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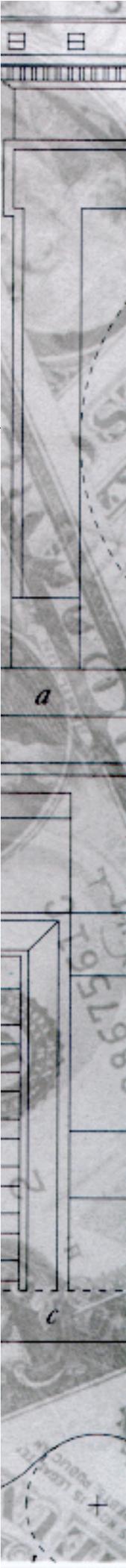
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*Risk Management in an Age of
Change*

by
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RISK MANAGEMENT IN AN AGE OF CHANGE

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ABSTRACT

The environment in which banks and other financial services industry firms operate was once very stable. It is now increasingly permeated with change. Enhanced performance demands make this change salient to high-level decision-makers. Many of the opportunities firms now face are path-dependent and this will continue to be so. For firms to make effective choices in such an environment, both competitive strategy and the strategy-making process must come to terms with opportunities which evolve over time. Old decision-making systems and attitudes are unhelpful in this and may even be impediments to good outcomes.

Risk inevitably features in getting these decisions right. All strategic decisions induce and impose constraints on the types of risk banks traditionally monitor and manage. This needs to be explicitly considered and is generally not. Strategic decisions also impose a new type of risk, detailed here, which also needs to be analyzed, monitored, and controlled. All these activities require changes, discussed in detail, both in decision-making protocols and in the organizational structures and routines supporting decision-making.

Risk Management in an Age of Change

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1. The Changing Financial Environment

Bankers have cause for concern as they contemplate the future of their businesses. The landscape of the financial services industry is changing dramatically. The change is often not slow. Historic franchises are under attack or seem strikingly less secure. The environments in which profits have been made and results delivered to shareholders are evolving in unfamiliar and uncertain ways. A guide for understanding and action would be useful.

Change in the competitive landscape is the most overt element of this. Consolidation in the banking sector is creating significantly larger institutions expanding well beyond their historic geographic locations and, increasingly, beyond national boundaries. At the same time, competitive strategies are converging as the traditional walls separating banking, insurance, and investments are blurring. Through acquisitions, mergers, alliances and de novo initiatives, banks are extending the breadth of financial service product offerings to both commercial and individual customers. The pace of change is increasing and, in particular, the speed with which once distinctive product offerings and services are being copied and offered by competitors is up. Banks which wish to survive must respond.

The consolidation is no minor matter. The North Carolina National Bank was once the name notwithstanding - a typical American local banking company, operating in a state far from the manufacturing and financial centers. Under ambitious, hard-driving, and risk-taking leadership, it transformed into Nationsbank, a major player in a thriving region, and then again, through merger turned into acquisition, into a truly national Bank of America. BancOne routinized the process of growth through acquisition. It too grew to national significance in America, in large part through developing extraordinary speed and efficiency in exporting its systems and procedures to new acquisitions. The phenomenon is hardly confined to America, large though its market may be. The former Hongkong Shanghai Banking Corporation is now headquartered in London and is truly global in the scope of its operations and subsidiaries. These changes offer economies of scale and the many advantages of a broader network. These are potentially quite serious competitive considerations.

The convergence is in some respects even more striking. Firms which were large and powerful but seemed at least to have a distinct identity are increasingly moving into all lines of business or at least seriously contemplating such a move. It has been many years since the New York banks merged and grew into the Citibank, complex and multinational enough to have had the troubles it did in the 1970s. However, Citibank was still a bank. The merger with Travelers gave Citi a tremendous interest in insurance and brought many Travelers executives into high positions in the new company's management. The melding with Salomon Smith Barney clearly changed the organization, even if certain traditional Salomon lines of business were closed down and certain aspects of the Salomon culture were moderated. ING began in insurance but is now a global financial institution with many lines of business. It operates banks. It has a major asset management business. It is a force in investment banking. Convergence appears, at the moment, as a bet on the prospective value of cross-selling and economies of scope in certain operations. If the bet pays off, the firms that put their money down will be formidable competitors.

Commodification attacks, and seems to threaten the decline, of many historic franchises. Many lines of business which were once driven by long-standing relationships or were otherwise a matter of custom-tailored products are increasingly transaction-oriented and up for bid. Investment banking services are the outstanding example of this – the period in which a company’s investment banker was a part of its corporate identity now seems lost in the mists of time – but they are far from the only, or even the most thought-provoking, example today. Derivative securities were once essentially contracts crafted on an ad hoc basis. Now one reads of conversations in which one banker tells another “You were winning too much business. We were sure you either had a new model we didn’t yet understand or were headed for big trouble.” Lines of business which were once thought to be information - (and history-) intensive, like small business credit analysis, are becoming systematized and much more open to competition. The most intriguing variant of this appears in vivid relief in the mortgage market. Once there was no mortgage market, of course, except in retail; but there is increasingly radical disintegration upstream now. In all of these examples, efficiency considerations are coming to the fore and the informational asymmetries which once sheltered the banker’s life are becoming smaller and smaller. These developments have broader ramifications, not just for the level of profits earned but equally for the perception of product lines and the business units in which activities ought to be grouped together within and across firms.

These examples are phenomena and not causes: they are pictures of a present rather than any real guide to thinking about the future. But their upshot is clear. Competition is getting tougher. Small responses and tactics involving incremental changes seem unlikely to help. While the force of prospective competitive challenges is unambiguous, their form is obscure. The evolving competitive landscape is a threatening place.

These changes, and whatever lies behind them, are given enhanced significance by change in the corporate control landscape. Once this landscape was flat and essentially featureless, but it increasingly looks like Iceland – apparently covered by ancient glaciers worn to smoothness but in fact covered with established and scaldingly hot geysers and including many regions in which geysers threaten to break through. Shareholders are now far more conscious of performance standards than they were. They are aware management has more opportunity than it once did to affect financial performance. And shareholders are increasingly active. Management which fails to take the challenges seriously will be far more vulnerable now than it once was. The recent changes at the CEO level of Bank One and First Union Corp. are seen by many observers as testimonial to the performance demands of shareholders and the markets.

Institutional shareholders are more sophisticated and more driven by their own performance needs than they once were. This has had consequences far beyond shareholder motions in annual meetings and formal interviews. Analysts now feel the need to provide much finer detail on where firms’ profits come from and how great those profits are. Analysts seek, in ways which generate real pressures, more transparent accounting conventions. They want line-of-business reporting of results. They want to see, and discuss, rates-of-return by businesses. All of this renders far more visible management’s ability to cope with, and foresee, the changing environment.

Shareholders know that management can do more than it once could. In Europe, selective credit controls have been on the decline for many years. The European Union Second Banking Directive shattered legal constraints on cross-border innovation there. London's financial market had been in some respects closed and uncompetitive, and the Big Bang of the early 1980s changed that world utterly. The situation in Japan is more constrained, but the 1985 elimination of the Temporary Interest Rate Act (of 1945!) had a first-order impact on competition and the Tokyo Big Bang opened the securities markets in a similarly major way. In America, the waning of Glass-Steagall and other regulatory developments are also opening up new possibilities in very public ways.

Sensitivity to these developments is a matter of increasing urgency for senior management. Events now sometimes come to a sharp point. In the most recent Commerzbank annual meeting, a significant shareholder spoke at length about a vision of the future alternative to that of incumbent management; and while management responded heatedly that he had agreed not to do this, the thirty percent negative vote which he mustered against a minor resolution later in the meeting was a clear warning shot across management's bows. Allianz has made plain that it is prepared to sell its holdings in firms, however prominent, offering an inadequate rate of return on its investments. Actual corporate control transactions do now take place. In the days of strictly state-by-state banking, Wells Fargo was once a premier player in one of the very largest American markets. It was essentially purchased by a large and well-run bank from the upper Midwest. U.S. Trust, long a well-respected name in private banking was purchased by Charles Schwab in part because of slow growth and the acquirer's vision of the true national potential of the brand name.

The development of new technologies and the lowering of regulatory barriers suggest that shifts in corporate control will not be just limited to changes within the financial service industry but extend well beyond traditional players. The continued extension of features in Intuit's Quicken software and other web driven vehicles move these firms closer and closer to bank functionality. Internet start-ups like eCharge and Flooz.com are developing alternative payment vehicles which may lead to the development of new service capabilities ultimately creating new models for financial service firms.

Expectations of management are thus increasingly high. Monitoring is increasingly good and the knowledge of alternatives – both actions and investments – is increasingly sophisticated. All this points to enhanced vulnerability of incumbent management which does not take the future seriously; however the present is working out. Understanding the evolving competitive future has never been more important.

These dynamics, while building for some time, have greatly increased pace in the past several years. This trend is expected to continue. Banks are increasingly making the investments and commitments to be multi-product and multi-national financial service firms and to offer new innovation to their customers. The structures and organizations to support this are largely untested, and it remains to be seen how the various operating strategies now being employed will play out. As we will explain below, the result of this is a new set of risk issues. These go far beyond bankers' traditional concerns with financial risk and the risk that functional operations such as clearing may go awry, reaching to questions of the risk involved in committing company resources to particular business activities. The quality of the management of these issues will differentiate winners from losers and define long-term success in the industry.

The research presented here provides a structure for better understanding the new dimensions of risk. The ultimate strategic issue in banking today is how to invest in unique talents and capabilities to generate sustainable attractive returns in a rapidly evolving and therefore challenging world. The ideas we offer will be helpful to bankers in their ongoing search for long-term competitive success.

Our basic approach can be summarized briefly. The environment of change needs to be treated as if it is here to stay. This means that the economic logic of profitability remains as it was but the conditions of its application are now, and may well remain, far different from what they were. Most business decisions important enough to occupy the attention of senior decision-makers will involve sunk costs and thus the danger of loss. There is no avoiding the choices: the purchase price of investments already proven wise will later be too high and the opportunity cost of buying late will be too great. To thrive in the world bankers now face, their institutions require philosophy, organization, and systems to accept and exploit change rather than be overwhelmed by it. In the chapters which follow, we develop these ideas and their implications systematically and offer detailed suggestions as to what to do.

2. Strategy and Context

In an environment of change, operational efficiency is clearly not enough to assure profitability. Insightful strategy is essential. When banking was a more stable business, effective strategy was well understood. The old times are gone and the old approaches do not suit the new circumstances. It is easiest to understand why this is so with a more powerful conceptual framework encompassing both the old and the new and enabling managers to situate their businesses and draw inferences. We develop such a framework below. It makes plain why the new differs from the old and what precisely needs to be changed for firms to adapt.

A conceptual framework needs foundations. These must begin with the context and objectives of the firm. The firms we are considering here are banks. They provide banking and perhaps related services to retail, institutional, and wholesale customers based or operating in one or perhaps many countries. Some of the bank's activities thus take place in its own home country, some in international centers such as London, New York, and Tokyo, some in regional or national centers, and some local to customers, offshore, or in any location where back-office operations can efficiently be sited. The banks engage, qua banks, in the usual range of intermediary activities, fee-based services, and trading. The purpose of all this, of course, is to make a profit.

There is always an upper bound to the profit that can be made from such services. Often there are other banks or competing financial services firms which are already able to provide the services or would, for a sufficiently high price, set up to provide them. Often the basic ideas behind the services are well known or at least understood. Even when a bank develops a new product, the innovation is usually copied, often relatively quickly (compared, say, to the life of a patent). Monopoly on the innovation would therefore be relatively temporary. In these ways, competition is often an important constraint on profitability in banking. Operating efficiency and other such tactics are no solution to challenges from similarly situated firms. Ordinary profits – the baseline “normal profits” in an industry referred to in basic economic theory – are the outcome when competition is vigorous.

What banks seek from their operations, then, are extraordinary profits, and not just occasionally but rather on a sustainable basis. This represents success. What achieving it requires is some unique talent or capability which serves as an impediment to the usual leveling forces of imitation and competition. The important medium to long-term question in banking is therefore how to create combinations of bank resources, services, and clients which will generate such unique talents and capabilities. We call such questions strategic. More precisely, we will use the word strategic to describe firm-level decisions which result in such asymmetries and which are difficult or very costly subsequently to implement (or to reverse in the short-run) and so tend to have long-lasting consequences for firms' fortunes. These are important in any environment in which it is possible to create such an asymmetric and advantageous position. They are particularly important in a dynamic environment. The real threat to firms in changing environments, as reported by one senior banking executive, lies precisely in losing sight of the strategic issues when the natural tendency of management is to focus on the most urgent operational demands.

In the earlier, less turbulent, environments, there were straightforward and relatively durable answers to the strategy question. The theme was the creation of barriers to direct competition (or the exploitation of extant barriers), and there is abundant and vivid evidence that this was often feasible. Examples of the banking sector's ability to sustain competitive advantage include: J.P. Morgan's corporate banking franchise, Citi's retail distribution capacity, and Bank of New York's processing capability. However, the basic approach had weaknesses and vulnerabilities which have become painfully obvious.

Bankers conceived of their strategies in terms of a client-arena-product matrix. The goal was to offer a distinctive mixture to avoid direct competition. The general approach was thus one of positioning. In a relatively static environment, this was a viable way of organizing systematic thought, since the possibilities were not changing. But what ultimately protected the positions? The answer comes back to barriers to entry. There were six of any practical significance.

For many years, the most quantitatively important category was probably locational barriers. Sometimes this was actually a matter of a limited number of attractive physical sites in a particular population or business center. More often it was a matter of being inside regulatory barriers, allowed to operate and being on the list of institutions whose continuity the authorities wanted to preserve. One particularly concrete example of the value of being inside of regulatory boundaries involved the longtime American ban on interstate branching. All large American banks were then (and therefore) headquartered in New York, California, or Illinois. Areas of lucrative opportunity such as Florida or Texas had their bank's franchise protected by restrictive entry legislation.

Reputation can also form a barrier to entry. Reputations can only be formed around activities which are difficult to do. They are also typically formed over an extended period of time. Thus they are not subject to prompt imitation. A reputation for competence and probity is the foundation of relationship management. Competence and probity have served banks well in the area of private banking, surety and large scale corporate lending. It is no wonder that Northern Trust or U.S. Trust protected and burnished their brand names, or J.P. Morgan and Chase portrayed themselves with such conservative images. Reputations mattered and formed a viable barrier to entry.

Complex and capital-intensive businesses often provide their own natural scale-based barriers to entry. The minimum efficient scale can be large relative to the potential market. In custody and processing, for example, the investment requirements for capital and network building, may well be so large that only a limited number of competitors can realistically hope to be successful even globally. The example of State Street Bank comes to mind. A rather typical commercial banking firm twenty years ago, it systematically invested (and re-invested proceeds from exited businesses) in a securities custody infrastructure to the point today that the firm is hardly a bank in the traditional sense but one of a select group of large scale global custodians.

Access to and efficient management of information can form a barrier to entry for similar reasons. For example, large-scale samples of patterns of consumer behavior may enable a bank to perform or price its services much more efficiently or to offer its services to a set of customers at a better price than would be possible without the sample. The early success of the mono-line credit card companies such as MBNA and First USA provided vivid examples of how customer “data mining” and other information technologies can create competitive advantage and substantial shareholder value.

Relationship lock-in costs may form a barrier to entry as well. In corporate banking, and to a certain extent in the upper end of consumer banking, the ability to tie customers to one’s operating systems and thus increase the cost of moving, may lead to more sustainable, long-term profit. It was this logic that led firms like Mellon and Chase to invest so heavily in cash management services to secure corporate clients and their long-term customer relationships. It is worth noting, however, that the more the transaction is commoditized, the less this is a profitable strategy.

Finally, economies of scope can also form barriers. Firms with a broad enough business might have cost advantages which entrants and other incumbents do not. These economies could exist for some particular set of customers or of product offerings. They could equally well be economies to the banking firm as a whole.

It is readily apparent that these barriers did create profits. The big California banks were quite profitable, free from competition from major banks elsewhere in the country. (The more recent change in fortunes of major California and Illinois banks, on the other hand, is an equally vivid illustration of how such constraints occasionally can collapse.) As the demographic profile of the state of Florida began to shift, banks with a local franchise like Barnett commanded a substantial premium when they went on the block. One reason behind the historic profitability of Wall Street investment banks was the reluctance of clients to switch providers.

Nonetheless, the positioning approach had major potential defects. Being fundamentally a list of circumstances rather than a theory of how competition could be short-circuited, it was not easy generalized. Also it offered no internal call for generalization, for the world it depicted was a static one.

To provide a more general and robust theory, we cannot proceed from an assumption of static environments. That this was the world for many years was a happy state but a confusing precedent. Against the background of this Old World of static equilibrium we must see a New World of change. There are two importantly different cases worth distinguishing. One is punctuated equilibrium, the other continuous change.

To understand the features and implications of the new environments, it is helpful first to lay out carefully what the old one was actually like. Outside the entry barriers of good position, competition was fierce and profits driven down. The barriers were like the walls of a castle, and inside tranquility and profits reigned. Given that the firms in question generally ran many activities, it is reasonable to ask how the decision-making should be structured in such an environment. The answer is feudally, with barons and domains. How were the choices actually decided? In a basically static environment, it made sense to assess activities and the prospects for new proposals via detailed cost and revenue projections far into the future, performing discounted cash flow analysis. (This is the native terrain of what used to be called strategic planning.) If those performing these analyses got it wrong, what were the consequences? Merely normal profits in the activity in question. Otherwise secure activities and profit streams were not endangered.

Imagine instead a slightly less stable world. In particular, imagine an intermittently less stable world. Periods of sustained stasis are interrupted – punctuated – by dramatic structural change. This change is structural in the sense that it redefines who the competitors are and which positions are defensible. The emerging market debt crisis in the mid eighties is one example of a stasis interrupted by a dramatic structural change. For many banks the heavy cost of loan losses in that arena drove them from the internal markets completely. Other institutions, such as CoreStates (now a part of First Union) had to re-structure their infrastructure to build new and different businesses in international money movement and documentary collection rather than lending. As in the example of international banking new, theretofore unimagined, positions may emerge. So new opportunities arise and old opportunities disappear. It is immediately apparent that in such a setting, the old means of project assessment are inadequate. Even viewed from within a period of stasis, future cost and revenue streams cannot be imagined to go on unperturbed forever. They must be assessed in a way which incorporates the possibility that their attractiveness may abruptly get much better or much worse. The former is the interesting possibility: it may be worth investing in projects which in some possible state-of-the-world will be well worth owning. The worst that can happen is an out-of-the-money option. One tries again.

The more extreme case is continuous change. Change is never literally continuous, of course; and perhaps this possibility is best thought of as a series of very frequently punctuated equilibria, with swiftly evolving opportunities and repeated radical reconfigurations of resources. It is very likely in such a world that future decisions are constrained by past ones. Decision-making on individual projects would be as before, since nothing structural to the logic of valuation has changed; but it would be desirable to change something else. Since the periods of stasis are short and opportunities often path-dependent, it is important that the organization generate a steady flow of new projects and be set up in a way to nurture them, since the costs of being wrong are now far worse than in the punctuated equilibrium case. The threat is not merely one bet not paying off but rather rapid obsolescence. The rationale for Chase Manhattan and other large banks investing in portfolios of new technology companies is in part motivated by financial return on the investment but equally driven by the option value inherent in gaining early access to the new technologies being developed.

It is clear that the character of our own times has become one of punctuated equilibrium or continuous change rather than of essentially static equilibrium. There are some exceptions, but in general the duration of monopoly positions is shrinking rapidly. We are in a period in which technical change may reconfigure much, much more. This process will clearly continue for some time to come. These claims are even more obvious when considered by lines of business. We group them below, for convenience, as retail banking, private banking, insurance, corporate banking, and securities sales and services.

A series of examples in retail banking exhibit a consistent theme. American banks once paid no interest on consumer checking accounts. Accounts paying interest following the returns on money market instruments represented a major change. Cash Management Accounts which enabled brokerage customers many of the services of a checking account and more, broadened the scope of change. Direct mail marketing fundamentally redefined the cachement areas for customers for many services. Banks headquartered in low-tax New Hampshire offering no walk-in services whatsoever have for many years advertised, offering superior rates and charges to mail and, latterly, electronic customers, in the Wall Street Journal. Sophisticated direct mailing strategies employed by the credit card industry provided national distribution for firms operating in locales such as Delaware or North Dakota, far from population centers. Automatic Teller Machines initially radically redefined what retail branches should be; and as ATM networks grew, they made branch and corporate location itself increasingly insignificant. Internet banking threatens to make this shift complete. Attempts at cross-selling have been going on for years. The results continue unimpressively. The theme is that the significance of locational and regulatory barriers and of relationship lock-in is declining. The dramatic failure of Sears in the 1980s to build a “financial supermarket” around Dean Witter, Allstate and the Discover card has been repeated on a smaller scale throughout the U.S. banking system. Despite tremendous efforts, banks have been unsuccessful in their attempts to capture significant shares of consumer financial wallets.

In private banking, increasingly well-informed clients are putting pressure on results. There is a war for talent for private bankers. New venues for privacy have emerged, and the protections of the old ones are not what they were. The theme here is that the significance of location, reputation, and lock-in is, again, declining. Long the home of global private banking, Switzerland and its banks have seen their status erode as sophisticated bankers and investment managers from London, New York and elsewhere have attacked these markets. Data suggests that newer players such as Charles Schwab and Fidelity Investments are attracting increasing shares of high net worth client dollars to their efficient, self-directed business models.

The insurance industry is particularly sensitive to the changes in information processing and analysis technologies. The rate of new product innovation has been brisk. The ability provided by the Internet for shopping and precise comparison has been a major shock to the distribution channels. Location (here, predominantly important because of licensing requirements and regulation) is still important but reputation, information access, and relationships are increasingly unimportant. This is most dramatically seen in the erosion of the dedicated agency distribution channel. For many U.S. insurers, bank branch distribution is fast becoming the predominant channel for the sale of life annuity products.

At the same time, banks have experienced a steady decline in their role as capital providers to corporate customers. Bank alternatives such as GE Capital compete for traditional bank business but are not subject to the same regulation and implicit tax burdens. Corporate clients from AAA to high yield go to the capital markets directly with much ease and less expense than previously. Disintermediation has been more general, and many services which the house bank once routinely provided - and some new ones - are now regularly pitched by new potential providers trawling for customers. Providers know more about potential clients and the clients' Chief Financial Officers, aided by monitors on their desks, know more about the alternatives. There are generally decreasing informational asymmetries.

The counter-examples here prove the point. Factoring, i.e., bill discounting is an example of a corporate banking line of business which is not changing much and continues to be very profitable. But this is a business in which successful players need to know both sides and market conditions, i.e., one in which incumbents have relatively stubborn informational asymmetries relative to potential entrants. It is small and not growing much. This reality recently led the Bank of New York to exit a profitable but stagnant niche looking for greater growth potential.

In security sales and services, we have already noted the changing nature of the underwriting business. Funds management has become commodified. Merchant banking as an activity pursued by stand-alone companies has essentially ceased to exist, though many of its functions are now carried out by divisions of large banks (among others). In all of these cases, relationships and information asymmetries are less important than they were. Charles Schwab's "One-Source" and other fund supermarkets have unalterably changed the value proposition of proprietary fund families. Hedge funds and venture capital partnerships provide many of the advantages of the old style merchant bank with much greater liquidity and possibility for diversification.

Here, on the other hand, there are some counter-examples of substantially growing significance. Payments processing (retail) and clearing and settlement (wholesale) are scale-intensive. These businesses are quite profitable with attractive returns on invested capital. The same is true of the somewhat more complex custody business. Minimum efficient scale is thus still important in some lines of business. These are seeing global consolidation and conceivably a growing market. This is a competitive situation with path dependencies of its own as best illustrated by the trajectories of State Street mentioned earlier and the Bank of New York.

In the great majority of these cases, however, the old barriers are decaying and so are the old franchises. New opportunities, many driven by developments in information technology and the possibilities they represent are rising. But seizing them is not a passive activity. It requires commitment and therefore, in a changing and therefore uncertain world, risk.

3. New Perspectives on Risk

If operating environments change in significant ways, then the emerging conditions must pose different sets of opportunities and risks from their predecessors. Profit requires commitment, but in this new world commitment affects risk profiles in ways which, because of the incompleteness of markets, cannot be hedged away. Thus simply having a strategy raises questions of risk management. The evolution of financial institutions' thinking about risk has generally not recognized this, but the ongoing changes in technology and markets are pushing many towards seeing it. They should: the implications for strategy assessment and action are in fact radical.

Many decisions routinely being grappled with by industry firms today are strategic in nature. As a practical matter, all decisions to enter new lines of business are. Decisions to offer new products may be. Sometimes the sunk costs involved in this are very small but often they are not. Expenses which seem recoverable at a time when many firms are contemplating a particular move can be much less valued when a firm which has taken the plunge and regretted it wants to get out. Setting up business in new places almost always involves sunk costs unless it is simply a matter of following established clients: the incoming firm needs to make connections and generally invest in information it will not generally be able to recoup in a sale to another provider. Much the same is usually true of investing in new consumers. In some sense, the acquisition of large consumer banking franchises can be seen as an investment in new retail customers, with sunk costs often including high premiums to book that must be earned back to generate an economic return.

The risks involved in making such decisions have not generally been considered by investing firms. This becomes clear when one considers the evolution of financial institutions' thinking about risk. To do this, however, one must begin with a general definition of risk. It is helpful to think of it as any source of uncertainty about the future operating environment which can (in particular, negatively) affect profits.

Specific types of risk correspond to categories of sources. The broad general categories are financial risk, operating risk and, we will argue, strategic risk. To understand why there is a third category and not just the first two, it is helpful to see how these concerns emerged.

There are many different types of financial risk. Credit risk is the risk borrowers will not repay their loans. Liquidity risk is the risk that lenders will want to withdraw more money than is available in quick assets. Interest rate risk is the risk that adverse interest rate movements will decrease the value of or income flow from interest-bearing investments. Market risk is the risk that adverse movements in asset prices will lower the mark-to-market value of the trading portfolio.

The origins of concerns about financial risk are partly private and partly regulatory in origin. The private element arises from banking involving risky investments of deposits. Furthermore, the deposits are generally more liquid than the investments. All this adds to the danger that the value of the equity of the firm will be at some moment zero or negative. The regulatory element arises from the fact that banks run an important part of the payments system: bank deposits are in effect a part of the medium of exchange. Governments have an interest in preventing abrupt changes in volume. They therefore have an interest, and generally a more conservative one, in managing the level of financial risk.

These are all risks of individual transactions. Different sorts of risk arise from the fact that the organization itself undertakes many transactions. These are collectively known as operational risk. Two types are most salient. The first derives from the malfunctioning of processing systems. This could take many forms, among them recording mistakes, lack of reference data, processing delays, and general system crashes. Internal malfeasance is also a species of operating risk. Inadequately monitored individuals acting on their own account rather than the firm's, or taking on more risk than instructed in hopes of superior reward, are potentially major problems as well.

Operational risk has only recently become the matter of focus for senior managers. The origins of this interest lie in part in increasing complexity of systems leading to increased vulnerability. Deregulation and market volatility leading to increased risk-taking, are probably also a cause.

Features of operating environments over the past decade have made plain that there is more to risk than investments and systems. We call the category which has emerged strategic risk. If strategy concerns decisions which are hard subsequently to implement quickly and to reverse, strategic risk concerns the consequences when the environments in which those relatively inflexible commitments decisions play out in unattractive or even adverse ways. Sunk costs play a crucial role in strategic risk – with no sunkness, the commitments can be costlessly unwound. (There is always, of course, also the opportunity cost.)

Concern about this is not a fad. Rather, like the species of risks and risk management which have preceded it, it is a larger form of risk in which the previously known ones are embedded. Choosing a product line, business area or even a location is the key strategic decision. Inherent are risks that follow from the chosen path; ones that must be managed in the rather standardized ways that have developed over the last decade. However, it is the strategic choice that is crucial and the determinant of what risks are present and therefore which risks need to be managed. The analogy to owning a house atop a dormant earthquake fault line is almost exact. Its location is the key aspect of its risk, not just its home security system. The origins of concern about strategic risk lie in modes of competition, which were always possible but now have become undeniably salient.

The source of these changes in strategic environment is not, unlike its predecessors, principally regulatory. Rather, it is some combination of underlying technology and demand factors. Information technology has been a tremendous driver of the possibilities of new products and the ease of their creation. Some work, some don't. The apparent early success of internet banking in Scandinavia versus the limited adaptation of "smart cards" in the U.S., despite significant investments, shows that it is the competitive environment, and customer acceptance today, rather than regulation that produces change and leads to greater strategic risk.

There is also an argument that the world consuming population has been getting wealthy disproportionately fast in recent years and the demand for financial service products fancy and plain has been on the rise. This has led to differentiated strategies to service a growing and increasingly segmentable clientele. The use of local bank private banking, e.g., PNC Advisors, niche players, e.g., Bessemer, or broad new strategies, e.g., Schwab – U.S. Trust are examples of three clearly different strategies all aimed as segments of what was once more simply described as the affluent market.

With the recognition of the existence of strategic risk comes the need for strategic risk assessment. Even in the old world of essentially static equilibrium, strategic commitment induces operating and financial risk profiles which cannot effectively be hedged. The consequences of a strategy thus include the changes in other sorts of risk-bearing which following that strategy will impose, and the calculus of costs and benefits of the strategy must include the induced risk burden.

In punctuated equilibrium and continuous change worlds, matters are more complex still. In addition to this induced risk bearing, there is also the risk of the commitment itself and the opportunity costs it bears. The recent decision of First Union to close the Money Store only two years after acquisition is a case in point. However, it should be remembered that strategic risk follows from not following a proposed path, as well. As subsequent waves of change follow from the last, the firms' capability tomorrow may be dependent upon decisions today, e.g., early commitments to PC-banking provided the foundation for eventually rolling out far more robust web-banking offerings.

4. Organization and Strategic Risk Management

These concerns are structural rather than ad hoc. Circumstances are such that they are important now. The environment which makes them important may or may not last forever; but it seems certain to last for an extended period. Ignoring them or treating them with a wave of the hand (as in the commonest response of an arbitrary increase in the hurdle rate in project evaluation) is therefore not responsible.

The concerns need to be addressed systematically at an organizational level. The actual processes for making strategic decisions needs to reflect their seriousness. The structures governing such decision-making need to change to support the new processes. Corporate culture needs to change in ways which reflect the demands these will place on employees.

The process by which such decisions are generally made routinely underestimate the value of strategic investments and make it difficult to for organizations to see, and get used to, the means of managing the risks. The conventional routine of project evaluation by discounted cash flow analysis and, more broadly, so-called strategic planning involving revenue and cost forecasts five and ten years out in which flows are treated as fixed and new information as unimportant, is now highly problematic. The problem is not mainly that the precision is implausible, though this is so, but rather that the particular cash flow expected in the future is portrayed as the only attractive feature the future has. It is a striking fact that no one at all reflective thinks about their own life in this fashion.

The traditional general approach causes prospective projects to seem less attractive than they should, some initiated projects to be less valuable than they should, and many initiated projects to be managed in ways which impose unnecessary risk and fail to maximize shareholder value. These are not desirable features in themselves, and their cumulative effects on companies in a rapidly changing and increasingly closely monitored environment are worse. Implementing alternatives in a world of change is not a trivial matter, but it is an important one.

Several typical organizational features of the old approaches are themselves highly problematic. The most salient here is the silo mentality. A silo structure of responsibilities may well be the most efficient execution of agreed upon tasks. But embedding strategic planning and strategic risk assessment within silos is a recipe for superficial assessment of possibilities and opportunities. It leads to what might be called an infrastructure of continuity, in which decision-makers who are focused on established customers and products and on established means of addressing them, are asked to evaluate enterprises which may threaten and even cannibalize these. This is not the way to create imaginative scanning and flexible implementation. For years, many U.S. banks were frustrated in their development of mutual fund products in their investment divisions as the retail branch "silo" registered concern over the potential cannibalization of their consumer deposit base. Similarly, institutions who ignore the potential impact of the internet and e-commerce on their broad business models, run the risk of missed opportunities or worse, the loss of business franchises.

Financial options represent a thought-provoking analogy to the traditional decision-making model. The financial option is a contract in which, for a period after agreement, the buyer can choose to carry out activities-in particular buying or selling ownership claims-at the precommitted price or decide not to do so depending upon the market conditions which subsequently obtain. The analogue of interest is a real option, real because the activity the buyer would undertake is directly productive-to run a new product or line of business-rather than a mere transfer of ownership.

Options are valuable because they offer flexibility. The flexibility is valuable for two distinct reasons. One is the opportunity they offer for exploiting the upside of less than fully anticipated emerging circumstances. A second is the opportunity for limiting the downside by shutting down the cost flows of capabilities which come to look unpromising enough.

The operational implementation of a real options approach to strategic investment is a highly nontrivial matter in organization as well as detail. There are three basic elements which need to be considered. The first concerns recognition. The second concerns the creation and structuring of real options. Only the third concerns actual valuation.

Recognizing real options requires first of all assessing future decisions as if they will be made on the basis of future, and not just present, information. This says that decision-makers must value flexibility and potentially productive intangibles, and not simply confine their analysis to tangible expected revenues and costs. This, in turn, requires far more searching surveillance of possible paths of evolution, for it is only in the context of concrete circumstances that the potential value of present intangibles can be assessed. This leads to another counterintuitive thought: ex ante uncertainty can be a positive feature of a decision-making environment, representing value-increasing opportunity and not value-diminishing risk as in traditional finance. This is the essence of the real option perspective. The value of any option increases with risk, rather than decreases. Inducing decision-makers to act on the basis of this is no small matter.

Creating and structuring real options develops the surveillance element in a constructive mode. It involves expanding the consideration set of possible actions. There are often many ways in which a project which was initially conceived in a unitary way can be decomposed and put into steps and sections with distinct decision nodes and assessment opportunities, and opportunities for further phasing, between them. It is often possible to build the timing of revenue and cost flows into this in a way which allows the management of risk. Collateral actions in (emerging) favorable environments can be optimized. Exit alternatives can be protected and actively used for risk management. The injunction here is simple: Unbundle decisions! While criticized in some quarters for their slowness in embracing the internet, Merrill Lynch's more cautious, step-by-step, implementation strategy may be seen in this light. As pieces of their transformation away from exclusive dependence on the broker channel emerge, results can be evaluated and corrective actions taken to limit risk and seek new opportunities.

These measures are useful, and promote better decision-making, in themselves. They are, however, incomplete: the final step of actual valuation remains. There are several alternative approaches to this. Variants of the standard finance option-pricing approach, known as Black-Scholes analysis, are the most familiar of these. The strength of the assumptions required in taking this for an exact analysis are well known and the more awkward the more idiosyncratic the risk. However, such calculations do shed useful light. So do Monte Carlo decision-tree analyses, where possibilities can be assigned to possible outcomes. For less certain environments, as in the internet world, scenario planning offers a methodology to where future outcomes can be evaluated.

Beyond implementation for specific possible projects, the strategic perspective on option sensitive decision making suggests activities. It suggests, in particular, developing and sustaining new potential sources of competitive advantage, dynamic analogues to static barriers to entry discussed above. One vivid example is facility in product innovation. A second lies in the informational aspects of specific relationships. A third is organizational flexibility.

Financial services institutions may have (or develop) an unusual facility in product innovation. Most aspects of new product development are, as we remarked above, relatively easy to imitate. But some are not. The potential advantage lies in two component parts. The first is the organizational ability to create new products. The second is the market presence to sell them. Unique capability in either (or both) is valuable. Much of the success of Fidelity Investments, for example, can be attributed to their demonstrated facility for the creation of ever-changing variants of mutual fund offerings.

Established relationships with customers whose needs are evolving may offer asymmetric favorable opportunities. Knowledge of customers' business may give established providers who are sufficiently alert a clear head start on recognizing emerging needs and on developing solutions. So may knowledge of customers' infrastructure and systems. In a world of constant challenge, ideas for constructive change, and the opportunity to present them in a timely fashion, are extremely valuable. In this, relationships may matter more rather than less, both for inspiring new ideas and for selling them. When done well, it is precisely this feature of customer and market knowledge that drives the broader product offering of the U.S. banks and provides hope for the scope economy alluded to above.

Finally, organizational flexibility can in itself present a potential sustainable advantage. This is because most financial services are, the occasional rhetoric to the contrary notwithstanding, not very flexible. Two sorts of flexibility are relevant here. One is adding new activities to the extant core. The other is subtracting them. The organization's ability to transform itself in response to a changing environment, therefore, offers another sustainable barrier. The then bold decision by Bankers Trust in the 1980s to shed its retail banking franchise and transform itself into corporate investment banking was a striking example of organizational restructuring by subtraction. On the other hand, Mellon Bank's decision some years later to dramatically add to their investment management business through the purchase of Dreyfus and the Boston Company put the firm on a new strategic business trajectory.

This raises the deep questions of organizational architecture and process, since exploiting (or developing) any of these may require organizational innovation. These questions come in two main families. The first asks what changes are required to support such sources of competitive advantage. The second asks what is needed to create enduring change.

Changes in routines are required to support the development of such sources of competitive advantage. These concern discovery and assessment, nurturance, risk-management practices and strategic decision-making, and exit.

Firms must become systematically good at discovering and assessing unfamiliar opportunities. Part of the problem with discovery in a traditionally organized firm is that the clues are often encountered at relatively low levels of the organization whereas the decisions are usually made at relatively high ones. In such cases, information needs to flow more freely - a broader circle of individuals than is traditional may need to be drawn in some way into the decision-making. Assessing opportunities reliably before any concrete models exist is always a particularly difficult task; but in environments such as these, this may not be the best way to look at the problem. The overall discovery task might best be thought of as one of generating choices about which enough is known to make an informed decision. It may be that the important first task is fleshing out an idea into an experiment rather than making an early decisive call. The “smart card” tests during the Atlanta summer Olympics is an example of an increasingly common trend of introducing new product innovations into limited and controllable environments.

If ideas are really worth exploring, organizations must nurture them. This sounds straightforward but in practice is anything but. Many new initiatives within an organization threaten some established interests elsewhere in the organization. Some represent sufficiently different ways of understanding opportunities or doing business that employees find it part to feel part of both the initiative and the firm. (The commonest response to this is to pursue the initiative without changing behavior enough to make the initiative work.) And some new initiatives will simply puzzle the customers if too closely identified with the firm. Structural changes to the organization or ad hoc task forces may be necessary to carry out this stage effectively. All of this is particularly salient in organizations for which it is particularly important to inspire customers’ confidence and trust. The establishment of separately branded web-banking offers such as Bank One’s Wingspan.com may be seen at least partially in this light.

The track record of so-called corporate intrapreneurship is not in fact good. Profitability is generally low and failure not uncommon. A common conclusion of arms-length studies is that fewer ventures and more commitment would be better. The commitment in question is a subtle thing. Pressures from the parent inhibiting altering venture strategies as new opportunities become clear and circumstances evolve are nontrivial. The motivations and skills of the new venture executives, and the incentives facing them, are often not what they might be. And, culture conflicts are difficult to resolve. This had been the story surrounding the attempts to merge investment and commercial banking, as the case of Morgan Grenfell and Deutsche Bank or more recently, Bank of America and Montgomery Securities.

There are other alternatives. External alliances may be necessary, in the sense that certain business opportunities may not be open in a timely fashion to either of two firms without their cooperating. But the dangers of strictly external alliances are by this time well known. Joint activities generate competitively valuable information and human capital. These may well make the alliance partner a more formidable unallied competitor in the future. This is at least one of the reasons given for the failed Integriion internet venture. Alliances often generate subsequent advantage unequally while at the same time lulling the partner whose relative position is weakening with the thought that they are now active. It is as difficult as it is important to make sure you learn and retain as much as your partner does and that you are as well situated if and when the alliance comes apart. And even when they work well, alliances often require unusual degrees of managerial attention. So aside from situations of extreme opportunity and complementarity, strictly external alliances should be regarded quite cautiously.

In the less extreme circumstances characteristic of nascent possibilities, external ventures owned by the firm and, to a significant extent, by the venture managers are an attractive alternative. They do not have the dangers of strictly external alliances. They avoid the dangers of internal politics. They permit incentive schemes for senior employees which would be politically difficult within an established organization. And they leave unambiguous who has the property rights in work products which would be valuable for the parent organization. However, if the product is focused at existing customers this causes other competitive problems?

This view should lead to a wholesale review of risk management within the dynamic firm. Conventional risk management, both financial and operational, is of course complicated by initiatives which the firm does not entirely understand. The fact that the initiatives generally start small is a saving grace, as is the fact that the reason for starting the initiative will generally be susceptible to the sort of structural analysis suggested above. This is only to say that a capability most banks do not now really possess - or at least use on a routine basis - will become even more important.

One structural means of addressing this is to change the composition of the voices at the table for strategic decision-making. It seems clearly important in a business fundamentally about managing risk to have all aspects of the risk perspective represented in such discussions. The background, experiences, and responsibilities of most divisional Chief Risk Officers at present would not help them make the constructive contribution required, but it is clear by example that some corporate Chief Risk Officers would be able to do so, and it is clearer still that there are executives with different backgrounds who could take on this portfolio and add value by doing so. In short, this view of strategic risk requires the development and use of a corporate level risk officer engaged in strategic debate on future activities and business lines. Risk management is too important to the process to be brought in "after the fact" and their perspective too relevant to be kept quiet.

Finally, firms must, as suggested above, become good at graceful exit. This is so partly because in a world of change, even the good opportunities will not persist forever. It is also true because many promising opportunities will not, for one reason or another, pan out. There are many forces in most organizations working against flexibility in such matters, from training requirements and the career concerns of employees and executives to ill-founded notions of what important customers do and ought to value. Getting good at graceful exit probably requires a substantial amount of culture change as well as restructuring of institutions. Here again investment banks have traditionally been more successful.

The ideas of the preceding paragraph suggest a surprising afterthought. Banks are generally identified as relatively conservative institutions. Yet the thrust of the paragraph—and indeed of the past nine—is that banks will do better in the world in which they seem to be moving if they behave more like venture capitalists. Venture capitalists do not expect each new investment to be a success—indeed, they expect most ultimately to fail. They do not know, at the outset, which the survivors will be. They try to organize both incentives and the resources of their own organizations to help (some) survivors emerge and to see to it that they own a piece of the survivors which have good futures. This is a very different model from the static barriers to entry for thinking about choosing lines of business. But it does have a theoretical foundation which seems to suit the times.

The challenge here lies less in creating prototypes which demonstrate a possibility than it is in creating enduring change, be it in the prototype grown into production or in the parent. Given proper incentives in the prototype, this problem will take care of itself. The process is most worthwhile when there is something of the prototype that can be folded back or otherwise imported into the parent organization. This inevitably involves change. For change to be effective and long-lasting, the organization needs to be prepared to want it and become competent to implement it. Neither of these is straightforward; and both require real leadership.

Behind all of this, it must be increasingly obvious, lies the company's culture. Strategic risk ultimately has two elements. One is doing the right thing (at the right time). But the other, at least as important, is doing it well. Thus the importance of corporate culture, structural issues entirely aside. (Thus also the importance of vertical engagement, idea-finding mechanisms entirely aside.)

For in a static world, full optimization of plans is imaginable and strategy is matter for deduction from a relatively limited fact base. Actions can be taken *ex ante* which will prove enduringly wise. In a world of change, the future and its possibilities are initially obscure. There is an inevitable inductive element to any valuable analysis. A planner's emphasis in such a world should be on diversification, experimentation, and getting (and contemplating searchingly) feedback before any decisive action—in short, or learning. Procedures, institutions, and a set of understandings as to what the firm needs if its employees are to prosper should all be designed to support this.

5. The Research Behind this Study

The principal investigator in this study was Daniel Raff, Associate Professor of Management at the Wharton School and Senior Fellow of the Wharton Financial Institutions Center. He had much insightful assistance from three partners in the Deloitte Global Financial Services practice, Frank Kolhatkar, Leon Bloom, and Robert Carter. Anthony Santomero, the Richard King Mellon Professor of Finance at Wharton and Director of the Financial Institutions Center, and Sidney Winter, the Deloitte and Touche Professor of Management, were heavily involved in the early analysis and fieldwork. Peter Burns, Managing Director of the Center, Daniel Levinthal, Julian Aresty Professor of Management, and Adrian Tschoegl, Assistant Professor of Management, gave helpful comments.

The principal field work involved extended interviews with senior officials at Citigroup, Chase, Bankers Trust (as it was then), the Bank of New York, the Bank of Montreal, HSBC (in the London headquarters), Standard Chartered, Deutsche Bank, UBS, Banco Santander Central Hispano (BSCH), and the Singapore Development Bank. Mr. Pei Chia was also very gracious with his time. Interviews at Allianz and the Bank of England were also helpful, as were formal responses by Messers. George Vojta and Michael Urkowitz and lively general discussion at a board meeting of the Wharton Financial Institutions Center in New York in May, 2000.