decline in both levels and variability of inflation and, in turn, was an important driver of the low return environment across financial markets.
3. *Disintermediation*—the process of “cutting out the middleman” whereby corporations, investors, and consumers deal with each other directly and gain more direct access to capital markets—has removed some financial institutions from the traditional flows of funds.
4. *Greater availability of information* has led to most up-to-date market and financial product data becoming broadly disseminated, especially over the Internet.
5. *Greater financial market efficiency* has arguably become increasingly pronounced in normal market environments, stemming from the greater

availability of information, advances in technology, and huge amounts of often-unconstrained capital flowing freely around the world in search for returns.

6. *Alternative investment* vehicles—such as *hedge funds* and *private equity funds*—have dramatically affected the behavior of capital markets, business models of other financial institutions, and the overall leverage in the financial system.
7. *Financial deregulation* (i.e., liberalization) has contributed to the reduction of price controls, portfolio requirements, product restrictions, and barriers to entry within a financial system.
8. *The convergence* (i.e., blurring of the lines) between different traditional financial businesses—a direct consequence of deregulation, disintermediation, and earnings pressures—became pervasive.
9. *Increasingly complex financial instruments* such as *derivatives and structured products* have become an important (and permanent) feature of modern capital markets.
10. *Advances in technology, financial theory, analytics, and risk management* have enabled disintermediation, capital market innovation, “atomization” of risks, the growth of structured products, and the rise of alternative investments.

I refer to the *second group* of forces that greatly affected financial institutions during the Great Moderation as *period-specific*. While at this stage of the new dynamic order the permanence of these factors is unclear, their impact on the financial landscape has been significant and, thus, needs to be articulated:

1. *Disinflation exporting*—the abundance of low-cost labor in developing countries combined with the liberalization of trade—has limited inflation in developed countries and impacted the market environment.
2. The *global savings glut*—a confluence of forces behind a significant increase in the global supply of savings—has facilitated the transition of many developing countries from net borrowers to net lenders and changed the global flow of funds.⁸
3. *Bretton Woods II*—an allusion to the international monetary system with fixed exchange rates between 1945 and 1971—has represented the adoption by several countries, mostly in Asia and the Middle East, of currency exchange rates that were pegged to the U.S. dollar. This, in turn, has affected financial institutions and capital markets worldwide in multiple ways.

While the Great Moderation spanned multiple economic cycles, the third group of the cyclical factors (e.g., economic expansions, favorable corporate

and consumer credit fundamentals, flat yield curves, low volatilities) has at times exacerbated the pressures on traditional financial businesses brought about by secular and period-specific forces. This is especially relevant to understanding the dynamics of modern financial crises, as discussed later in the book.

Economic Performance in the Dynamic New World

So what was the net impact of these forces on the global financial system and, by extension, on real economies, financial institutions, and capital markets? In the spirit of “Don’t try this at home” (i.e., not meant to be studied too closely), Figure 1.4 illustrates the challenges at hand.

Globalization of capital markets, disintermediation, alternative asset managers, securitization, and other secular forces have fundamentally changed the traditional flows of funds and risks. The dynamics of the global financial markets—and the latent feedback loops—became infinitely more complex. Financial products and financial institutions themselves became more sophisticated and opaque, with disclosures about their inherent risks increasingly outdated. Margin pressures on traditional financial businesses with static business models increased, leading to institutional responses

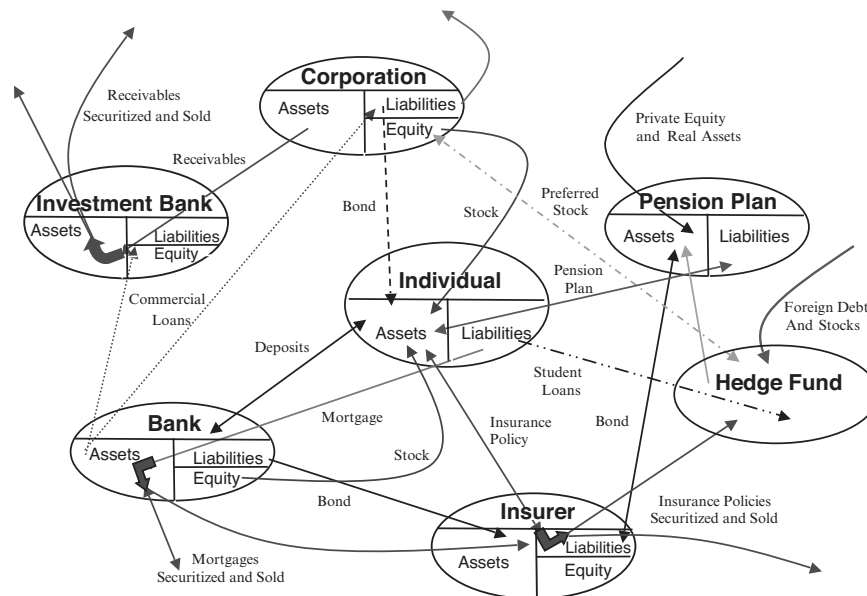


FIGURE 1.4 The Chaotic, Intertwined, Opaque, Dynamic New World

where increased leverage and risk taking were not always understood. Thus, in order to describe this new world of finance and adapt to it, a radical break with past thinking and acting—of the kind that Thomas S. Kuhn called a *paradigm shift* in his influential book *The Structure of Scientific Revolutions*—is needed. More specifically, an actionable framework must be developed where: (a) the complexity is filtered out, (b) evolutionary insights into the process of economic value creation are explored, and (c) strategic alternatives available to financial executives are examined.

The discussion on potential evolutionary responses by financial institutions to the new environment brings us back to the concept of economic performance—and its own much-needed transformation. Recall criticism of static business models and the corresponding old ways of thinking about economic value creation. First, during the Golden Age, business strategy and corporate finance were the primary decision tools used to grow traditional businesses and maximize accounting earnings. Second, risks underlying business models were not always understood and were not actively managed over time, which often resulted in cyclical earnings. Third, the disconnect between executive decision making and risk management persisted despite advances in analytics and technology. To illuminate these shortcomings and describe how financial institutions can adapt, the old-fashioned concept of economic performance needs to be updated to reflect the modern-day realities. In particular, the changed role of active risk taking in delivering economic performance and the nature of risks inherent in various business models both need to be made explicit.

A simple analytical transformation of the old economic performance equation discussed in detail in Chapter 3 affords useful insights into the process of economic value creation in the dynamic new world. It focuses on the differential returns between assets and liabilities, showing that underlying this accounting-inspired construct are three distinct components—balance sheet arbitrage, principal investments, and systematic risks:

Return on assets – cost of liabilities

= balance sheet arbitrage + principal investments + systematic risks

This observation leads to the new *risk-based economic performance equation* that reflects the changed role of risk taking in the process of economic value creation:

Economic performance

= balance sheet arbitrage + principal investments + systematic risks
+ fees – expenses – cost of capital

Economic performance in the dynamic new world is generated through balance sheet arbitrage, principal investment activities, exposures to systematic risks, fee-based businesses, cost-control, and minimization of the cost of capital. This description represents the process of economic value creation in terms of conceptually different risk-taking and fee-generating activities, which I refer to as *risk-based business models*. Here, briefly, are the components of the risk-based economic performance equation.

Balance Sheet Arbitrage. The ability of some financial institutions to borrow funds at submarket levels is obviously a rare and very desirable feature in the era of efficient capital markets. While this book's use of the word *arbitrage* may offend finance purists, it simply alludes to institutional features (e.g., the charter or the nature of business) that help generate profits on the liability side of the balance sheet without putting significant capital at risk, which is a significant competitive advantage. Common examples of balance sheet arbitrage include lower-than-wholesale rates paid on retail deposits of commercial banks as well as funding advantages enjoyed by some government-sponsored enterprises. The introduction of this new component of economic performance allows us to conceptually separate customer-related corporate finance activities from active risk taking. Additionally, balance sheet arbitrage helps explain why not all carry trades are created equal. In many cases, differential returns between assets and liabilities are due to inherent financial risks rather than balance sheet arbitrage.

Principal Investments. As a response to the pressures facing static business models, financial institutions are increasingly risking their own capital in order to enhance economic value created by traditional financial businesses. Per the risk-based economic performance equation, such risk taking falls into two distinct categories—*principal investments* and *systematic risks*. The difference between the two lies in the *types of risks* that are undertaken in the attempt to generate economic performance, which has important implications for the corresponding organizational structures and risk-management tools. Thus, principal investments include direct private equity and venture capital stakes, investments in hedge funds and private equity funds, or capital allocations to internal proprietary trading desks. According to my adopted convention, principal investments are assumed to have no *structural* systematic risk exposures over time. Macro-level decisions involving principal investments (their broad categories, sizes, and risk limits) are often made by senior executives at financial institutions. However, specific investment

decisions are often decentralized, with traders, portfolio managers, or private equity fund managers implementing their own views on the markets and securities subject to risk limits and other guidelines. This is why, consistent with financial theory, diversification is used as a primary risk-management tool when it comes to portfolios of principal investments of real-world institutions and investors. Not surprisingly, greater allocations of capital to principal investment activities require significant organizational changes and typically entail larger risks, greater complexity, and the lack of transparency for external stakeholders.

Systematic Risks. In addition to principal investments, the dynamic management of *systematic risks* is playing an increasingly important role in the lives of modern financial institutions. The dynamism of this process (also known as *market timing* in the investment analysis arena) is a critical feature here since it directly addresses the shortcomings of static business models characterized by unmanaged (structural) risk exposures. Systematic risks are related to whole economies or markets and cannot be eliminated via diversification. Correlations among different systematic risks vary over time and tend to increase in times of crisis. Common examples of systematic risks include interest rates, credit risks, mortgage prepayments, currencies, commodities, and equity indices. According to some financial theories, an institution's expected return for bearing a systematic risk over a given holding period can be represented as the product of (a) how much risk it has taken on, and (b) how much it gets paid for taking on a unit of risk. The systematic risk component of economic performance explicitly links dynamic risk taking and value creation and is central to the explanation of the pressures facing traditional financial activities. In short, clinging to static business models in periods of declining compensation for risk taking may create vicious circles of greater leverage, especially if other parts of the economic performance equation come under pressure at the same time. I contend that systematic risk taking is very different from other activities of financial institutions. First, it relies on investment analysis and modern risk management to a much greater extent. Second, it must be managed in a centralized fashion at the top executive level; for example, taking on more interest-rate risk and less equity or credit risk on the balance sheet may be deemed desirable if the economy is expected to go into a recession. Third, this type of active risk taking requires significantly different executive skill sets, decision-making processes, and analytical systems. It is very different from, say, the task of

assembling a diversified portfolio of investments in hedge funds that endeavor to profit from buying “undervalued” securities and selling “overvalued” securities.

Fees and Expenses. These components of the economic performance equation are self-explanatory: Financial institutions remain focused on growing fee-based businesses and controlling expenses. Of special relevance for business model and economic performance discussions, the importance of fee-based businesses tends to increase—with the fight for them intensifying—whenever the differential returns between assets and liabilities decline.

Capital Structure Optimization. This component of economic performance—alternatively described as *the minimization of the total cost of capital*—has become increasingly visible in recent decades as financial institutions have been afforded tremendous flexibility with respect to debt funding and capital raising alternatives.

Pressures on Static Business Models

Having introduced the risk-based economic performance equation, we can now proceed to a more detailed discussion of the challenges facing static business models. Thus, as the secular forces began to gather momentum during the Great Moderation, pressures on traditional financial businesses began to intensify. At times, as illustrated by the U.S. institutional experiences listed below, these secular evolutionary changes in the financial environment were exacerbated by period-specific and cyclical factors.

- Net interest margins (differential returns between assets and liabilities) of U.S. commercial banks have declined by 25 percent over the past 15 years. This fairly persistent compression was due in part to the increases in both the relative costs of liabilities as well as their sensitivity to changes in interest rates. In risk-based terms, this can in part be described as the compression of the *balance sheet arbitrage* component of economic performance.
- Dangers of static business models were illustrated by the experience of the U.S. life insurance industry in 2000 to 2003. During that period, investment returns declined and competitive pressures increased. In response, most insurers invested in progressively riskier instruments and issued liabilities with increasing amounts of embedded short options. During the subsequent recession, these greater risks did significant damage to the industry's capital and earnings. In 2001 to 2002, realized losses of 20 top life insurers in the United States amounted to almost

\$11 billion, with average return on assets dropping to below 2 percent in 2002. This episode—that can be described in terms of pressures on the *systematic risks* and *fees* components of the economic performance equation—showed the susceptibility of static business models to secular compression in fees coupled with low-return environments.

- The experience of defined-benefit pension plans in the United States during the first decade of the twenty-first century was equally troublesome—and also related to unmanaged *systematic risks* inherent in static business models. Historically, pension asset allocations were heavily skewed toward equities, which was contrary to the fixed-income nature of their liabilities. Given these exposures, a simultaneous drop of equity prices and interest rates hurts pension plans the most. Between 1999 and 2007, assets of pensions with traditional static asset allocations grew by 33 percent, while their liabilities grew by over 110 percent over the same time period.⁹ Thus, a pension plan that was fully funded in 1999 would have been underfunded by 37 percent in 2007—entirely because of the static asset allocations and underlying mismatched risks between assets and liabilities. The latter calculation is consistent with the actual experience of U.S. defined-benefit pensions.
- Throughout the Great Moderation, other traditional financial activities have experienced a dramatic *fee* compression. Representative investment bank underwriting fees declined by 70 to 80 percent between 1997 and 2007. Equity trading commissions charged by brokers decreased by 80 to 90 percent over recent decades. According to anecdotal evidence, loan origination fees, bid-ask spreads, clearing fees, and asset management fees for large institutional mandates experienced a similar fate, albeit to a lesser extent.
- The low-return environment in 2003 to 2006 coupled with a secular *fee* compression resulted in a wide range of financial institutions attempting to earn additional returns via complex financial instruments with significant underlying *systematic* market and credit risks. During the subsequent financial crisis, prices of these securities dropped precipitously amidst deteriorating economic fundamentals, the lack of market liquidity, and incapacitated structured-product markets. Between September 2007 and April 2008 alone, write downs across commercial banks, securities firms, and insurers amounted to over \$200 billion. As a result, capital ratios declined and the total capital in excess of \$65 billion had to be raised during a market dislocation, leading to higher overall *costs of capital* and impairing future economic performance.

Representative pressures on static business models during the Great Moderation are summarized in Table 1.1.

TABLE 1.1 Pressures on Static Business Models During the Great Moderation

Financial Sector	Pressures on Static Business Models	Magnitude/ Time Frame	Relevant EP Components
Commercial Banks	Margin compression	−25% (1992–2007)	Balance sheet arbitrage Systematic risks
Life Insurers	Margin compression	−22% (1997–2007)	Systematic risks
Brokers	Decline in trading commissions	−88% (1980–2007)	Fees
Investment Banks	Decline in underwriting fees	−76% (1997–2007)	Fees
Life Insurers	Realized losses due to excessive risk taking in response to secular pressures and a low-return environment	−\$11B (2002–2003)	Systematic risks Fees
DB Pensions	Decline in funding status due to mismatched A/L risks	−50% (1999–2007)	Systematic risks
Securities Firms Commercial Banks Insurers	Significant write downs due to excessive risk taking in response to secular pressures and a low-return environment	−\$200B+ (2007–2008)	Systematic risks Fees

Note: Corresponding references and data sources are presented in Chapter 2.

The risk-based economic performance equation affords us with insights into the exact sources of pressures on traditional financial businesses that came to the forefront during the Great Moderation. It helps explain why risk and return characteristics of static business models have increasingly become at the mercy of capital markets and economic cycles, with attempts to replenish declining earnings at times leading to vicious circles of leverage and risk taking. Last, it sheds light on the two distinct types of undesirable institutional responses to pressures. The first involved financial executives who hoped that things would return to “normal,” questioning the need to adapt and clinging to static business models in the face of evolutionary changes. The second involved financial institutions that attempted to adopt a more active approach to risk taking without appropriate decision-making frameworks, investment processes, and risk-management

capabilities in place. As described in the next section, both have proven perilous.

Dynamic Finance Perspective on Financial Crises

Global financial crises serve as an invaluable, albeit extreme, learning experiences about the inner workings of the new world of finance, providing convincing evidence of the profound evolutionary changes that have occurred over recent decades. To elaborate on one of the most telling examples of pressures on static business models from the previous section, let us examine how the stage for the 2007-2008 credit and liquidity crisis was set. We start by systematically describing the impact of global forces on each component of risk-based economic performance.

The Vicious Circle of Leverage and Risk Taking

It is all too tempting to declare the 2007–2008 financial crisis merely a cyclical phenomenon. Consider the following familiar pattern. The late stages of a prolonged economic expansion are accompanied by a period of tranquility and low default rates, leading to the overall complacency on the part of both financial institutions and investors. Underwriting standards on loans and covenants on debt instruments get progressively looser, while access to cheap credit becomes abundant. Risk taking becomes reckless, and imbalances build up. A well-deserved reckoning ensues in due time.

I argue, however, that the unique features of the 2007–2008 crisis suggest that powerful new phenomena—those that extended far beyond the cyclical forces—were at play, causing an unprecedented increase in leverage throughout most of the global financial system. As a way of understanding this, let us walk through the components of the economic performance, one by one.

First, such secular forces as globalization, disintermediation, greater availability of financial information, intensified competition, and increased consumer sophistication decreased the opportunities for *balance sheet arbitrage*. Second, the same factors compressed *fees* associated with basic financial services. To defend against these, financial executives dispatched a variety of corporate finance activities directed at preserving balance sheet arbitrage, reducing *expenses*, and minimizing *the cost of capital*. Meanwhile the growth of *fee-based businesses* (that included asset management and “originate, securitize, and sell” business models) became an important part of supplementing existing sources of earnings.

For many financial institutions, these actions proved insufficient in mitigating the margin pressures. Part and parcel of the buildup in leverage, financial institutions and investors—unwilling to accept lower returns and

earnings—turned to greater risk taking. The latter involved both *principal investments* and *systematic risks*. In addition to leveraging static business models explicitly, market participants began to employ alternative investments, progressively more sophisticated trading programs, and complex and opaque financial instruments and derivatives. Due to laws of supply and demand, greater demand for risky investments resulted in the decline in compensation for bearing financial risks.

Meanwhile, the rise in alternative investments—coupled with an increase in market efficiency—led to highly leveraged hedge funds and proprietary desks chasing the same set of investments and further compressing the returns from risk taking. In fact, secular, period-specific, and cyclical factors have *simultaneously affected most components of the economic performance equation!* The following vicious circle ensued: Margin pressures pushed financial institutions and investors to take on progressively larger risks. That, in turn, further compressed the returns from risk taking. Last, in one of the important risk-management lessons learned, what we see in retrospect as greater risk taking was not perceived as such by the market participants during the leverage buildup. Perversely, as market volatility declined, so did the estimates of risk, such as Value-at-Risk, that many institutions used. The reliance of some risk measures on recent historical data signaled to many market participants that an increase in nominal exposures was appropriate. In Figure 1.5 we see this vicious circle in graphic form.

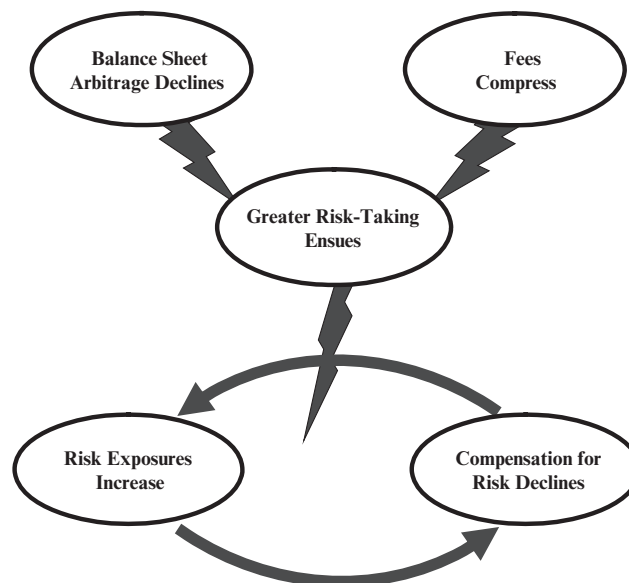


FIGURE 1.5 The Vicious Circle of Leverage and Risk-Taking

In the prelude to the credit and liquidity crisis that followed, the spring of leverage and opaque risk taking was wound up to an unprecedented extent.

The Vicious Circle of Deleveraging

What was the outcome of the failures to adjust static business models to the changing realities or forays into active risk taking without requisite skills, processes, decision-making frameworks, and risk-management capabilities? It was the financial crisis that sent ripple effects across real economies and financial markets around the world. While not all market crises have an easily identifiable cause, the 2007–2008 dislocation was sparked by the housing market deterioration in the United States, coupled with the increase in delinquencies on mortgage loans. Once the crisis got going, however, many of its features had a lot in common with other significant dislocations of the past decade—for instance, the 1998 LTCM crisis—and could be described as follows.¹⁰ First, risk aversion, deleveraging, and the flight to less risky investments all lead to illiquidity in complex positions and accompanying price declines. Business models relying on securitization of loan originations become unviable. Margin calls and forced liquidations directed at meeting these obligations follow. This, in turn, leads to the so-called *contagion* where forced sales of positions occur even in markets that are not directly threatened. Commercial and investment banks become more risk averse and reduce lending activities, creating difficulties for financing in capital markets and forcing additional liquidations. The downward spiral continues as prices decline and margin calls increase, leading to further risk aversion and deleveraging. Similarities in risk exposures, risk tolerances, and risk-management practices across the global financial system become the determining factors, often overwhelming macroeconomic backdrops and prompting the description of these events as *technical* (related to supply-and-demand). Figure 1.6 shows the vicious circles observed during the unwinding stages of modern financial crises.

Complexity, Globalization, and Unintended Consequences

The following additional lessons from the 2007–2008 financial crisis illustrate the evolutionary changes in the global financial landscape and suggest the need for transformational thinking:

- Complex securities used by financial institutions and investors to counteract margin pressures often lack transparency with respect to their underlying risks.

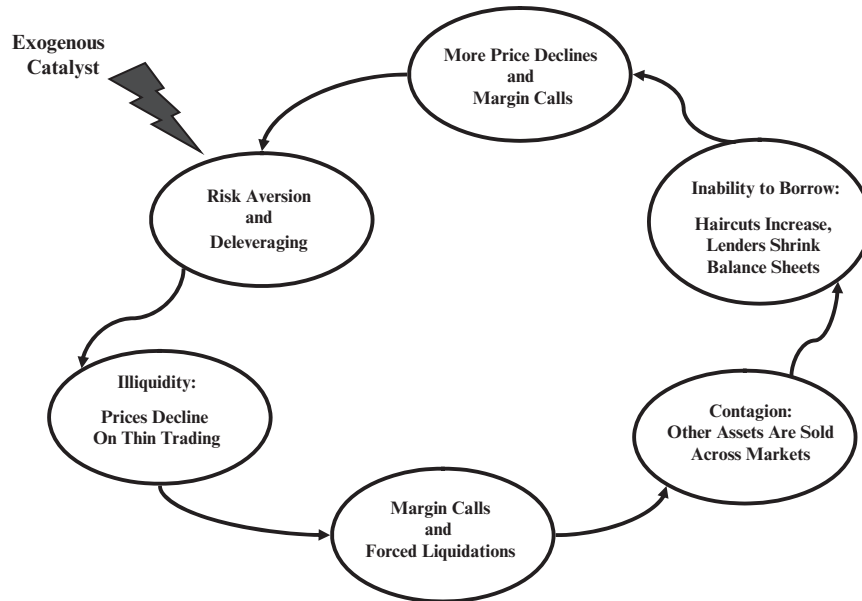


FIGURE 1.6 The Deleveraging Stage of a Modern Financial Crisis

- The increased complexity and lack of transparency also apply to financial institutions themselves due to inadequate financial reporting. They increase stakeholder and lender uncertainty about risk exposures and contingent liabilities of their counterparties, crippling investment and financing environments in times of crisis.
- Non-risk-based constructs—such as credit ratings and accounting earnings—that fail to convey the true nature of financial institutions' business models and risk exposures may be not only unhelpful but actually blinding, contributing to both the winding-up and unwinding stages of financial crises.
- The leverage in the system may be exacerbated if the market compensation for bearing financial risks—already potentially mispriced at the end of an economic expansion—is additionally reduced by period-specific and secular phenomena.
- The quest for higher origination volumes amidst compressing fees and the prevalence of “originate, securitize, and sell” business models that detach originators from credit risk both contribute to the loosening of underwriting standards.

- The global diffusion of risks—coupled with the lack of adequate risk-based financial disclosures—can dramatically amplify the vicious circles of risk taking and deleveraging in a testament to the increased complexity, interconnectivity, and opaqueness of the dynamic new world.

Given the secular nature of many forces at play, continuing pressures on static business models, and the nature of modern mechanisms according to which imbalances build up and then unwind, it is reasonable to expect that systemic financial crises as described may be a permanent feature of the new financial regime.

Pillars of Strategic Decision Making

To understand how financial institutions can adapt to the dynamic new world, recall the prevailing mode of operation that served so well during most of the Golden Age. Static business models produced adequate earnings because of high fees and generous asset/liability spreads. The executives' skill sets were reflective of the dominant priorities at hand: Create a robust mix of businesses through organic development; seek mergers and acquisitions that complement existing businesses; achieve stable and growing accounting earnings; minimize expenses; and grow individual businesses through a variety of customer-related activities. I have referred to this entire process as *business strategy coupled with corporate finance*. Along with accounting earnings, they were previously described as the pillars of strategic decision making during the old regime, as illustrated in Figure 1.3.

Evolutionary changes in the world of finance argue for a fundamentally new approach to economic value creation. The buy-and-hold old-regime mentality must be replaced by a new paradigm represented by the risk-based economic performance equation. *Strategic vision* needs to encompass dynamism, active risk taking, business strategy, and corporate finance all at once. Even after an organization has successfully adapted and transformed itself, it cannot stand still but must continue to reassess and rebalance its resources, businesses, and risks as the market environments change around it.

As active risk taking and dynamic management take on a more prominent role in delivering economic performance, the nature of strategic vision, the concept of optimality, and the nature of companies' communication with stakeholders must all change accordingly. Part and parcel of the expanded mandate of an executive, rigorous risk management becomes the very

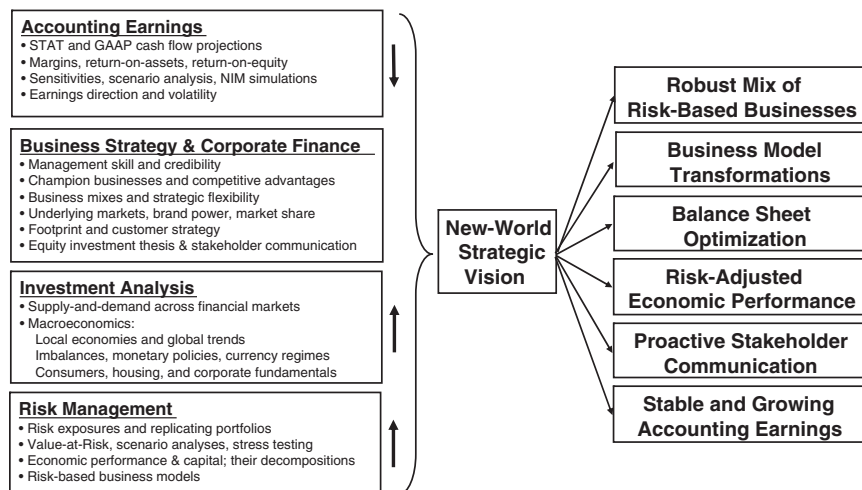


FIGURE 1.7 The Four Pillars of Strategic Decisions in the Dynamic New World

language of strategic decision making and the key ingredient of future success. Greater complexity and uncertainty of the landscape—including strategic alternatives, competitive pressures, and the market environment—necessitate a dramatic change in the required executive skill set. A greater importance is placed on executives' understanding of macroeconomic forces, a rigorous investment philosophy, and a command of advanced financial tools. Therefore, the two pillars of strategic decision making—that during the old regime included accounting earnings and business strategy combined with corporate finance—must be expanded to include risk management and investment analysis, forming the four pillars shown in Figure 1.7. I argue later in this book that movement toward fair valuation and risk-focused regulation are likely to gradually shift the “power equation” away from the accounting-based mentality and toward economic value creation and the risk-based paradigm.¹¹ This is schematically represented through the arrows in Figure 1.7.

Value Creation Through Dynamism and Business Model Transformations

I began this chapter with the quotes from financial executives dealing with the challenges of the dynamic new world. They questioned the viability of traditional asset-allocation strategies. They argued that, in addition to offering fee-based advice, investment banks have to finance their clients'

projects and co-invest alongside them. They urged that asset managers need to continually expand into new asset classes and offer new products to stay competitive. They cautioned that the Golden Age of commercial banking may be over.

When interpreted from the evolutionary perspective of *Dynamic Finance*, these observations are, in essence, descriptions of the pressures facing static business models in a changed world. Along with lessons learned from modern financial crises, they suggest the need to radically reengineer the business models of financial institutions, making them more dynamic and flexible and enabling active risk taking to become a major contributor to economic value creation.

As modern financial institutions and institutional investors are adapting to the new order, executive strategic decisions directed at dynamic economic value creation can be thought of in terms of the following two general categories.

- *Responsive recalibrations of business models*: Transitions from static to dynamic business models, where *individual components* of the risk-based economic performance equation are continually enhanced¹²; and
- *Full-scale business model transformations*: Dynamic rebalancing of risk-based business model mixes on the enterprise-wide level that will be addressed in a separate section later in this chapter.

Here is a closer look at responsible recalibrations of business models.

Responsive Recalibrations of Business Models

Enhancement of the individual components of the economic performance equation is the important first step in transitioning from static to dynamic business models and changing the corresponding ways of thinking. A combination of business strategy, corporate finance, investment analysis, and risk-management activities can be employed in this regard as follows.

- *Balance Sheet Arbitrage*. This component of economic performance can be enhanced through a variety of business strategy and corporate finance activities. For example, commercial banks can improve customer service, employ cross-selling and customer retention strategies, or enhance brand power and market share in an effort to increase the share of retail liabilities on their balance sheets. This can potentially reduce the overall cost of retail liabilities as well as their sensitivity to changes in interest rates. Meanwhile, government-sponsored enterprises can maintain and enhance funding advantages by continually improving their risk management sophistication, expanding their debt

and capital offerings, and actively growing the universe of investors in these securities worldwide.

- *Principal Investments.* Expansion into principal investments starts with a formulation of a strategic vision regarding the role of different types of risk taking in the overall business model. Investment preferences, expected returns, macroeconomic views, and risk budgets can subsequently help optimize the portfolio of principal investments, including capital allocations to proprietary trading, stakes in hedge funds, as well as private and public equity investments.
- *Systematic Risks.* The dynamic management of systematic risks is increasingly used to create economic value across financial sectors. In this regard, financial institutions and institutional investors can employ such organizational structures as asset/liability committees and investment strategy committees to implement this enterprise-wide (“top-down”) risk-taking process on a senior management level. Macroeconomic views, investment analyses, risk-management considerations, and advanced financial instruments can all be used to arrive at and subsequently execute such decisions as decreasing interest-rate risk in an anticipation of an economic expansion or decreasing exposures to consumer and corporate credit in anticipations of a recession. In a notable trend, financial institutions are continually adding new asset classes—commodities, hard assets, and local currency emerging markets—to their investment arsenal in order to increase investment flexibility and improve risk-adjusted returns. The increasing importance of the dynamic management of systematic risks in delivering economic performance represents a departure from static business models, significantly affecting the nature of executive decision making and stakeholder communication in the process.
- *Fees and Expenses.* A variety of activities that typically fall under the umbrella of business strategy and corporate finance can be proactively used by modern financial institutions to grow fee-based businesses and control expenses. Of particular importance to this component of economic performance is the advent of securitization—the process of pooling together assets and future receivables, repackaging them as financial instruments, and selling them to investors. During securitization, financial institutions may collect various fees and commissions as well as earn the so-called *deal arbitrage*—the difference between the total value of repackaged securities and the cost of the underlying collateral. Dangers associated with inadequately risk-managed “securitize and sell” business models became apparent during some of the recent financial crises where capital markets that trade securitized products became incapacitated. Securitization has become an important new source of fee income, transforming risk-taking businesses (such as

loan origination) into fee-based businesses and presenting many conceptual, organizational, and risk-management implications. As for expenses, financial institutions continue to be proactive and innovative in minimizing them through mergers and acquisitions, technological innovation, applications of the management science, and other business strategy and corporate finance activities.

- *Capital Structure.* Minimization of the total cost of the firm's capital structure has become an important component of economic performance in recent years. Typically, investment banks and other strategic advisors are retained by financial institutions and non-financial companies to analyze the alternatives and subsequently underwrite and sell debt and capital instruments to investors worldwide. Today, when a plethora of funding and capital choices exists—ranging from common and preferred stocks to various forms of debt instruments and hybrid capital securities—capital structure optimization has become a nontrivial act of balancing regulatory requirements, credit-rating considerations, tax strategies, and capital market perceptions. It should be noted that capital structure optimization exercises may simultaneously affect other components of the economic performance equation (e.g., differential systematic risk exposures between assets and liabilities). This suggests that capital management should be a part of an integrated enterprise-wide process.

Leading real-world financial institutions are already responding to the major changes around them. Examples of companies that are making transitions from static to dynamic business models by enhancing the individual components of the economic performance equation are presented in Table 1.2.¹³

Applications to Non-Financial Companies

It is worth noting that the risk-based economic performance equation—used primarily in this book to analyze the economic value creation by financial institutions—also has implications for non-financial corporations. In fact, growing fee-based businesses, minimizing expenses, and optimizing the capital structure are examples of responsive recalibrations of business models that are similar across financial institutions and non-financial corporations. One of the recurring motifs of this book is that management of systematic risks has become an important determinant of economic performance of financial institutions. It is also the case with non-financial corporations that routinely take on financial risks in their international operations, debt issuance, cash management, securitization, capital management, pension-related decisions, and M & A. Failures to properly manage financial

TABLE 1.2 Firms Enhancing Individual Components of the Economic Performance

EP Component	Type of Enhancement	Institutional Examples
Balance Sheet Arbitrage	Growth of retail deposits and improvements in customer service standards	Wachovia
	Debt product innovation coupled with a proactive expansion of the investor base	The Farm Credit System
Principal Investments	Using the firm's own capital to take stakes in other financial institutions	Bank of America, HSBC, RBS, Allianz, ING
	Expansion of hedge funds into private equity activities and vice versa	The Tudor Group, The Blackstone Group, KKR
Systematic Risks	Expansion of the investment universe and dynamic rebalancing of systematic risks according to economic and market views	PIMCO (as asset manager)
Fees	Growth of asset management businesses, which may be coupled with principal investments	Goldman Sachs
Expenses	Using mergers and acquisitions to lower the cost of operations	The Bank of New York Mellon
Capital Structure	Innovative uses of hybrid capital securities	US Bancorp
	Accelerated share repurchase programs	State Street Bank Marsh & McLennan

Note: Corresponding references and data sources are presented in Chapter 5.

risks are numerous and well-documented, with recent notable examples including foreign exchange as well as auction-rate securities-related losses of non-financial companies (Chapter 5). For financial institutions and non-financial companies alike, the concept of risk-based economic performance can help establish the relationship between economic value creation, executive choices, and risk management.

Full-Scale Business Model Transformations

Financial Darwinism encompasses a plethora of executive decisions that help financial institutions adapt to the new reality and enhance economic

performance in a dynamic fashion. To illustrate the decision-making process and a myriad of alternatives surrounding full-scale business model transformations, consider the following types of choices and dilemmas facing executives at modern financial institutions: Do I grow risk-taking businesses or fee-based businesses? Among risk-taking businesses, do I emphasize commercial lending or principal investment activities? Where and how do I short options to increase my returns? Among fee-based businesses, do I prefer brokerage, strategic advisory, or asset management? What is my view on “originate, securitize, and sell” business models?

It stands to reason that any firm will try to maximize the balance sheet arbitrage and minimize both expenses and cost of capital as per the previous section. Subsequently, as shown in Figure 1.8, the following fundamental philosophical decision needs to be made: *What is the desired proportion of economic performance that should be generated through risk-taking*

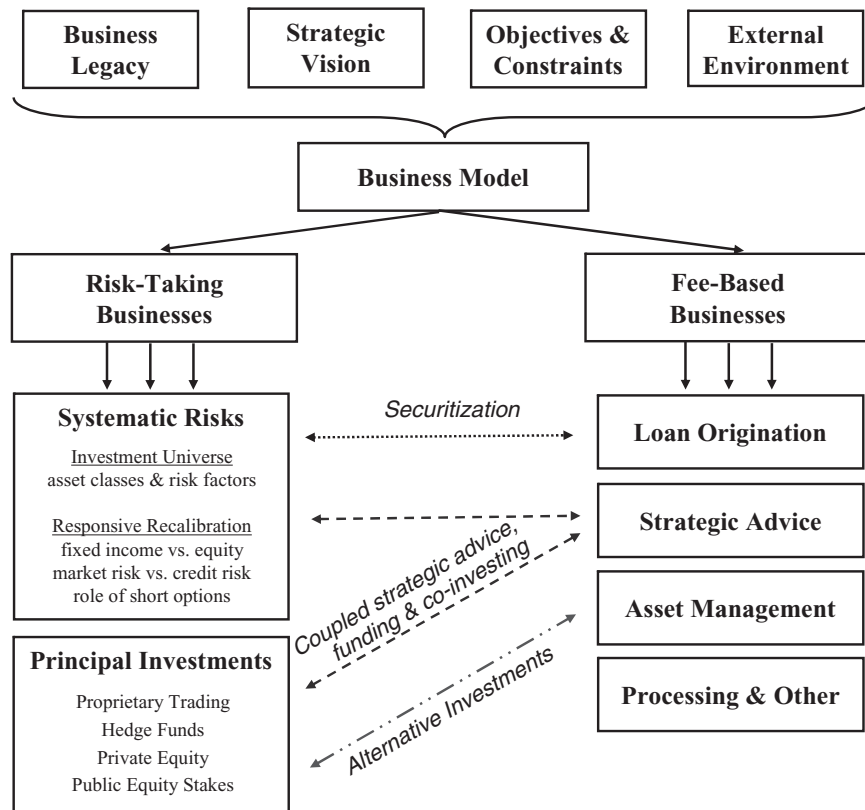


FIGURE 1.8 Example of an Executive-Level Strategic Decision Tree

activities vis-à-vis fee-based activities? This decision should be based on the institution's legacy; unique circumstances, objectives, and constraints; external environment; and, most importantly, strategic vision of executives. It should reflect the overall risk tolerance of the company, its perceived competitive advantages, as well as its risk-management philosophy, dramatically affecting all subsequent decisions.

Let us continue walking through Figure 1.8. After the role of risk-taking activities vis-à-vis fee-based businesses—and their relative desirability—have been determined on a macro level, more specific choices within each category can be analyzed and implemented in the spirit of responsive recalibrations of business models. Within the systematic risk component, after the investment universe is established, risks can be dynamically rebalanced according to macroeconomic and market views. Among principal investment activities, the roles of proprietary trading, stakes of hedge funds and private equity funds, and direct private equity and venture capital stakes can be periodically reassessed. The same process applies to alternatives related to fee-based businesses. Relevant details within different components of economic performance can be further enhanced through more formal optimizations that use analytical computer systems.

Once broad conceptual decisions have been made, the art of marrying business strategy, corporate finance, risk-based business models, and investment decisions begins. At this stage, executives must answer yet another important set of questions. Should strategic advisory services be coupled with principal investment and financing activities, as shown via lines connecting Strategic Advice, Principle Investments, and Systematic Risks in Figure 1.8? Should growth of asset-management (fee-based) businesses be intertwined with principal investments? Should originated loans be retained on the balance sheet as is, or hedged, or securitized and sold, with the latter choices effectively converting a risk-taking business into a fee-based business? What kinds of options should be bought or shorted on the balance sheet?

Today's executives responsible for strategic decisions face a continuous conceptual optimization problem that attempts to help financial institutions arrive at a robust business mix, minimize the cost of capital, preserve strategic flexibility, generate stable and growing earnings, and achieve premium equity market valuation. Making the maximization of absolute and risk-adjusted economic performance an equally important priority can seamlessly integrate *Financial Darwinism* into the lives of financial institutions. The outcome of the decision-making processes described previously is the desired mix of *risk-based business models* that reflects strategic vision of executives as well as numerous objectives, considerations, and constraints unique to the institution. Business strategy combined with corporate finance, risk management, and investment analyses are integrated within a

top-down framework that encompasses both business and risk-taking activities. By construction, risk-management executives become active participants in strategic decisions—not a policing function responsible for after-the-fact safety-and-soundness verification.

Not surprisingly, the overall effectiveness of business model transformations depends on the executives' ability to implement their strategic visions through a combination of financial and organizational means. In this day and age, capital markets afford tremendous flexibility in enhancing economic performance, solving a particular problem, or arriving at a portfolio of businesses with desired risk/return characteristics. Thus, both the breadth of perspective and the necessary change in the executive skill set repeatedly emphasized in this book become self-evident: In order to determine an "optimal" implementation of an "optimal" strategic vision, an intimate familiarity with the entire arsenal of advanced financial tools is required. As shown in Figure 1.9, leverage strategies, asset management, hedging, securitization, insurance, mergers and acquisitions, capital structure optimization, debt management, and product design are all at the disposal of financial executives today.

Let me close this section with the following comment about the interaction between accounting and economic realities. While this book focuses on economic performance and a risk-based paradigm, the delivery of stable and growing accounting earnings is likely to remain the governing reality and an overriding objective of financial institutions in the foreseeable future. This implies that a practical and realistic approach to implementing the framework that I have proposed involves a simultaneous optimization of both accounting earnings and economic performance. Alternatively,

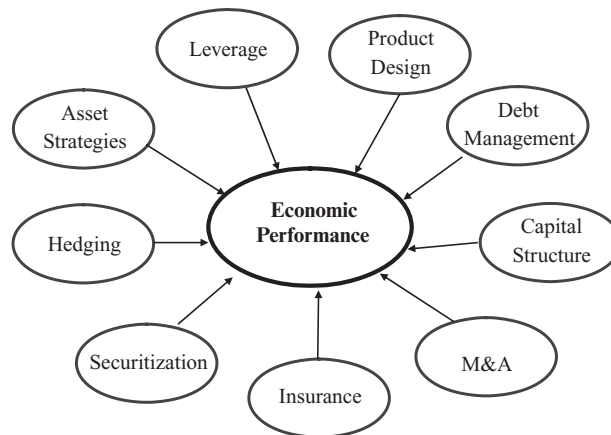


FIGURE 1.9 The Arsenal of Financial Tools Used in Business Model Transformations

economic performance can be optimized subject to various risk and accounting earnings constraints.

There are reasons to believe, however, that as the world of finance continues moving toward risk-focused regulation, more comprehensive financial disclosures, and fair valuation, the balance of power in both strategic decisions and stakeholder priorities should gradually shift away from accounting earnings and toward economic performance, increasing the importance of investment analyses and risk management as pillars of strategic decision making as shown in Figure 1.7. If this admittedly provocative prediction comes true, this would have the following significant capital market implications:

- As the relevant information about business models, risk exposures, and the entire process of economic value creation becomes gradually available to financial institutions' stakeholders, equity market valuations should become more directly linked to the economic reality rather than accounting earnings.
- Premium equity market valuation should become increasingly reflective of the company's success in translating active risk decisions and business model transformations into economic value creation. Accelerating trends in absolute and risk-adjusted economic performance should lead to expanding valuation multiples over time.
- Perceptions about the future prospects of companies should be increasingly shaped by the risk-based communication between companies and stakeholders. When behaving in the spirit of *Financial Darwinism*, executives will have to proactively and systematically: (a) describe their strategic visions and rationale for business model transformations; (b) articulate the track record of generating consistent and growing economic performance through active risk-taking decisions; and (c) demonstrate that they possess the necessary competency, skills, broad perspective, and command of advanced financial tools.

As with responsive recalibrations, some financial institutions are already undertaking full-scale business model transformations designed to counteract the pressures on static business models. Table 1.3 describes several distinct types of such actions. Think of these examples as adhering to the "spirit" of *Financial Darwinism*—even in the absence of a comprehensive framework presented in this book.

Business model transformations are likely to become a critical component of not only success but the very economic viability of financial institutions and investors in the changed world. They should increasingly contribute to economic value creation, differentiating visionary firms from their competitors and leading to premium valuation in the capital markets.

TABLE 1.3 Organizations Undertaking Comprehensive Business Model Transformation

Financial Sector	Business Model Transformation	Institutional Examples
Central Banks Sovereign Wealth Funds DB Pension Plans College Endowments Insurance Companies	Transition away from static business models via allocations to alternative investments	China Investment Corp. ADIA Yale Endowment Texas Teachers Swiss Re Allstate
Commercial Banks Insurance Companies Pension Plans	Transition away from static business models via dynamic management of systematic risks	Wells Fargo MetLife
Insurance Companies Commercial Banks REITs	Transformation of risk-taking businesses into fee-based businesses via securitization	AIG*
Investment Banks	Coupling of strategic advice with financing and principal investment activities	Goldman Sachs
Commercial Banks Investment Banks	Shorting out-of-the-money options via acquisitions of reinsurance companies or asset-management strategies	Lehman Brothers*
Financial Services	Coupling of brokerage with other fee-based services, such as strategic advice	Marsh, Inc.

Note: SWF stands for Sovereign Wealth Funds; Texas Teachers stands for Texas Teachers Retirement System. Corresponding references and data sources are presented in Chapter 5.

*Important examples despite the companies' problems during the 2007–2008 financial crisis.

Beyond the Façade: The Importance of Risk-Based Transparency

The lack of risk-based transparency associated with modern financial institutions has become indisputable in recent years. On one end of the spectrum is the increasing number of firms that engage in dynamic risk-taking and business model transformations in order to create economic value. On the opposite end of the spectrum are the financial institutions and investors that continue to cling onto static business models, often responding to pressures

with increased leverage and investments in highly complex and opaque financial instruments.

Not surprisingly, traditional financial disclosures—that may have been adequate in informing the financial community and stakeholders about the process of economic value creation during the static old regime—often fail to describe more intricate aspects of behaviors of today’s financial institutions. During market dislocations, the lack of risk-based transparency may result in significant stakeholder and lender uncertainty, crippling investment and financing environments. For instance, during the 2007–2008 credit and liquidity crisis, hundreds of billions of contingent liabilities and write downs, proprietary trading losses, concentrated credit exposures, and complex investments by a wide range of institutions and investors have all greatly surprised capital markets and regulators, resulting in an extreme risk aversion across the global financial system and a vicious circle depicted in Figure 1.5.

In Figure 1.10, I illustrate the lack of risk-based transparency in graphic form by contrasting the building façades (metaphors for what outsiders know about financial institutions) with the actual underlying business models. As an adequately disclosed legacy business on the left is transformed into an enterprise reflective of the executives’ strategic vision, the business model and its risk/return characteristics can be altered dramatically. However, financial disclosures and the capital market perceptions (building façades) remain largely unchanged, putting the effectiveness of credit ratings, equity valuations, and analyst reports in doubt.

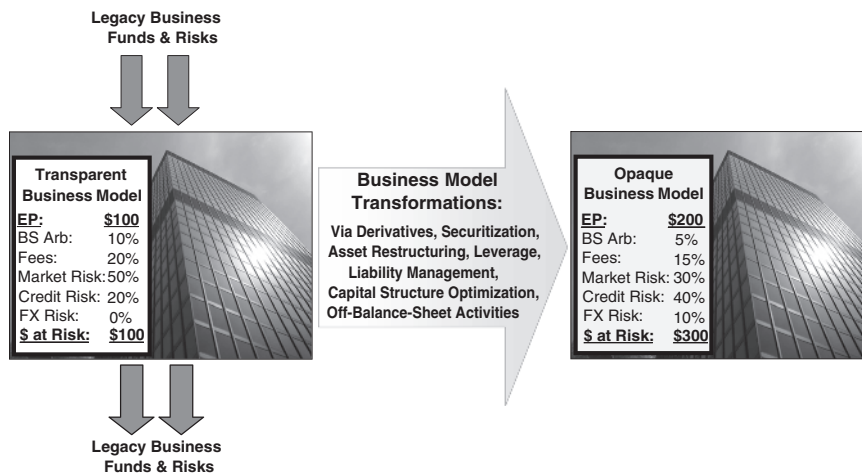


FIGURE 1.10 Beyond the Façade: The Need for Risk Based Transparency

If financial institutions and their stakeholders are to take full advantage of the opportunities of the dynamic new world and mitigate the severity of financial crises, the need for risk-based transparency in the system—direct, clear, and comprehensive descriptions of financial institutions’ business models, risk exposures, and economic value generation mechanism—is paramount. A number of initiatives in the realm of public policy, regulation, and accounting standards are currently underway to address this issue.



To grasp just how different the dynamic new world is from the post-World War II era that has served financial intermediaries so well, let us now turn in Chapter 2 to the study of the old regime and its inner workings in greater detail. Among other things, this chapter illustrates that W. Edwards Deming was, regrettably, correct: “It is not necessary to change. Survival is not mandatory.”

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