

## Topics in

# Corporate Finance

The Future of Banking:

Two Essays on the Consolidation in the Financial Sector

INGO WALTER

ARNOUD W.A. BOOT

## TOPICS IN CORPORATE FINANCE

THE FUTURE OF BANKING

## TOPICS IN CORPORATE FINANCE

## THE FUTURE OF BANKING

Two Essays on the Consolidation in the Financial Sector

With contributions of:

Ingo Walter Arnoud W.A. Boot

ISBN 90-805728-1-0 ISSN 1567-7664

© 1999, Amsterdam Center for Corporate Finance Second print, August 2000

All rights reserved

#### PREFACE

The financial sector is consolidating and restructuring at an unprecedented speed. The deregulation of formerly protected domestic markets together with new distribution channels and a breathtaking level of financial innovation have swept away barriers to competition, challenging time-honored institutions and markets.

Business leaders, economists and politicians alike are confused and tantalized by this financial landscape in flux. Is consolidation an optimal response? Should banks widen their scope and become financial supermarkets? And, more fundamentally, what determines the competitiveness of financial institutions?

The Amsterdam Center for Corporate Finance has focused this inaugural publication on the consolidation in the financial services sector. We hope that it helps illuminate the challenges facing financial institutions.

A.W.A. Boot J.E. Ligterink October, 1999

## THE FUTURE OF BANKING

## **C**ONTENTS

Preface	V
FINANCIAL SERVICES STRATEGIES IN THE EURO-ZONE by Ingo Walter	
1. The New Euro Environment	1
2. Searching for Operating Economies and Revenue Synergies	7
3. Prospective Market Structures in Euro-Zone Financial Services	13
4. Firm Size, Structure and Financial Stability	18
5. Do Multifunctional Financial Firms Embody a Conglomerate Discount?	19
6. Linkages between Financial and Non-Financial Firms	20
7. Strategic Options	22
References	24
Annexes	26
Note on the Contributor	32
CONSOLIDATION AND STRATEGIC POSITIONING IN BANKING	
by Arnoud W.A. Boot	
1. Introduction	33
2. Fundamentals: The Economics of Banking	35
3. Scale and Scope Issues in Banking	40
4. Scope as a Strategic Advantage	44
5. Final Thoughts	47
References	53
Note on the Contributor	56

## FINANCIAL SERVICES STRATEGIES IN THE EURO-ZONE

by Ingo Walter

#### 1. THE NEW EURO ENVIRONMENT

Introduction of the euro certainly represents a sea-change in the environment of modern global finance. In the three decades since the end of the Bretton Woods system in 1971, and against great odds, Europe has forged a platform that could ultimately emerge as a viable challenger to the United States as the world's premier financial market. It was a difficult birth – but if ever the saying "no pain, no gain" applies in context of macrofinancial reform, this is it.<sup>1</sup>

Financial institutions are extraordinarily sensitive even to small changes in the environment. Increases in interest-rate or exchange-rate volatility can create wholly new markets for risk-management products, just as surely as these businesses – often built-up at huge expense – can be wiped-out overnight if volatility drops. Regulatory concerns about counterparty or liquidity risk in over-the-counter markets can quickly drive transactions onto organized exchanges and their standardized contracts, and eliminate much of the innovation that is most easily undertaken in interprofessional OTC markets. Similar stories could be related to changes in tax codes, transaction-costs, information technologies, and an array of other variables that form the environmental overlay of business strategy in the financial services industry. These are parameters that management has to carefully think through, build a consensus on, and then place its strategic bets. When mistakes are made in devising core strategies in the financial services industry, they are usually big ones.

The advent of the euro is probably the most important current development in the environment of the world's financial institutions, and therefore has to be carefully related to the strategies of financial firms. Other contemporary issues, such as emerging market financial crises, regulation of hedge funds, and Japan's continued economic doldrums pale by comparison. The euro will redefine a large part of the global financial landscape of the 21st century. Strategies of European financial services firms in their home markets have already been profoundly affected by competitive conditions that have yet to be fully delineated. Meanwhile outsiders, notably American firms long used to competing in a massive single-currency market, have big strategic plans for the euro-zone. In some cases they have already made incursions into European financial services markets that would have been undreamed-of a few years ago. As financial reconfiguration in the euro-zone proceeds alongside continued technological advance in both the wholesale and retail domains, as regulatory and tax policy alignment continues to change the rules of the game, and as clients become increasingly performance-oriented and promiscuous, core strategies of financial firms - whose managers often continue to think in terms of institutional boundaries instead of financial processes – will come under additional stress.

<sup>1</sup> See for example Story and Walter (1997).

#### Box 1 - Suppositions

#### The Government Bond Market

- Eleven euro-zone government bond markets, estimated at \$1.9 trillion in 1998, are roughly comparable in size to the United States. There will be growing standardization of government bonds in the euro-zone, including auction calendars and interest calculations, as well as new instruments such as inflationindexed bonds denominated in euros.
- The changed fiscal environment will constrain the issuance of national government bonds and the rate of growth of the market, and push financing onto municipalities and other public finance entities, sometimes with state guarantees.
- Trading in euro-zone government bonds, driven historically by interest rate and exchange rate factors among the participating countries are likely to be driven mainly by credit spreads in the future. The 23 bp and 20 bp spread between Germany and Portugal and Belgium, respectively, at the end of 1998 are far smaller than those between the states in the U.S. Without future sovereign bailouts, these may be too narrow. Euro-zone government bonds will be subject to conventional rating criteria and corporate spreads will no longer be capped by home-country government spreads.

#### The Corporate Bond Market

- The euro-zone corporate bond market was estimated at \$160 billion in 1998, one-sixth the size of the United States, with limited liquidity. Outstandings may rise to \$800 billion over ten years as capital market financing replaces bank financing, as a highcapacity, liquid euro-zone market replaces fragmented national markets, and as national investment restrictions are scrapped.
- Incremental demand for assets denominated in euros can be expected to lower average interest rates and the cost of capital facing euro-zone corporations even in the presence of growing demand for financing in euros. Increased trading volume and market liquidity will reduce transactions costs for investors and issuers.
- The market for non-investment grade debt in Europe has already grown rapidly as investors search for yield and as the financing requirements of small, highgrowth companies increase, a development that is likely to continue in the foreseeable future.
- The market for asset-backed securities in the euro-zone, very small in comparison to that in the United States, will grow rapidly as various tax and regulatory impediments are removed, and as banks rethink how much capital they should have tied-up in their lending book. Already some of the pioneering securitization of commercial loans has taken place in Europe, with significant mutual gains for borrowers, investors and intermediaries.

#### The Market for Equities

 Euro-zone equity market capitalization was estimated to be \$2.5 trillion in mid-1998, compared to about \$10 tril-

- lion in the United States, with various forecasts pointing to a tripling over a decade or so. The euro-zone's 32 stock exchanges in 1998 (compared to 8 in the U.S.) and 23 derivatives exchanges (compared to 7 in the U.S.) will consolidate rapidly even as trading, clearance and settlement systems become more efficient.
- Secondary markets for equities in the euro-zone will increasingly be characterized by block-trading, as large institutional investors grow in importance, and with it the need for risk management, capital and institutional distribution capability. There will be growing use of innovative equity-linked financial instruments and structured transactions for which the national European markets were previously too small, too fragmented and illiquid, too tightly regulated or too uncompetitive to make them attractive.
- The creation of euro-equity benchmarks like the Dow Jones Euro Stoxx 50 and the FTSE Eurotop 100 will strengthen performance orientation of asset managers as well as corporations, promoting the shift from national to sectoral asset allocation.
- Accelerated development of IPOs and the small-cap equity market can be foreseen, promoted by the success of markets such as Nouveau Marché in France and Neuer Markt in Germany, as well as growth in the volume of MBOs, LBOs, venture capital and private equity.

#### Retail Financial Services

- Retail financial services markets in the euro-zone will change only gradually, due to wide differences in preferences and the historical dominance of certain types of institutions such as savings banks, mortgage banks, cooperative banks and postal savings banks, as well as equally significant differences in the insurance industry.
- New products and retail distribution channels will gradually encroach on legacy structures, as they have already done in the case of bancassurance, which will gradually make the retail financial services market more open to competition, both cross-border and between domestic strategic groups.
- As demographics confront heavy reliance in most eurozone countries on unfunded (pay-as-you-go) or underfunded pension schemes, governments are being forced to introduce pre-funded pension systems. New schemes will focus on defined contribution formulas that shift management responsibility to beneficiaries, suggesting a growing role for mass-distribution and branding of pension products. This will eventually form massive, performance-driven managed pools of fixed-income securities and equities. As involuntary "noise" traders, these will make a disproportionate contribution to euro-zone financial market liquidity and efficiency (see Walter, 1999).
- The euro-zone mutual fund industry will be contested by banks, insurance companies, independent fund management companies, as well as financial conglomerates. However, retail financial services in the euro-zone will be subject to strong consumer protection measures at the national level, which may retard penetration of non-traditional and innovative products and distribution channels.

This paper begins with a series of suppositions – essentially maximum-likelihood state-variables relating to financial system conditions in the euro-zone, assuming a five-year time horizon. These suppositions set the framework for a discussion of strategic positioning and implementation on the part of financial services firms expecting to compete successfully in the euro-zone. We focus on the institutional microstructure of the financial intermediation process and the determinants of competitive performance. This is followed by an assessment of strategic *options* facing financial firms in the euro-zone, and alternative institutional *outcomes* from the perspective of efficiency and stability of the euro-zone financial system. Where appropriate, comparisons are drawn with the U.S. financial system, which has operated under a single currency since 1865. The final section of the paper provides some strategy and policy indications for the future.

#### 1.1 Suppositions

Any competent strategic exercise aiming at creating and sustaining a high-performance financial services franchise in the euro-zone has to start by taking a view on the basic drivers of financial markets – as well as various regulatory overlays – and their impact on the prospective size and structure of the market for wholesale and retail financial services. If some of management's suppositions turn out to be wrong, expensive and possibly debilitating strategic mistakes may be the result. Box 1 presents the likely impact on financial markets of the introduction of the euro.

If these environmental suppositions are broadly borne-out by the facts, the euro-zone market for financial services is likely to be a very dynamic one indeed, both in terms of its overall prospects within the broader context of the global financial system and in terms of its structure. This runs across the entire spectrum of wholesale and retail financial activities. There is plenty of growth potential in wholesale capital market activities as the new government bond market envelops the constituent national markets and as the corporate and asset-backed bond markets accelerate the replacement of bank debt, as it has done in the United States. Equity markets should develop rapidly as well, propelled by rising volumes of new issues and an expanding need for equities in pre-funded pension plans as some of the euro-zone countries come to grips with the demographic reality of aging populations. Economic sectors, individual corporate prospects, and credit quality will replace currencies in asset allocation strategies. And at the retail level, clients will face an increasing array of financial services from a wide variety of vendors using traditional and nontraditional approaches to distribution, with local and regional financial services oligopolies confronting unprecedented competitive challenge.

The potential for change brought about by the euro is set against a state of substantial overcapacity and inefficiency in broad segments of the euro-zone's financial services industry. There is too much capital and there are too many people employed in the production and distribution of financial services – as there have been in the United States. Both will be removed in a process of restructuring and consolidation that has only just begun. It will take a long time, most particularly in the retail sector in view of the impor-

Table 1: Volume of In-Market Mergers & Acquisitions in the United States and Europe, 1985-98 (billions of U.S. dollars and percent)

			Target In	stitution		
		U.S.			Europe	
Acquiring Institution	Banks	Securities	Insurance	Banks	Securities	Insurance
Commercial	435	18	0.2	186	16	21
Banks	(53.4%)	(2.2%)	(0.0%)	(36.9%)	(3.2%)	(4.2%
Securities	6	98	29	27	31	31
Firms	(0.7%)	(12.0%)	(3.6%)	(5.4%)	(6.2%)	(6.1%)
Insurance	73	15	140	45	9	137
Companies	(9.0%)	(1.9%)	(17.2%)	(9.0%)	(1.8%)	(27.2%)

tance of government-related and cooperative institutions in Europe that are not subject to the shareholder-value discipline. The ruthlessness of the U.S. restructuring process will be missing, and this is likely to retard the movement to a new equilibrium in terms of financial structure. And of course nobody wants to be shaken-out, so tenacious rearguard actions will be mounted by vulnerable players even as new entrants – including the ubiquitous Americans hardened by their own structural revolution – crowd into the European marketplace.

Table 1 shows some of the differences between European and U.S. financial-sector restructuring via mergers and acquisitions (M&A), with U.S. intra-sector M&A volume during the period 1985-98 almost three times the European volume in banking, three times as large in securities and twice as large in insurance. This despite the fact that the EU plus Switzerland comprises a larger economic region than the United States. Intersector M&A volume was higher in Europe for banks buying insurance companies, presumably due to the popularity of bancassurance and the absence of legal barriers. Table 2 shows the cross-border aspects of financial services M&A activity. Most important among U.S. acquisitions abroad are investment firms buying other investment firms (notably British merchant banks and asset managers) and insurance companies buying foreign insurance companies. Intra-European cross-border transactions are mainly intra-sectoral, with almost half occurring in the insurance industry. When European firms acquire non-European ones (mainly in the United States and Japan), this is again largely on an intra-sector basis.

Table 2: Volun	ne of Cross-Ma	arket Mergers	s & Acquisition	Table 2: Volume of Cross-Market Mergers & Acquisitions in the United States and Europe, 1985-98 (billions of U.S. dollars and percent)	States and E	urope, 1985-9	<b>3</b> (billions of t	J.S. dollars ar	nd percent)
				Тап	Target Institution	uo			
		U.Snon U.S.		П	Intra-Europe		Eu	Europe-Non Europe	rope
Acquiring Institution	Banks Sec	Securities Insu	Insurance	Banks Seci	Securities Inst	Insurance	Banks S.	Securities Ins	Insurance
Commercial Banks	15.1 (16.0%)	6.3 (6.6%)	0.2 (0.3%)	21.5 (15.4%)	5.9 (4.2%)	0.4 (0.3%)	40.2 (16.9%)	11.0 (4.6%)	0.9 (0.4%)
Securities Firms	3.6 (3.8%)	19.8 (20.9%)	5.7 (6.1%)	4.9 (3.5%)	8.9 (6.4%)	2.5 (1.8%)	7.9 (3.3%)	26.7 (11.2%)	8.1 (3.4%)
Insurance Companies	0.6 (0.7%)	4.4 (4.6%)	38.7 (41.0%)	21.1 (15.1%)	1.8 (1.3%)	72.6 (52.0%)	22.1 (9.3%)	5.8 (2.5%)	115.1 (48.4%)

Source: DeLong, Smith and Walter (1999) and Securities Data Company.

The first figure is the dollar value (in billions) of M&A activity and the second number in parentheses is the percentage of the total (these sum to 100 for each 3x3 matrix). Figures reported are the sum of the equity values of the target institutions.

Developing and implementing strategies in firms hoping to secure a permanent and profitable place in the coming euro-zone financial services configuration thus presents challenges that will test the mettle of even the most far-sighted and determined managers. It centers around seven basic questions:

- *Strategic positioning.* Given the foregoing environmental suppositions governing the euro-zone, what are the target markets in terms of clients, products and geographic spread that promise the most attractive opportunities for growth over time?
- Prospective market structure. How are these targeted markets likely to evolve over time in terms of competitive structure? There is not much sense in going through the effort and expense of gearing up for what looks like a potentially profitable market if, at the end of the day, competitors are doing the same thing and market structure ends up approximating perfect competition, incapable of supporting attractive, sustained returns on the capital employed. Herd-like behavior is well known among financial services managers and strategists, especially in the face of major parameter-shocks like creation of the euro-zone, and it may be advisable to stay out of the way of the stampede.
- *Core competencies.* What is the firm really good at, in terms of its baseline market position and franchise, creativity and innovation, flexibility, ability to manage complexity, command of financial and human resources? What competitive resources can be rolled-out geographically or focused on defensible market segments in response to euro-zone developments?
- *Operating economies.* To what extent are there economies of scale, cost economies of scope and production-efficiencies that can be exploited in order to reinforce the firm's competitive position?
- Revenue synergies and earnings diversification. Are there revenue economies of scope
  that can be exploited by linking products and clients, and are these cross-selling gains
  likely to prevail across the euro-zone for target retail and/or wholesale client segments? Relatedly, are there significant earnings-stability gains to be had by diversifying across clients, financial services activities and geographies within the euro-zone?
- *Institutional configuration*. What types of institutional configurations do the strategic positioning considerations suggest are the ones most likely to maximize the value of the enterprise, running across the institutional spectrum from massive euro-zone universal or multifunctional financial services conglomerates to specialists that are highly focused on best-in-class delivery of specific types of financial services?
- *Ability to execute.* Based on the firm's existing situation and an objective assessment of competitive strengths and weaknesses a "reality check" is it reasonable to envision its

transformation into what will be required in the light of the environmental suppositions, given resource and managerial constraints, with reasonable but not excessive urgency?

Financial intermediation in the countries comprising the euro-zone has traditionally been heavily dominated by commercial banks, insurance companies and savings institutions, together capturing about 85% of all financial assets in the system in 1998, compared with about 40% in the United States. If the same economics of disintermediation apply in both regions, one would expect the role of classic euro-zone intermediaries to decline dramatically over time. In order to "go with the flow" banks will have to develop viable strategies to compete in mutual fund management, pension fund management, capital market access, asset securitization, custody and securities transaction-processing, etc. So will insurance companies and savings institutions. And there will be plenty of room for specialists of various kinds. The financial services industry, in short, is beginning a profound shakeup which will ultimately settle into some sort of new institutional equilibrium, and nobody is quite sure yet how that will look. But if the United States is any sort of reasonable guide, it will be a highly varied and dynamic field of players.

#### 2. SEARCHING FOR OPERATING ECONOMIES AND REVENUE SYNERGIES

As in many other industries, a major purported benefit associated with the advent of the euro is the realization for the first time of significant economies of scale and economies of scope. For the first time as well, an unprecedented degree of competitive pressure will bear on long-sheltered European financial firms, and force them to manage better. Regardless of scale or scope benefits, this will create a leaner, more cost-effective set of competitors to the benefit of their own shareholders and the European financial system.

Individually or in combination, economies (diseconomies) of scale and scope in eurozone financial firms will lead to increased (decreased) profit margins or passed along to clients in the form of lower (higher) prices resulting in a gain (loss) of market share. The reverse happens when diseconomies of scale and scope are encountered. Both should be directly observable in cost functions of financial services suppliers and in aggregate performance measures. Unfortunately, studies of scale and scope economies in financial services are unusually problematic. The nature of the empirical tests used, the form of the cost functions, the existence of unique optimum output levels, and the optimizing behavior of financial firms all present difficulties. Limited availability and conformity of data present serious empirical problems. And the conclusions of any study that has detected (or failed to detect) economies of scale and/or scope in a sample selection of financial institutions does not necessarily have general applicability. Such difficulties notwithstanding, the potential impact of the euro on operating economics (production functions) of financial firms is so important – and so often used to justify mergers, acquisitions and other strategic initiatives – that available empirical evidence is central to the whole argument.

<sup>2</sup> For a recent survey, see Berger, Demsetz and Strahan (1998).

#### 2.1 Economies of Scale

Whether economies of scale exist in financial services has been at the heart of strategic and regulatory discussions about optimum firm size in the financial services sector. Can increased average size of firms create a more efficient financial sector and can it increase shareholder value?

In an information- and distribution-intensive industry with high fixed costs such as financial services, there should be ample potential for scale economies – as well as potential for diseconomies of scale attributable to disproportionate increases in administrative overhead, management of complexity, agency problems and other cost factors once very large firm-size is reached. If economies of scale prevail, increased size will help create systemic financial efficiency and shareholder value. If diseconomies prevail, both will be destroyed.

Examples of financial-sector megamergers in 1998 alone include Deutsche Bank and Bankers Trust as the first intercontinental mega-deal, creating the world's largest bank with combined assets of \$849 billion in November 1998, Swiss Bank Corporation and Union Bank of Switzerland in Europe to form UBS AG (\$749 billion), and Citibank and Travelers to form Citigroup (\$702 billion), Banco Santander and Banco Central Hispanoamericano to form BSCH (\$300 billion) in January 1999, as well as such major 1998 U.S. deals as First Chicago NBD and BancOne, and BankAmerica and NationsBank. Bankers regularly argue that "bigger is better" from both systemic and shareholder-value perspectives, and usually point to economies of scale as a major reason why. What is the evidence?

Many studies of economies of scale have been undertaken in the banking, insurance and securities industries over the years (see Saunders (1996) for a survey). Estimated cost functions form the basis of most of these empirical tests, virtually all of which have found that economies of scale are achieved with increases in size among small banks (below \$100 million in asset size). More-recent studies have shown that scale economies may also exist in banks falling into the \$100 million to \$5 billion range. There is very little evidence so far of scale economies in the case of banks larger than \$5 billion. An examination of the world's 200 largest banks (Saunders and Walter (1994)) found evidence that very largest banks grew more slowly than the smaller among the large banks during the 1980s, but that limited economies of scale did appear among the banks included in the study. There is some scattered evidence of scale-related cost gains of up to 20% for banks up to \$25 billion in size. (Berger and Mester (1997)) But according to a new survey of all empirical studies of economies of scale through 1998, there was no evidence of such economies among very large banks. (Berger, Demsetz and Strahan (1998)) In any case the consensus seems to be that scale economies and diseconomies generally do not result in more than about 5% difference in unit costs. This is bad news for those justifying restructuring via mergers and acquisitions on the basis of size-effects alone.

Inability to find major economies of scale among large financial services firms is also true of insurance companies (Cummins and Zi (1998)) and broker-dealers (Goldberg, Hanweck, Keenan and Young (1991)). And among German universal banks Lang and Wetzel (1998) found diseconomies of scale in both banking and securities services.

Annex 1 shows the 20 largest European and U.S. banks, all of which are well are much larger than the size of banks for which any empirical evidence of scale economies has been found. The data also show the top-20 European banks to be much larger than the top-20 U.S. banks, but American banks have substantially higher valuations as measured by the market-to-book ratio.

So, for most banks and nonbank financial firms in the euro-zone, except the very smallest among them, scale economies seem likely to have relatively little bearing on competitive performance. This is particularly true since many of the smaller European institutions are linked-together in cooperatives or other structures that allow harvesting available economies of scale centrally, or are specialists not particularly sensitive to the kinds of cost differences usually associated with economies of scale in the financial services industry. Big deals like those cited above and most of the megamergers that may appear in the euro-zone in coming years are unlikely, whatever their other merits may be, to contribute very much in terms of scale economies unless the fabled "economies of superscale" turn out to exist – these, like the abominable snowman, have unfortunately never been observed in nature.

A basic fallacy, of course, is focusing on firm-wide scale economies when the really important scale issues are encountered at the level of individual financial services. There is ample evidence, for example, that economies of scale are both significant and important for operating economies and competitive performance in areas such as global custody, processing of mass-market credit card transactions and institutional asset management, but are far less important in other areas – private banking and M&A advisory services, for example. Unfortunately, empirical data on cost functions that would permit identification of economies of scale at the product level are generally proprietary and therefore unavailable. Still, it seems reasonable that a scale-driven pan-European strategy may make a great deal of sense in specific areas of financial activity even in the absence of evidence that there is very much to be gained at the firm-wide level.

#### 2.2 Cost Economies of Scope

There should also be potential for economies of scope in the euro-zone financial services sector – competitive benefits to be gained by selling a broader rather than narrower range of products – which may arise either through supply- or demand-side linkages.

On the supply side, scope economies involve cost-savings achieved through sharing of overheads and improving technology via joint production of generically similar services. Cost-diseconomies of scope may arise from such factors as inertia and lack of responsiveness and creativity that may come with increased firm size and bureaucratization, "turf" and profit-attribution conflicts that increase costs or erode product quality in meeting client needs, or serious cultural differences across the organization that inhibit seamless delivery of a broad range of financial services.

Most empirical studies have failed to find cost-economies of scope in the banking, insurance or securities industries, and most of them have concluded that some disec-

onomies of scope are encountered when firms in the financial services sector add new product-ranges to their portfolios. Saunders and Walter (1994), for example, found negative supply-side economies of scope among the world's 200 largest banks – as the product range widens, unit-costs seem to go up.

Scope economies in most other studies of the financial services industry are either trivial or negative (see Saunders (1996)). However, the period covered by many of these studies involved institutions that were shifting away from a pure focus on banking or insurance, and may thus have incurred considerable costs in expanding the range of their activities. If this diversification effort involved significant front-end costs – which were expensed on the accounting statements during the period under study – that were undertaken to achieve future expansion of market-share or increases in fee-based areas of activity, then we might expect to see any strong statistical evidence of diseconomies of scope (for example, between lending and non-lending activities of banks) reversed in future periods. Investment in staffing, training, and infrastructure in fact bear returns in the future commensurate with these expenditures, then neutral or positive cost economies of scope may well exist. Still, the available evidence remains inconclusive.

### 2.3 Revenue Economies of Scope

On the revenue side, economies of scope attributable to cross-selling arise when the allin cost to the buyer of multiple financial services from a single supplier – including the cost of the service, plus information, search, monitoring, contracting and other transaction costs – is less than the cost of purchasing them from separate suppliers. Managements of universal banks and financial conglomerates often argue that broader product and client coverage, and the increased throughput volume and/or margins this makes possible, leads to shareholder-value enhancement.

Despite an almost total lack of hard empirical evidence, it is nonetheless reasonable to suggest that revenue economies of scope may indeed exist, but that these are likely to be very specific to the types of services provided and the types of clients served. Strong crossselling potential may exist for retail and private clients between banking, insurance and asset management products (one-stop shopping), for example. Yet such potential may be totally absent between trade-finance and mergers and acquisitions advisory services for major corporate clients. So demand-related scope economies in the euro-zone are clearly linked to a firm's specific strategic positioning across clients, products and geographic areas of operation (Walter (1988)). Indeed, a principal objective of strategic positioning in the "new" model of European financial services is to link market-segments together in a coherent pattern - what might be termed "strategic integrity"- that permits maximum exploitation of cross-selling opportunities, and the design of incentives and organizational structures to ensure that such exploitation actually occurs. These are, however, extraordinarily difficult to achieve and must work against multiple-vendor behavior on the part of corporate and institutional clients as well as a new generation retail clients comfortable with non-traditional approaches to distribution such as the Internet.3

#### 2.4 Revenue Diseconomies of Scope and Conflicts of Interest

Revenue diseconomies of scope could arise, for example, through agency costs that may develop when the multi-product financial firm acts against the interests of the client in the sale of one service in order to facilitate the sale of another, or as a result of internal information-transfers considered inimical to the client's interests. Indeed, the potential for conflicts of interest is endemic to the kinds of multi-functional financial services firms that characterize the euro-zone, and runs across the various types of activities in which they are engaged.<sup>4</sup>

First, when firms have the power to sell affiliates' products, managers may no longer dispense "dispassionate" advice to clients and have a salesman's stake in pushing "house" products, possibly to the disadvantage of the customer. Second, a financial firm that is acting as an underwriter and is unable to place the securities in a public offering may seek to ameliorate this loss by "stuffing" unwanted securities into accounts over which it has discretionary authority. Third, a bank with a loan outstanding to a client whose bankruptcy risk has increased, to the private knowledge of the banker, may have an incentive to induce the corporation to issue bonds or equities to the general public, with the proceeds used to pay-down the bank loan.<sup>5</sup> Fourth, in order to ensure that an underwriting goes well, a bank may make below-market loans to third-party investors on condition that the proceeds are used to purchase securities underwritten by its securities unit. Fifth, a bank may use its lending power activities to coerce a client to also use its securities or securities services. Finally, by acting as a lender, a bank may become privy to certain material inside information about a customer or its rivals that can be used in setting prices, advising acquirers in a contested acquisition or helping in the distribution of securities offerings underwritten by its securities unit.

Mechanisms to control conflicts of interest can be market-based, regulation-based, or some combination of the two.

In most of the euro-zone countries few impenetrable walls exist between banking and securities departments within universal banks, and few external firewalls exist between a universal bank and its non-bank subsidiaries (e.g., insurance). Internally, there appears to be a reliance on the loyalty and professional conduct of employees, both with respect to the institution's long-term survival and the best interests of its customers. Externally, reliance appears to be placed on market reputation and competition as disciplinary mechanisms. The concern of a bank for its reputation and fear of competitors are viewed as enforcing a degree of control over the potential for conflict exploitation. The United States, on the other hand, has had a tendency since the 1930s to rely on regulation, and

<sup>3</sup> Recent consumer surveys in the United States show that client reactions to multi-product vendor relationships are viewed very positively in principle, but in fact American retail clients have significantly increased the average number of financial services firms they deal with throughout the 1990s.

<sup>4</sup> For a detailed discussion, see Saunders and Walter (1994), Chapter 6.

<sup>5</sup> A recent example is the 1995 underwriting of a secondary equity issue of the Hafnia Insurance Group by Den Danske Bank, distributed heavily to retail investors, with proceeds allegedly used to pay-down bank loans even as Hafnia slid into bankruptcy. This case is now before the courts. See Smith and Walter (1997B).

<sup>6</sup> For a comprehensive catalog of potential conflicts of interest, see Gnehm and Thalmann (1989).

in particular on "walls" between types of activities. Either way, preventing conflicts of interest is an expensive business. Compliance systems are costly to maintain, and various types of walls between business units can have high opportunity costs because of inefficient use of information within the organization.<sup>7</sup>

The conflict of interest issue may seriously limit effective strategic options. For example, inside information accessible to a bank as lender to a target firm would almost certainly prevent it from acting as an adviser to a potential acquirer. Entrepreneurs are unlikely to want their private banking affairs dominated by a bank that also controls their business financing. A mutual fund investor is unlikely to have easy access to the full menu of available equity funds though a universal bank offering competing in-house products. These issues may be manageable if most of the competition is coming from other universal banks. But if the playing field is also populated by aggressive insurance companies, broker-dealers, fund managers and other specialists, these issues will prove to be a continuing strategie challenge to management.

#### 2.5 Production Efficiencies

Besides economies of scale and cost-economies scope, financial firms of roughly the same size and providing roughly the same range of services can have very different cost levels per unit of output. There is ample evidence of such performance differences, for example, in comparative cost-to-income ratios among banks or insurance companies or investment firms both within and between national financial-services markets. The reasons involve differences in production functions, efficiency and effectiveness in the use of labor and capital, sourcing and application of available technology, and acquisition of inputs, organizational design, compensation and incentive systems – i.e., in just plain better management.

Empirically, a number of authors have found very large disparities in cost structures among banks of similar size, suggesting that the way banks are run is more important than their size or the selection of businesses that they pursue (Berger, Hancock and Humphrey (1993); Berger, Hunter and Timme (1993)). The consensus of studies conducted in the United States seems to be that average unit costs in the banking industry lie some 20% above "best practice" firms producing the same range and volume of services, with most of the difference attributable to operating economies rather than differences in the cost of funds (Akhavein, Berger and Humphrey (1996)). Siems (1996) finds that the greater the overlap in branch-office networks, the higher the abnormal equity returns in U.S. bank mergers, while no such abnormal returns are associated with increasing concentration levels in the regions where the bank mergers occurred. This suggests that any shareholder value gains in many of the financial services mergers of the 1990s were more highly associated with increases in production efficiency (often termed X-efficiency) than with reductions in competition.

For example, large organizations may be more capable of the massive and "lumpy"

<sup>7</sup> A detailed discussion is contained in Smith and Walter (1997A), Chapter 8.

capital outlays required to install and maintain the most efficient information-technology and transactions-processing infrastructures. If extremely high technology spend-levels result in higher efficiency, then large financial services firms will tend to benefit in competition with smaller ones. However, smaller organizations ought to be able to pool their resources or outsource scale-sensitive activities in order to capture such gains.

If very large institutions are systematically better managed than smaller ones (which may be difficult to document in the real world of financial services) then there may be a link between firm size and X-efficiency. In any case, both from a systemic and share-holder-value perspective, management is (or should be) under constant pressure though their boards of directors to do better, to maximize X-efficiency in their organizations and to transmit that pressure throughout the enterprise. If the euro-zone intensifies that pressure, this may in the end be one of the most significant sources of financial-sector performance gains.

Taken together, the available empirical suggests very limited prospects for firm-wide cost economies of scale and scope among major financial services firms, and that X-efficiency seems to be the principal determinant of observed differences in cost levels among banks and nonbank financial institutions. Demand-side economies of scope through cross-selling may well exist, but are likely apply very differently to specific client segments and can be vulnerable to erosion due to greater client promiscuity in response to sharper competition and new distribution technologies. Based on these considerations alone, therefore, there appears to be room in the euro-zone for viable financial services firms that range from large to small and from universal to specialist in a rich mosaic of institutions, as against a competitive monoculture dominated by financial mastodons.

## 3. PROSPECTIVE MARKET STRUCTURES IN EURO-ZONE FINANCIAL SERVICES

In addition to the strategic search for operating economies and revenue synergies in the euro-zone financial services industry of the future, firms will also seek to dominate markets in order to extract economic rents. Europe has a long history of imperfect market structures and sometimes cartel formation in various industries, and the financial services market has been no different.

The role of concentration and market power in the financial services industry is an issue that empirical studies have not yet examined in great depth, although in many national markets for financial services, suppliers have shown a tendency towards oligopoly. Supporters have argued that high levels of national market concentration are necessary in order to provide a platform for a viable pan-European or global competitive position. Opponents argue that monopolistic market structures without convincing evidence of scale economies or other size-related gains serve mainly to extract economic rents from consumers or users of financial services and redistribute them to shareholders, cross-sub-

sidize other areas of activity, or reduce pressures for cost-containment. They therefore advocate vigorous anti-trust action to prevent exploitation of monopoly positions.<sup>8</sup>

The key strategic issue is the likely future competitive structure of financial services in the euro-zone, since margins tend to be positively associated with higher concentration levels, as do cost-to-income ratios. Financial services market structures differ widely among countries, as measured for example by the Herfindahl-Hirshman index,<sup>9</sup> with very high levels of concentration in countries such as the Netherlands, Finland and Denmark, and low levels in relatively fragmented financial systems such as the United States and Germany. The market-concentration issue is perhaps best considered separately for wholesale and retail financial services.

With respect to wholesale financial services, the competitive structure that prevails in the euro-zone is likely to be similar to that prevailing in the global market. National markets for wholesale financial services in the euro-zone countries are already increasingly contested, with corporate and institutional clients under pressure to find the best and most competitively-priced products regardless of vendor. American and other European firms have achieved impressive incursions on traditional domestic client relationships. This is likely to be reinforced by the euro. The pan-European wholesale banking market should be highly fluid, as has long been the case in the United States.

The top-10 firms in global fixed-income and equity underwriting, loan syndications and M&A mandates in 1998 ranged from U.S. broker-dealers like Merrill Lynch, Goldman Sachs and Morgan Stanley Dean Witter to multifunctional financial conglomerates like UBS, Deutsche Bank and Citigroup – see Annex 2. The dominance of the U.S. firms is evident from this data. Of the top-10 firms, 7 were American, 3 were European and none was Japanese. Of the top-20 firms, 11 were American, 8 were European and 1 was Japanese. The 1998 merger of Citicorp and Travelers would have moved its combined market share to No. 4 in the 1998 rankings, and the acquisition of Bankers Trust by Deutsche Bank would have moved the combined firm to No. 9 in the rankings. This picture may shift in the years ahead, as the major European universal banks acquire or build significant wholesale market-shares against their American rivals – especially if introduction of the euro and higher levels of capital-market integration creates disproportionate growth Europe's share of global transaction-flow.

A significant number of firms below the top-10 have the ambition to move up in the rankings. Indeed, global wholesale banking shows very little evidence so far of systematically increasing market concentration to levels capable of supporting sustained excess returns. The Herfindahl-Hirshman index for the top 10 firms rose gradually since 1990, but was still only 716 in 1998. For the top 20 firms, the index rose from 393 in 1995 to 764 in 1998. But the index is still very low compared with many other industries, indicating a high level of market competition despite some evidence of an rising trend in

<sup>8</sup> In the case of Canada, two megamergers that would have reduced the number of major financial firms from five to three was disallowed by the authorities in late 1998 despite arguments by management that major American financial services firms would provide the necessary competitive pressure to prevent exploitation of monopoly power.

<sup>9</sup> The Herfindahl-Hirshman index is the sum of the squared market shares (H=3s2), where 0<10,000 and market shares are measured for example, by deposits, by assets, or by capital. H rises as the number of competitors declines and as market-share concentration rises among a given number of competitors.

concentration. This indicates a very competitive global wholesale market prevailing well into the future, one that is far tougher than the term "global bulge bracket" – a small coterie of highly profitable global firms – suggests. <sup>10</sup>

With respect to wholesale financial services, competitive conditions that will exist in the global market are likely to exist in the euro-zone as well, which suggests a highly competitive market structure for the foreseeable future. This is good news for the euro-zone financial system as a whole, but not such good news for shareholders expecting sustained high profitability from wholesale banking activities. Nor is there much evidence so far that size as conventionally measured (e.g., by assets or capital) makes much difference in determining wholesale banking market share.

The situation is likely to be very different with respect to market structure in retail financial services. Here the geography of local and regional market concentration is clearly more important, and what will no doubt be a very low euro-zone Herfindahl-Hirshman index for retail banking, insurance and investment services as a whole can mask high levels of regional or local concentration that are capable of supporting monopolistic pricing. The key question here is whether the advent of euro will trigger the kind of geographic cross-penetration observed in the United States after the relaxation of interstate banking restrictions in the 1990s.11 American retail financial services markets have become increasingly contestable, with large national and superregional banking networks like Bank of America, Key Corp., Fleet Financial and First Union battling it out for regional market-share with smaller, local institutions surprisingly adept at survival. Table 3 shows that, among all types of financial services firms doing business with the general public, only banks and savings institutions have shown significant increases in concentration (8-firm ratio) during the period 1988-97 - from 22.3% to 35.5% – while concentration has decreased substantially in the life insurance industry. Even in the case of banks, the Herfindahl-Hirshman index has decreased from 2,020 in 1988 to 1,949 in 1997 in urban areas, and from 4,316 to 4,114 in non-urban areas - this during a period of dramatic industry consolidation in the United States.

Recent research (Kwast, Starr-McCluer and Wolken (1997)) shows that retail banking clients remain strongly dependent on financial services firms with a local presence, and where there is a high level of concentration this is reflected in both interest rates and deposit rates. (Berger and Hannan (1987)) However, the most profitable firms in the industry were not clearly identified with highly concentrated markets, suggesting that other competitive factors seem to be more important. On the other hand, bank mergers that increased local concentration sufficiently to trigger antitrust guidelines of the Department of Justice (a Herfindahl-Hirshman index exceeding 1800 and a 200-point increase in the index as a result of the merger) was associated with reduced deposit rates. (Prager and Hannan (1999)) The U.S. has implemented a legislative constraint against excessive market concentration in the form of the Riegle-Neal Act, which limits the share

<sup>10</sup> Such data, of course, mask much higher concentration levels in specific areas of wholesale banking activity. But with the exception of initial public offerings (IPOs) the evidence of margin erosion is compelling, suggesting highly contestable global sub-markets that are likely to prevail well into the future.

<sup>11</sup> Insurance and investor services were never subject to such restrictions, although there continues to be prudential regulation at the state level.

of retail deposits captured by mergers to 30% in a given state and 10% nationally, although these limits do not apply in the case of organic growth. And despite continued consolidation and capacity reduction in the industry, in 1998 almost 300 new U.S. commercial bank charters were issued. There remains stiff competition from mutual fund companies, broker-dealers and insurance companies as well – i.e., intense competition both within and between strategic groups.

It seems likely that the kind of contestable retail financial services market that exists in the United States will be slower in coming to the euro-zone. Pan-European mass-market branding is not easy to achieve. Local and national consumer preferences remain strong, with no particular reason to change unless there are demonstrable gains in terms of pricing or service quality provided by foreign firms. Nationally entrenched retail financial firms have generally improved their performance to the point that foreign players have a difficult time doing much better, and penetrating local markets by acquisition can be prohibitively expensive. So far, successful cross-border retail businesses are largely in niches like private banking or consumer finance, with broaderbased incursions like Deutsche Bank in Italy or ING in Belgium confined to special situations. Still, change will come, especially with a new generation of consumers less tied to local vendors and new ways of delivering financial services. Markets that are already highly concentrated and characterized by high margins will be increasingly challenged. This suggests that the euro will eventually undermine existing monopolistic market structures, with little prospect of high levels of retail market concentration in the eurozone as a whole in the foreseeable future.

Finally, the asset management industry (where the top firms comprise a mixture of European, American and Japanese firms and at the same time a mixture of banks, broker-dealers, independent fund management companies and insurance companies – see Annex 3) is perhaps the most contestable in the entire financial services industry. Any number can play, as long as they have strong distribution, performance and client service capabilities. With a Herfindahl-Hirshman index of 540 for the top-40 firms in the industry and very little signs of increasing concentration in recent years, this sector of the eurozone's financial system is likewise likely to remain highly competitive. Despite this, the quality of earnings in asset management is relatively high, and provides an anchor of stability for financial firms that are also engaged in much more volatile parts of the business.

The role of the state at the national, regional and municipal level will also have a major impact on competitive structure and performance in the euro-zone, and remains rather unclear. The state is far more heavily involved than in the United States, ranging from the European Investment Bank through the German Landesbanken to municipal savings banks. Public guarantees and other forms of support, as well as performance pressures, are very different from those facing investor-owned financial firms. When public- and private-sector firms meet in the market, competitive outcomes will clearly be affected. Consequently, the value extracted from a given market structure may be substantially

<sup>12</sup> The merger of BankAmerica and NationsBank in 1998 created a national market share of 8% for the new Bank of America, which is very close to the limit but can be circumvented by moving assets off the balance sheet or non-deposit funding.

	nions	Asset Share of Eight Largest Firms	6.3%	6.7%	7.4%	7.7%	7.9%	7.8%	8.0%
	Credit Unions	Number of Firms	13,875	12,860	12,300 12,594	12,317	11,687	11,392	11,238
	Saving Institutions	Asset Share of Eight Largest Firms	13.5%	18.2%	19.3%	17.7%	21.7%	21.3%	30.6%
	Saving In	Number of Firms	3,175	2,725	2,086	1,726	1,420	1,322	1,201
	Firms	Capital Share of Ten Largest Firms	57.5% 61.8%	%9.69	02.1% 62.2%	63.4%	59.3%	58.5%	55.5%
	Securities Firms	Number of Firms	6,432 6,141	5,827	5,260	5,292 5,426	5,451	5,553	5,597
5	rty- lity nce	Asset Share of Eight Largest Firms	32.5% 32.4%	32.4%	32.2%	31.5%	33.7%	36.1%	n.a.
es Indust	Property- Liability Insurance	Number of Firms	940	1,272	1,207	1,197	1,179	1,138	n.a.
cial Servic	rance	Asset Share of Eight Largest Firms	41.7%	39.0%	37.2%	36.4%	34.9%	34.7%	n.a.
J.S. Finan	Life Insurance	Number of Firms	1,367	1,223	1,221	1,187	1,054	1,001	n.a.
ds in the L		Eight Firm Concentration Ratio	22.3% 22.6%	22.3%	25.1% 26.4%	28.1%	30.4%	34.3%	35.5%
Table 3: Concentration Trends in the U.S. Financial Services Industry		Number of Banking Organizations	9,881 9,620	9,391	9,100 8,873	8,446	7,686	7,421	7,234
:: Concen		Nrumber of U.S. Bank Charters	13,130 12,727	12,730		11,001	9,984	9,575	9,216
Table 3			1988	1990	1991	1993 1994		1996	1997

Source: Allen N. Berger, Rebecca S. Demsetz and Philip E. Strahan, The Consolidation of the Financial Services Industry: Causes, Consequences, and Implications for the Future (New York: Federal Reserve Bank of New York, 1998).

smaller than expected in the presence of explicit or implicit subsidies imbedded in the activities of state-linked firms in the market. Similar points could be made with respect to cooperatives and mutuals, which play a major role across much of the euro-zone.

One can conclude that the euro is unlikely to have much of an impact on market concentration in wholesale financial services, which is basically a globalized industry, or in asset management. At the same time, it may gradually reduce regional and local market concentration by introducing new competitors. If this is correct, a good proportion of the gains associated with restructuring and competitive development in the euro-zone financial services sector will flow to end-users rather than shareholders. This will place an even greater premium on astute strategic positioning and execution on the part of financial firms.

## 4 FIRM SIZE, STRUCTURE AND FINANCIAL STABILITY

Proponents of universal banking as the dominant current and future form of strategic organization of financial services argue that the aforementioned operating economies and synergies, as well as non-destructive competition, can best be assured if the core of the evolving financial system in the euro-zone comprises bank-based multifunctional financial organizations (Van den Brink (1998)).

There is the argument that greater diversification of income from multiple products, client-groups and geographies creates more stable, safer, and ultimately more valuable institutions. Indeed, there is some evidence that this is the case. Saunders and Walter (1994) carried out a series of simulated mergers between U.S. banks, securities firms and insurance companies in order to test the stability of earnings of the "merged" as opposed to separate institutions. The opportunity-set of potential mergers between existing firms and the risk-characteristics of each possible combination were examined. The findings suggest that there are indeed potential risk-reduction gains from diversification in multi-activity financial services organizations, and that these gains increase with the number of activities undertaken. The main risk-reduction gains appear to arise from combining commercial banking with insurance activities, rather than with securities activities. Such empirical studies may exaggerate the risk-reduction benefits of universal banking because they ignore many of the operational costs involved in setting up and managing these activities.

It has also been argued that shares of European-type universal banks, incorporate substantial franchise value due to their conglomerate nature and importance in national economies, which Demsetz, Saidenberg and Strahan (1996) suggest serve to inhibit extraordinary risk-taking. They find substantial evidence that the higher a bank's franchise value, the more prudent management tends to be, so that large universal banks with high franchise values should serve shareholder interests as well as stability of the financial sys-

<sup>13</sup> That is, only the financial firms in existence for the full 1984-88 period are considered.

tem – and the concerns of its regulators – with a strong focus on risk management, as opposed to banks with little to lose. This conclusion is, of course, at variance with the observed, massive losses incurred by European universal banks in recent years in lending to highly leveraged firms, real estate lending and emerging market transactions.

It is certainly the case that a number of large financial institutions will play a major role in the future financial configuration of the euro-zone. Failure of one of these institutions is likely to cause unacceptable systemic consequences, and the institution is virtually certain to be bailed-out by taxpayers — as happened in the case of comparatively much smaller institutions in the United States, Switzerland, Norway, Sweden, Finland, and Japan during the 1980s and early 1990s. 14 Consequently, too-big-to-fail (TBTF) guarantees create a potentially important public subsidy for universal banking organizations. And they pose enormous challenges to financial regulators – including those of small countries which may be in the end incapable of standing behind the massive global financial conglomerates which fall into their respective regulatory domains.

Of course, "free lunches" usually don't last too long, and sooner or later such guarantees invariably come with strings attached. Possible regulatory responses include tighter limits on credit- and market-risk exposures, stronger supervision and surveillance intended to achieve "early closure" in advance of capital depletion, and structural barriers to force activities into business units that can be effectively supervised in accordance with their functions even at the cost of a lower levels of X-efficiency and scope economies.

## 5. DO MULTIFUNCTIONAL FINANCIAL FIRMS EMBODY A CONGLOMERATE DISCOUNT?

It is often argued that the shares of multi-product firms and business conglomerates tend (all else equal) to trade at prices lower than shares of more narrowly-focused firms. There are two reasons why this "conglomerate discount" is alleged to exist.

First it is argued that, on the whole, conglomerates tend to use capital inefficiently. Empirical work by Berger and Ofek (1995) assesses the potential benefits of diversification (greater operating efficiency, less incentive to forego positive net present value projects, greater debt capacity, lower taxes) against the potential costs (higher management discretion to engage in value-reducing projects, cross-subsidization of marginal or loss-making projects that drain resources from healthy businesses, mis-alignments in incentives between central and divisional managers). The authors demonstrate an average value-loss in multi-product firms on the order of 13-15%, as compared to the stand-alone values of the constituent businesses for a sample of U.S. corporations during the period 1986-91. This value-loss was smaller in cases where the multi-product firms were active in closely-allied activities within the same two-digit standard industrial code (SIC) classification.

<sup>14</sup> The speed with which the central banks and regulatory authorities reacted to the 1996 Sumitomo copper trading scandal signaled the possibility of safety-net support of the global copper market, in view of major banks' massive exposures in highly complex structured credits.

The bulk of value-erosion in conglomerates is attributed by the authors to overinvestment in marginally profitable activities and cross-subsidization. In empirical work using event-study methodology, John and Ofek (1995) show that asset sales by corporations result in significantly improved shareholder returns on the remaining capital employed, both as a result of greater focus in the enterprise and value-gains through high prices paid by asset buyers.

Such empirical findings from event-studies of broad ranges of industry may well apply to diversified activities carried out by financial firms as well. If retail banking and wholesale banking are evolving into highly-specialized, performance-driven businesses, one may ask whether the kinds of conglomerate discounts found in industrial firms may not also apply to universal banking structures, especially as centralized decision-making becomes increasingly irrelevant to the requirements of the specific businesses.

A second possible source of a conglomerate discount is that investors in shares of conglomerates find it difficult to "take a view" and add pure sectoral exposures to their portfolios. Investors may avoid such stocks in their efforts to construct efficient asset-allocation profiles. This is especially true of highly performance-driven managers of institutional equity portfolios who are under pressure to outperform cohorts or equity indexes. So the portfolio logic of a conglomerate discount may indeed apply in the case of a multifunctional financial firm that is active in retail banking, wholesale commercial banking, middle-market banking, private banking, corporate finance, trading, investment banking, asset management and perhaps other businesses. In effect, the shares of a financial conglomerate reflect a closed-end mutual fund comprising a broad range of productive assets and business activities.

Both the portfolio-selection and capital-misallocation effects (perhaps mitigated by the franchise and TBTF effects mentioned earlier) may thus weaken investor demand for financial conglomerate shares, and lower their equity prices. In the context the eurozone universal banks and other financial conglomerates, management will have to come up with a compelling set of counter-arguments, particularly when investors have the choice of placing their bets on more narrowly-focused financial specialists.

#### 6. LINKAGES BETWEEN FINANCIAL AND NON-FINANCIAL FIRMS

In most of the euro-zone countries, including France, Germany and Italy, banks and insurance companies have traditionally held large-scale shareholdings in nonfinancial corporations or have been part of multi-industry holdings of financial groups. There are various historical reasons for this, such as politically-driven interests of the state to intervene directly in the control of industry and past economic crises that forced banks to capitalize debt in the face of threatened client bankruptcies. There are also portfolio reasons, such as the need of insurance companies to invest massive reserves in the absence of sufficiently broad and deep local capital markets – inevitably leading to major equity

positions in nonfinancial corporations as well as banks. And there are relationship reasons, with banks viewing shareholdings in client firms as an important part of "Hausbank" ties that would attract most of the client's financial services business, even as clients themselves value the presence of a reliable lender who looks beyond a purely arm's length credit relationship.

The absence of efficient capital markets in many European countries has historically produced a powerful role for the types of "internal" capital markets that can be seen in industrial conglomerates, long-term cross shareholdings, equity stakes cementing strategic alliances and other institutional and financial ties between banks, insurance companies and industrial companies. Of course, the causality can run the other way too, with European-style "insider" relationships tending to perpetuate themselves. This has tended to impede the development of alternatives such as commercial paper markets, corporate bond markets, and strong equity markets capable of attracting broad stock holdings on the part of individuals, pension funds and mutual funds. And it tends to limit shareholder-value pressures and periodic governance challenges to corporate underperformance though hostile corporate action.

The value of bank shareholdings in industrial firms or insurance companies is, of course, embedded in the market price of bank shares. The combined value of the bank itself and its industrial shareholdings may be larger or smaller than the sum of their stand-alone values. For example, Hausbank ties to corporations in which a bank has significant financial stakes and a direct governance role may raising the value of the bank. On the other hand, if such "tied" sourcing of financial services raises the cost of capital facing client corporations, this will in turn reduce the value of bank's own shareholdings. The reverse may be true if such ties lower client firms' cost of capital. Permanent bank shareholdings may also stunt the development of a contestable market for corporate control, thereby impeding corporate restructuring and depressing competitive performance and stock prices, which in turn are reflected in the value of the bank to its shareholders. Banks may also be induced to lend to affiliated corporations under credit conditions that would be rejected by unaffiliated lenders, and possibly encounter other conflicts of interest that may ultimately make it more difficult to maximize shareholder value.

In effect, a shareholder of euro-zone banks with significant industrial participations obtains a closed-end mutual fund that has been assembled by bank managers for various reasons over time, and may bear no relationship to the investor's own portfolio optimization goals. The value of the bank itself then depends on the total market value of its shares, which must be held on an all-or-nothing basis, plus its own market value.

Bank-industry linkages have for some time been subject to reexamination in many of the euro-zone countries, especially in terms of their impact on economic restructuring and overall economic performance in comparison with the more capital-market oriented "Anglo-American" approach. Even without the U.K. as a founding member of the euro-zone, companies like DaimlerChrysler, VEBA, Aegon and Alcatel have exposed themselves to market-based shareholder-value discipline, even as developments are underway that may ultimately lead to a pan-European equity market capable to meeting

the needs of massive performance-driven institutional pension funds and mutual funds. And there is a clear tendency toward loosening bank-industry ties, both on the part of corporations seeking better access to financing and advice and on the part of bankers seeking to manage their equity portfolios more actively – most notably in the establishment of DB Investor by Deutsche Bank late in 1998. So it seems clear how the "battle of the systems" of corporate governance is running, with a pan-European capital market-based approach likely to carry the day.<sup>15</sup>

### 7. STRATEGIC OPTIONS

The foregoing discussion is centered around a common-sense approach to strategic positioning and execution after the launch of the euro. Put simply, it's all a matter of doing the right thing, and then doing it right. This invariably requires an astute assessment of the prospective competitive battlefield, both in terms of market prospects and competitive structures, which has to be based on a number of suppositions reflecting a well-argued consensus among those creating the strategy. If important suppositions turn out to be wrong, key parts of the strategy will be wrong too.

Once a judgment has been reached as to key client-groups, geographies and product portfolios that may promise to generate acceptable risk-adjusted returns to shareholders, a strategic configuration has to be devised for the institution that can extract significant scale and scope economies and that can be managed effectively to achieve strong operating economies. Such an optimum configuration may be termed "strategic integrity." It forms what the Germans call a "soll-Zustand" (what *ought to be*). This has to compared with the "ist-Zustand" (what *is*), i.e., how does the institution currently stack-up against all competitors, traditional and nontraditional, in the cold light of day, and what will be required to compete effectively in the future in terms of capital, human and managerial resources and organizational change.

Comparing reality to strategic objectives in the presence of a critical time element usually produces a number of show-stoppers. Rejecting losers among strategic options is just as important as selecting winners, and is often much more difficult – especially when opportunistic moves beckon and time is short. Failure to reject losers probably results in a disproportionate number of what turn out to be strategic errors in the financial services sector – often at great expense to shareholders.

Finally comes strategic implementation: Marshaling resources, controlling costs, getting the troops on board, building a high-performance "super-culture" over what inevitably will be a number of often very different "sub-cultures," getting the right people, and then providing effective leadership. The devil is always in the details.

If a strategic direction taken by the management of a financial firm in the euro-zone

<sup>15</sup> See Walter (1993) and Story and Walter (1997).

does not exploit every source of potential value for shareholders, then what is the purpose? Avoiding an acquisition attempt from a better-managed suitor who will pay a premium price does not seem nearly as unacceptable today as it may have been in the past. In a world of more open and efficient markets for shares in financial institutions, shareholders increasingly tend to have the final say about the future of their enterprises.

#### REFERENCES

- Akhavein, J.D., A.N. Berger and D.B. Humphrey (1996), The Effects of Megamergers on Efficiency and Prices: Evidence from a Bank Profit Function, paper presented at a *Conference on Mergers of Financial Institutions*, New York University Salomon Center, October.
- Berger, A.N., R.S. Demsetz and P.E. Strahan (1998), *The Consolidation of the Financial Services Industry: Causes, Consequences, and Implications for the Future*, Federal Reserve Bank of New York, New York.
- Berger, A.N., D. Hancock and D.B. Humphrey (1993), Bank Efficiency Derived from the Profit Function, *Journal of Banking and Finance*, 17.
- Berger, A.N. and T.H. Hannan (1987), The Price-Concentration Relationship in Banking, *Review of Economics and Statistics*, 71.
- Berger, A.N., W.C. Hunter and S.J. Timme (1993), The Efficiency of Financial Institutions: A Review of Research Past, Present and Future, *Journal of Banking and Finance*, 17.
- Berger, A.M. and L. Mester (1997), Inside the Black Box: What Explains Differences in the Efficiencies of Financial Institutions?, *Journal of Banking and Finance*, 21.
- Berger, P.G. and E. Ofek (1995), Diversification's Effect on Firm Value, *Journal of Financial Economics*, 37.
- Cummins, J.D. and H. Zi (1998), Comparisons of Frontier Efficiency Levels, *Journal of Productivity Analysis*, June.
- DeLong, G., R.C. Smith and I. Walter (1999), M&A Database: Financial Services, New York University Salomon Center.
- Demsetz, R.S., M.R. Saidenberg and P.E. Strahan (1996), Banks with Something to Lose: The Disciplinary Role of Franchise Value, *Federal Reserve Bank of New York Policy Review*, October.
- Gnehm, A. and C. Thalmann (1989), Conflicts of Interest in Financial Operations: Problems of Regulation in the National and International Context, working paper, Swiss Bank Corporation, Basel.
- Goldberg, L.G., G.A. Hanweck, M. Keenan and A. Young (1991), Economies of Scale and Scope in the Securities Industry, *Journal of Banking and Finance*, 15.
- John, K. and E. Ofek (1995), Asset Sales and Increase in Ficus, *Journal of Financial Economics*, 37.
- Kwast, M.L., M. Starr-McCluer and J. Wolken (1997), Market Definition and the Analysis of Antitrust in Banking, *Antitrust Bulletin*, 42, 973-995.
- Lang, G. and P. Wetzel (1998), Technology and Cost Efficiency in Universal Banking: A Thick Frontier Approach, *Journal of Productivity Analysis*, 10.
- Prager, R.A. and T.H. Hannan (1999), Do Substantial Horizontal Mergers Generate Significant Price Effects?, forthcoming, *Journal of Industrial Economics*.
- Saunders, A. (1996), *Financial Institutions Management*, Second Edition, Irwin, Burr Ridge.

- Saunders, A. and I. Walter (1994), *Universal Banking in the United States*, Oxford University Press, New York.
- Siems, T.F. (1996), Bank Mergers and Shareholder Value: Evidence from 1995's Megamerger Deans, *Federal Reserve Bank of Dallas Financial Industry Studies*, August.
- Smith, R.C. and I. Walter (1997A), Global Banking, Oxford University Press, New York.
- Smith, R.C. and I. Walter (1997B), Street Smarts: Leadership and Shareholder Value in the Securities Industry, Harvard Business School Press, Boston.
- Story, J. and I. Walter (1997), *Political Economy of Financial Integration in Europe: The Battle of the Systems*, Manchester University Press and MIT Press, Manchester and Cambridge.
- Van den Brink, R.G.C. (1998), Universal Banking: An Answer to the Challenges Facing the Financial Sector, ABN AMRO (mimeo).
- Walter, I. (1988), *Global Competition in Financial Services*, Ballinger-Harper & Row, Cambridge.
- Walter, I. (1993), *The Battle of the Systems: Control of Enterprises in the Global Economy*, Kieler Studien, Nr.122, Institut für Weltwirtschaft, Kiel.
- Walter, I. (1999), The Asset Management Industry in Europe: Competitive Structure and Performance Under EMU, in J. Dermine and P. Hillion (eds.) *European Capital Markets With a Single Currency*, Oxford University Press, Oxford.

Bank         Total Assets         Market Cap         Tier I         ROAE         Net Int         P/B         P/B           1         Gügroup         (\$ billions)         (\$ billions)         38 % of Assets         Equity         (post tax)         Margin         P/E         P/B           1         Gügroup         702         107.0         15.2%         8.3         6.5         5.1         n.a.         n.a.           3         JP Morgan         299         16.6         5.6%         7.4         5.3         0.7         17.3         1.68           4         BankAmerica         264         99.9         37.8%         7.4         7.7         3.6         14.6         2.12           5         First Union         285         7.4         7.4         7.7         3.6         14.6         2.12           5         First Union         285         7.0         7.7         3.6         14.6         2.12           5         First Union         285         7.0         1.a.	Annex 1 Table A: Top-20 U.S. Bank Performance	ık Performance						Data Nove	Data November 1998
tan 357 48.7 13.6% 8.3 6.5 5.1 n.a.  299 16.6 5.6% 7.4 5.3 0.7 17.3  284 29.9 16.6 5.6% 7.4 5.3 0.7 17.3  285 285 57.4 224.4% 7.1 29.5 3.8 14.6  150 22.7 224.4% 7.1 29.5 1.0 1.0  120 57.3 47.8% 9.2 21.8 1.0  83 22.7 22.7% 6.9 18.6 4.6 15.5  183 22.7 22.7% 6.9 18.6 4.6 15.5  184 11.0 199% 7.4 20.2 1.3 19.3 19.6  185 28.3% 8.1 18.2 6.2 20.4  186 6.0 16.7% 6.8 19.3 19.3 19.6  187 28.3% 8.1 18.2 6.2 20.4  188 10.0 16.7% 6.8 19.3 19.3 19.6  189 29.0 16.3 19.8 11.4 19.8 19.8  189 6.0 16.7% 6.8 19.3 19.3 19.6  180 0.0 16.7% 6.8 19.3 19.3 19.6  180 0.0 16.7% 6.8 19.3 19.4  180 0.0 16.7% 6.8 19.3 19.4  180 0.0 16.7% 6.8 19.3 19.4  180 0.0 16.7% 6.8 19.4	Bank	Total Assets (\$ billions)			Tier 1 Equity	ROAE (post tax)	Net Int Margin	P/E	P/B
ran         357         48.7         13.6%         8.3         14.9         3.1         13.2           299         16.6         5.6%         7.4         5.3         0.7         17.3           264         99.9         37.8%         7.4         7.7         3.6         14.6           285         57.4         24.4%         7.1         23.5         3.8         15.5           150         50.0         25.5%         n.a.         n.a.         n.a.         n.a.           150         57.3         47.8%         9.2         21.8         14.6         15.5           100         22.7         42.8%         9.2         18.6         4.6         15.4           100         22.7         42.8%         19.0         4.1         16.2           100         22.7         22.7%         6.9         18.1         4.2         15.4           101         13.3         17.1%         6.7         18.1         4.2         15.4           101         15.1         19.9%         7.4         20.5         3.8         15.4           102         15.1         11.1%         14.6%         17.2         14.2         13.7	1 Citigroup	702	107.0	15.2%	8.3	6.5	5.1	n.a.	n.a.
Fargo 166 5.6% 7.4 5.3 0.7 17.3 17.3 264 99.9 37.8% 7.4 7.7 3.6 14.6 14.6 25.6 57.4 24.4% 7.1 23.5 3.8 15.5 14.6 14.6 15.0 15.6 14.6 15.0 15.6 14.6 15.0 15.0 15.6 14.6 15.0 15.0 15.6 14.6 15.0 15.0 15.6 14.6 15.0 15.0 15.6 14.6 15.0 15.0 15.6 14.6 15.0 15.0 15.6 15.6 15.6 15.6 15.6 15.6 15.6 15.6	2 Chase Manhattan	357	48.7	13.6%	8.3	14.9	3.1	13.2	2.20
264         99.9         37.8%         7.4         7.7         3.6         14.6           235         57.4         24.4%         7.1         23.5         3.8         15.5           156         6.0         25.5%         n.a.         n.a.         n.a.         n.a.           156         6.0         3.8%         7.0         n.a.         1.0         8.7           120         57.3         47.8%         9.2         21.8         5.3         14.4           120         57.3         47.8%         9.2         21.8         5.3         14.4           183         22.7         6.9         18.6         4.6         15.5         14.4           74         10.0         22.7%         6.9         7.4         20.5         3.8         15.4           74         10.8         14.6%         7.0         16.3         4.0         15.5           64         6.1         14.6         23.6         7.2         24.2         3.2         20.4           64         6.1         14.6         23.9%         7.2         18.3         3.9         19.6           64         6.1         14.6         23.9%         7.	3   P Morgan	299	16.6	5.6%	7.4	5.3	0.7	17.3	1.68
Eargo         196         57.4         24.4%         7.1         28.5         3.8         15.5           156         50.0         25.5%         n.a.         n.a.         n.a.         n.a.           120         57.3         47.8%         7.0         n.a.         1.0         8.7           120         57.3         47.8%         9.2         21.8         5.3         14.4           120         22.7%         6.9         18.6         4.6         15.5           183         21.2         25.5%         8.8         19.0         4.1         16.2           76         18.3         17.1%         6.7         18.1         4.2         15.5           74         10.8         14.6%         7.4         20.5         3.8         15.4           84         61         14.6%         7.0         16.3         4.0         12.5           86         61         14.6         29.9%         7.2         24.2         3.2         20.4           86         61         14.6         29.9%         7.2         24.2         3.2         20.4           86         61         14.3         20.0         18.3         3	4 BankAmerica	264	6.66	37,8%	7.4	7.7	3.6	14.6	2.12
Fargo         196         50.0         25.5%         n.a.         n.a.         n.a.         n.a.           156         6.0         3.8%         7.0         n.a.         1.0         8.7           120         57.3         47.8%         9.2         21.8         5.3         14.4           120         22.7         22.7%         6.9         18.6         4.6         15.5           83         21.2         25.5%         8.8         19.0         4.1         16.2           78         13.3         17.1%         6.7         18.1         4.2         15.5           74         16.8         7.4         20.5         3.8         15.4         15.5           64         23.6         36.9%         7.5         24.2         3.8         15.4           65         18.7         26.2         3.2         20.6         20.6           66         18.7         28.3%         8.1         18.2         6.2         20.4           86         10.1         10.3         6.8         14.4         3.7         14.3           86         6.0         18.4         3.7         14.3         14.3           10.0	5 First Union	235	57.4	24.4%	7.1	23.5	3.8	15.5	3.31
156         6.0         3.8%         7.0         n.a.         1.0         8.7           120         57.3         47.8%         9.2         21.8         5.3         14.4           120         22.7         22.7%         6.9         18.6         4.6         15.5           83         21.2         25.5%         8.8         19.0         4.1         16.2           78         13.3         17.1%         6.7         18.1         4.2         15.5           74         16.8         14.6%         7.0         16.3         4.0         12.5           64         23.6         36.9%         7.5         24.2         3.8         15.4           65         18.7         28.3%         8.1         18.2         6.2         20.6           64         23.6         36.9%         7.5         24.2         3.2         20.6           64         18.7         28.3%         8.1         18.2         6.2         20.6           65         18.7         28.3%         7.2         18.3         3.9         19.6           6         16.1         16.7%         6.8         14.4         3.7         14.3      <	6 Norwest/Wells Fargo	196	50.0	25.5%	n.a.	n.a.	n.a.	n.a.	n.a.
120         57.3         47.8%         9.2         21.8         5.3         14.4           100         22.7         22.7%         6.9         18.6         4.6         15.5           83         21.2         25.5%         8.8         19.0         4.1         16.2           78         13.3         17.1%         6.7         18.1         4.2         13.7           76         15.1         19.9%         7.4         20.5         3.8         15.4           74         10.8         14.6%         7.0         16.3         4.0         12.5           66         18.7         28.3%         8.1         18.2         6.2         20.4           66         18.7         28.3%         8.1         18.2         6.2         20.4           66         18.7         28.3%         8.1         18.2         6.2         20.4           61         10.1         19.8%         14.3         20.0         1.8         23.4           86         6.0         16.7%         6.8         20.3         4.0         18.5           86         16.0         16.7%         23.0         4.6         17.2           86	7 Bankers Trust	156	0.9	3.8%	7.0	n.a.	1.0	8.7	1.44
100       22.7%       6.9       18.6       4.6       15.5         83       21.2       25.5%       8.8       19.0       4.1       16.2         78       13.3       17.1%       6.7       18.1       4.2       13.7         76       15.1       19.9%       7.4       20.5       3.8       15.4         74       10.8       14.6%       7.0       16.3       4.0       12.5         64       23.6       36.9%       7.5       24.2       3.2       20.6         66       18.7       28.3%       8.1       18.2       6.2       20.4         61       14.6       23.9%       7.2       13.3       3.9       19.6         51       10.1       19.8%       14.3       20.0       1.8       23.4         48       15.7       32.7%       6.8       14.4       3.7       14.3         34       10.0       6.5%       7.2       23.0       4.0       18.5         3100.0       624.7       20.2%       7.2       23.0       4.0       17.2         40       155.0       40.5       15.7       3.7       14.3       14.3	8 BancOne	120	57.3	47.8%	9.5	21.8	5.3	14.4	2.81
83         21.2         25.5%         8.8         19.0         4.1         16.2           78         13.3         17.1%         6.7         18.1         4.2         13.7           76         15.1         19.9%         7.4         20.5         3.8         15.4           74         10.8         14.6%         7.0         16.3         4.0         12.5           64         23.6         36.9%         7.5         24.2         3.2         20.6           66         18.7         28.3%         8.1         18.2         6.2         20.4           61         14.6         23.9%         7.2         13.3         3.9         19.6           51         10.1         19.8%         14.3         20.0         1.8         23.4           48         15.7         32.7%         6.8         20.3         4.0         18.5           36         6.0         16.7%         6.8         14.4         3.7         14.3           3100.0         624.7         20.2%         23.0         4.0         17.2           40         15.7         23.0         4.0         17.3           5         40.5         21	9 Fleet Financial	100	22.7	22.7%	6.9	18.6	4.6	15.5	2.68
78         13.3         17.1%         6.7         18.1         4.2         13.7           76         15.1         19.9%         7.4         20.5         3.8         15.4           74         10.8         14.6%         7.0         16.3         4.0         12.5           64         23.6         36.9%         7.5         24.2         3.2         20.6           66         18.7         28.3%         8.1         18.2         6.2         20.6           61         14.6         23.9%         7.2         13.3         3.9         19.6           51         10.1         19.8%         14.3         20.0         1.8         20.4           48         15.7         32.7%         6.8         20.3         4.0         18.5           36         6.0         16.7%         6.8         14.4         3.7         14.3           3100.0         624.7         20.2%         4.6         15.2         3.0         14.3           6         155.0         7.2         23.0         4.6         17.2         14.3           8.6         15.7         20.2%         4.0         14.3         17.2 <td< td=""><td>10 National City</td><td>83</td><td>21.2</td><td>25.5%</td><td>8.8</td><td>19.0</td><td>4.1</td><td>16.2</td><td>2.94</td></td<>	10 National City	83	21.2	25.5%	8.8	19.0	4.1	16.2	2.94
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11 Key Corp	78	13.3	17.1%	6.7	18.1	4.2	13.7	2.38
74       10.8       14.6%       7.0       16.3       4.0       12.5         64       23.6       36.9%       7.5       24.2       3.2       20.6         66       18.7       28.3%       8.1       18.2       6.2       20.4         61       14.6       23.9%       7.2       13.3       3.9       19.6         51       10.1       19.8%       14.3       20.0       1.8       23.4         48       15.7       32.7%       6.8       20.3       4.0       18.5         36       6.0       16.7%       6.8       14.4       3.7       14.3         34       10.0       6.5%       7.2       23.0       4.6       17.2         3100.0       624.7       20.2%       7.6       15.7       3.6       14.3         6       155.0       7.6       15.7       3.6       14.3         7       8.6       16.2       3.7       14.3         8       6       15.7       3.7       14.3         10       15.7       20.2%       4.6       14.3         8       16       15.7       3.7       14.3         15 <t< td=""><td>12 PNC Bank</td><td>92</td><td>15.1</td><td>19.9%</td><td>7.4</td><td>20.5</td><td>3.8</td><td>15.4</td><td>2.75</td></t<>	12 PNC Bank	92	15.1	19.9%	7.4	20.5	3.8	15.4	2.75
Y         64         23.6         36.9%         7.5         24.2         3.2         20.6           Bank         66         18.7         28.3%         8.1         18.2         6.2         20.4           st         61         14.6         23.9%         7.2         13.3         3.9         19.6           et         51         10.1         19.8%         14.3         20.0         1.8         23.4           mk         48         15.7         32.7%         6.8         20.3         4.0         18.5           it         36         6.0         16.7%         6.8         14.4         3.7         14.3           op 20         310.0         624.7         20.2%         7.2         23.0         4.6         17.2           s Avg.         155.0         40.5         21.0%         7.6         15.7         3.6         14.3           s Avg.         15.0         16.2         3.7         15.         15.         15.	13 BankBoston	74	10.8	14.6%	7.0	16.3	4.0	12.5	2.30
Bank         66         18.7         28.3%         8.1         18.2         6.2         20.4           Bank         61         14.6         23.9%         7.2         13.3         3.9         19.6           et         51         10.1         19.8%         14.3         20.0         1.8         23.4           it         36         6.0         16.7%         6.8         20.3         4.0         18.5           it         34         10.0         6.5%         7.2         23.0         4.6         17.2           op 20         155.0         40.5         21.0%         7.6         15.7         3.6         14.3           s Avg.         3.7         15.7         3.7         15.	14 Bank of NY	64	23.6	36.9%	7.5	24.2	3.2	20.6	4.76
Bank         61         14.6         23.9%         7.2         13.3         3.9         19.6           et         51         10.1         19.8%         14.3         20.0         1.8         23.4           unk         48         15.7         32.7%         6.8         20.3         4.0         18.5           st         36         6.0         16.7%         6.8         14.4         3.7         14.3           op 20         3100.0         624.7         20.2%         7.6         15.7         3.6         14.3           s Avg.         8.6         16.2         3.7         15.3	15 Wachovia	99	18.7	28.3%	8.1	18.2	6.2	20.4	3.52
tt 51 10.1 19.8% 14.3 20.0 1.8 23.4 mk 48 15.7 32.7% 6.8 20.3 4.0 18.5 18.5 tt 36 6.0 16.7% 6.8 14.4 3.7 14.3 18.5 14.3 cop 20 155.0 40.5 21.0% 7.6 15.7 3.6 14.3 s.Avg.	16 Sun Trust Bank	61	14.6	23.9%	7.2	13.3	3.9	19.6	2.79
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17 State Street	51	10.1	19.8%	14.3	20.0	1.8	23.4	4.51
it $36$ $6.0$ $16.7\%$ $6.8$ $14.4$ $3.7$ $14.3$ $14.3$ $3.4$ $10.0$ $6.5\%$ $7.2$ $23.0$ $4.6$ $17.2$ $17.2$ op 20 $155.0$ $40.5$ $21.0\%$ $7.6$ $15.7$ $3.6$ $14.3$ $8.6$ $16.2$ $3.7$ $15.$	18 Mellon Bank	48	15.7	32.7%	8.9	20.3	4.0	18.5	3.60
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	19 SouthTrust	36	0.9	16.7%	8.9	14.4	3.7	14.3	2.27
3100.0 624.7 20.2% 155.0 40.5 21.0% 7.6 15.7 3.6 14.3 8.6 16.2 3.7 15	20 Comerica	34	10.0	6.5%	7.2	23.0	4.6	17.2	3.73
	Total	3100.0	624.7	20.2%					
8.6 16.2 3.7 15	Average Top 20	155.0	40.5	21.0%	7.6	15.7	3.6	14.3	2.4
	U.S. Banks Avg.				9.8	16.2	3.7	15	2.85

Banks 1	Total Assets (\$ billions)	Market Cap (\$ billions)	Market Cap As % of Assets	Tier 1 Equity	ROAE (post tax)	P/E	P/B
1 UBS	749	69.2	9.24%	7.5	21.6	15.50	2.94
2 Deutsche Bank	693	33.4	4.82%	5.1	15.0	11.70	1.76
3 ABN-Amro	501	31.8	6.35%	7.2	18.3	16.00	2.12
4 Hypovereinsbank	492	31.3	6.36%	5.0	17.7	n.a.	n.a.
5 HBSC	487	55.5	11.40%	8.6	17.7	12.00	2.02
6 Credit Suisse	477	46.4	6.56%	10.3	2.2	18.60	3.20
7 Dresdner	462	24.7	5.35%	5.7	15.0	19.70	2.04
8 ING Groep	456	55.2	12.11%	7.0	13.5	15.60	1.47
9 Societe Generale	418	18.2	4.35%	6.2	10.4	13.50	1.65
10 Barclays	406	35.6	8.77%	7.3	22.9	12.20	2.70
11 Banque Nationale des Paris	346	14.6	4.22%	5.5	10.1	12.40	1.39
12 Commerzbank	343	13.8	4.02%	0.9	10.4	13.90	1.37
13 National Westminster	311	30.2	9.71%	8.1	18.6	12.80	2.37
14 San Paolo-IMI	200	12.0	%00.9	11.0	5.2	20.80	2.25
15 Lloyds TSB	234	64.8	27.69%	9.1	27.7	18.10	5.49
16 Santander	186	21.9	11.77%	8.3	22.2	19.90	3.33
17 BBV	147	26.9	18.30%	0.6	19.4	25.00	4.88
18 Bank Austria	126	6.9	5.48%	5.9	8.5	6.40	1.07
19 Banco di Roma	119	10.3	8.66%	6.9	n.a.	16.80	1.80
20 BCI	1117	12.0	10.26%	7.8	5.1	23.40	2.32
Total	7270	614.7	8.46%				
UK & Continental Avg.				7.4	14.6	14.5	2.06

Annex 2 Global Wholesale Banking and Investment Banking 1998 - Full Credit to Book Running Manager Only	estment Banking 1998 -	Full Credit to Bo	ook Running M	anager Only		(\$ millions)
Firm (1997 Ranking)	Global Securities Underwriting and Private Placements	Global M&A Advisory (a)	International Bank Loans Arranged	Medium Term Notes Lead Managed (b)	Total	Percent of Top 25 (c)
Goldman Sachs & Co (2) Merrill Lynch & Co (1) Morgan Stanley Dean Witter (4) Salomon Smith Barney / Citigroup (7/11) Credit Suisse First Boston (6) JP Morgan & Co. Inc. (5) Chase Manhattan Corporation (3) Lehman Brothers (8) Deutsche Bank / BT (15/16) Warburg Dillon Read / UBS (9) Bank of America Corp (14) Bear Stearns (12) Donaldson, Lufkin & Jenrette (13) ABN AMRO (17) Paribas / Societe Generale (25/41) Lazard Houses (18) Barclays Capital (19) Drescher Kleinwort Benson (30) Rothschild Group (28) Nomura Securities (34) Schroder Group (22) BankBoston (38) First Union Corp (39) PaineWebber (23) HSBC (24)	388,765.9 549,797.3 404,497.3 404,497.5 366,353.8 290,502.0 250,064.7 122,602.9 264,339.6 158,681.0 201,809.6 57,975.7 111,498.7 111,7,077.6 153,649.0 81,236.9 54,611.5 58,998.1	1,067,258.8 692,920.3 635,623.9 483,761.8 431,756.5 324,207.0 172,858.9 225,415.6 147,874.4 143,743.3 83,679.4 184,752.8 217,614.0 34,143.3 54,472.3 160,775.5 84,291.2 69,179.4 49,903.0	16,404.5 10,999.7 107,565.7 19,086.9 115,665.7 307,131.0 26,311.8 53,780.3 17,009.9 200,100.1 12,618.8 16,282.5 14,457.3	54,419.6 129,629.4 32,680.2 51,412.2 60,166.1 27,502.8 20,448.0 48,982.5 84,419.0 53,780.1 42,250.0 17,610.0 17,610.0 125,333.1 11,398.0 6,370.2 8,273.0 14,556.0	1,526,848.8 1,383,346.7 1,072,801.6 1,009,093.5 801,511.5 717,440.2 623,040.8 565,049.5 444,754.7 416,342.9 384,005.2 342,971.5 302,836.5 219,519.3 100,775.5 1102,064.4 1100,257.7 84,291.2 73,554.1 69,179.4 69,027.8 66,564.0 57,604.2	13.89 9.76% 9.76% 9.78% 9.78% 9.79% 9.79% 9.79% 9.711% 9.7
Top 25 Firms  Top 10 as % of Top 25  Top 20 as % of Top 25	3,922,907.5 76.41% 96.44%	5,301,604.6 <b>81.59</b> % <b>97.75</b> %	958,130.7 70.34% 95.75%	809,230.2 <b>69.63%</b> <b>97.53%</b>	10,991,873.0 77.88% 97.09%	%%
(a) Completed deals only. Full credit to both advisors to targets and acquirers. (b) Equal credit to both book runner (c) To avoid overestimation, the top 25 total – \$10,991,873.0 mil was used instead of the industry total – \$8,470,261.3 mil	to both advisors to targets and acquirers. 25 total – \$10,991,873.0 mil was used inste	(b) Equal credit	(b) Equal credit to both book runners if acting jointly, fthe industry total – \$8.470,261.3 mil.	s if acting jointly.	Data: Securities Data Corporation	a Corporation

The Next Twenty Two:						
Firm (1997 Ranking)	Global Securities Underwriting and Private Placements	Global M&A Advisory (a)	International Bank Loans Arranged	Medium Term Notes Lead Managed (b)	Total	Percent of Industry Total
CIBC Wood Gundy Securities (27) BANK ONE Corp Wasserstein, Perella (33)	12,594.8	34,321.6 40,887.1	9,308.4 53,445.1		56,224.8 53,445.1 40,887.1	0.66%
•	39,208.6	10,001.1			39,208.6	0.46%
KbC Dominion Securities (52) Prudential Securities (31)	26.587.5	55,469.0			26,587.5	$0.40\% \\ 0.31\%$
			25,834.9		25,834.9	0.31%
Toronto-Dominion Bank and Tr (40)	0 077 11		24,751.1	0 000 01	24,751.1	0.29%
Commerzbank AG (31) First Tennessee Bank, N.A.	21,75.3			10,000.0	21,76.5 $21,357.4$	0.25%
Scotiabank-Bank of Nova Scotia			14,001.0		14,001.0	0.17%
Daiwa Securities (29)				13,500.0	13,500.0	0.16%
Banque Nationale de Paris (26)				11,700.0	11,700.0	0.14%
Fleet Financial Group Inc ING Barings (36)	10.693.1		10,788.9		10,788.9	0.13%
Bayerische H-V				10,000.0	10,000.0	0.12%
Bank of Montreal Trust			9,751.9		9,751.9	0.12%
Sakura Bank, Ltd.				9,124.3	9,124.3	0.11%
PNC Bank NA			8,146.3		8,146.3	0.10%
Wells Fargo Bank NA (50)			6,875.8		6,875.8	0.08%
Banque Internationale Lux SA				5,744.5	5,744.5	0.07%

# Annex 3 Top-100 Global Asset Managers

(\$ millions as of December 31, 1997)

Rank	Organization	Country	Total assets
1	UBS	Switzerland	799,250
2	Kampo	Japan	758,517
3	Fidelity Investments	United States	635,000
4	Groupe AXA	France	531,000
5	Barclays Global Investors	United Kingdom	485,771
6	Merrill Lynch Asset Mgmt. Group	United States	446,279
7	State Street Global Advisors <sup>5</sup>	United States	398,682
8	Prudential Insurance/America	United States	370,000
9	Vanguard Group <sup>5</sup>	United States	348,436
10	Capital International	United States	343,429
11	Allianz Holdings	Germany	333,696
12	Credit Suisse <sup>1</sup>	Switzerland	330,000
13	Bankers Trust	United States	317,736
14	Metropolitan Life Insurance	United States	302,000
15	Nippon Life Insurance Group	Japan	292,985
16	Mellon Bank	United States	261,662
17	J.P. Morgan Investment Mgmt.	United States	256,609
18	AMVESCAP	United States United States	245,942
19	Putnam Investments	United States United States	235,086
20			· · · · · · · · · · · · · · · · · · ·
20	Zenkyoren³ Deutsche Bank	Japan Cormony/LIV	233,200
22	Zurich Group	Germany/UK Switzerland	230,679 214,668
23	TIAA-CREF	United States	
23 24			213,400
	United Asset Mgmt. Dai-ichi Mutual Life Insurance	United States	206,900
25 oc		Japan	204,141
26	Mitsubishi Trust Bank²	Japan	203,500
27	Dresdner Bank	Germany/US	202,998
28	Pacific Investment Mgmt.	United States	199,905
29	Northern Trust <sup>5</sup>	United States	196,619
30	Prudential Portfolio Managers-MRG	United Kingdom	195,236
31	Sumitomo Trust Bank	Japan	194,700
32	Wellington Mgmt.	United States	193,855
33	Franklin Resources	United States	185,543
34	Groupe Caisse des Depots <sup>1</sup>	France	185,400
35	Travelers Insurance	United States	177,139
36	Schroder Investment Mgmt.	United Kingdom	175,900
37	American Express Retirement Services <sup>5</sup>	United States	173,400
38	Aegon-Transamerica <sup>6</sup>	Netherlands	172,905
39	Sumitomo Life Insurance Group	Japan	172,052
40	ING Asset Mgmt.	Netherlands	167,000
41	Yasuda Trust Bank	Japan	158,100
42	Chase Asset Mgmt.	United States	155,110
43	Morgan Stanley/Miller Anderson⁵	United States	149,325
44	Fortis	Beigium/Netherlands	146,692
45	MassMutual Life Insurances <sup>5</sup>	United States	145,110
46	Commercial Union	United Kingdom	145,000
47	Toyo Trust Bank	Japan	129,700
48	T. Rowe Price Associates	United States	126,055
49	Goldman Sachs Asset Mgmt.	United States	125,014
50	Indocam	France	123,565
51	Meiji Mutual Life Insurance Group	Japan	121,473
52	Banca Comerciale d'Italia	Italy	120,917

Annex 3
Top-100 Global Asset Managers (cont'd)

(\$ millions as of December 31, 1997)

Rank	Organization	Country	Total assets
53	NationsBank <sup>2</sup>	United States	120,000
54	John Hancock Mutual Life	United States	116,772
55	New York Life Insurance	United States	106,979
56	PNC Bank	United States	105,875
57	Fleming Group	United Kingdom	105,000
58	Nvest	United States	104,979
59	Hypo-und Vereinsbank	Germany/UK	104,502
60	Sun Life of Canada <sup>2</sup>	Canada	103,300
51	Legal and General	United Kingdom	102,818
2	Citibank Global Asset Mgmt.	United States	98,8940
3	Munich Re	Germany	97,431
4	Lloyds TSB Group	United Kingdom	97,316
5	Generali Group¹	Italy	97,287
6	Nomura Group <sup>1</sup>	Japan	95,600
7	Standard Life Assurance	United Kingdom	95,456
8	Société Generale	France	94,107
9	Commerzbank	Germany	93,763
0	Federated Investors <sup>5</sup>	United States	90,625
1	Daiwa Group	Japan	88,475
2	Asahi Mutual Life Insurance Group	Japan	87,397
3	Royal & Sun Alliance	United Kingdom	87,380
Į.	BNP Asset Mgmt.	France	85,550
,	AIG Global Investment	United States	83,694
5	Crédit Lyonnais	France	82,000
	Chuo Trust Bank <sup>3</sup>	Japan	81,300
3	Norwich Union	United Kingdom	81,102
)	GIGNA Investments	United States	80,000
)	AMP	Australia	79,995
l	Nikko Group¹	Japan	79,000
2	Generale de Banque	Belgium	77,946
3	ABN AMRO Asset Mgmt.	Netherlands	76,563
ŀ	American General Invst. Mgmt. <sup>5</sup>	United States	76,388
5	Gartmore Investment Management	United Kingdom	75,972
6	Mitsui Mutual Life Insurance Group	Japan	75,236
7	Great-West Life & Annuity Insurance	United States	74,940
8	Deka/Despa	Germany	74,525
9	Groupe Paribas	France	73,750
0	Principal Financial Group	United States	72,290
1	Aetna <sup>5</sup>	United States	71,300
02	Bank of America	United States	70,600
93	MFS Institutional Advisors	United States	70,148
)4	American Century Investment Mgmt.	United States	69,969
95	Sanford C. Bernstein	United States	69,783
96	GE Investments <sup>5</sup>	United States	69,397
7	Swiss Life Insurance	Switzerland	69,000
8	Janus Capital	United States	67,745
9	Yasuda Mutual Life Insurance	Japan	67,228
00	Providential <sup>1</sup>	Switzerland	66,700

4 Pension assets only.

Source: Pension & Investments, July 27, 1998.

<sup>&</sup>lt;sup>1</sup> As of Dec. 1, 1996. <sup>2</sup> As of March 31, 1998. <sup>3</sup> Estimate.

<sup>&</sup>lt;sup>5</sup> Includes assets passed to subdivisions. <sup>6</sup> Combined.

# NOTE ON THE CONTRIBUTOR

Ingo Walter is the Charles Simon Professor of Applied Economics at the Stern School of Business, New York University, and also serves as director of the New York University Salomon Center, an independent academic research institute founded in 1972 to focus on financial institutions, instruments and markets. Since 1985 he has also been affiliated with INSEAD in Fontaineblue, France as Professor of International Management, holding the John Loudon and Swiss Bank Corporation professorships.

Professor Walter received his A.B. and M.S. degrees from Lehigh University and his Ph.D degree in 1966 from New York University. He taught at the University of Missouri-St. Louis from 1965 to 1970 and has been on the faculty at New York University since 1970. From 1971 to 1979 he was Associate Dean for Academic Affairs and subsequently served a number of terms as Chairman of International Business and Chairman of Finance.

Dr. Walter's principal areas of academic and consulting activity include international trade policy, international banking, environmental economics, and economics of multinational corporate operations. At present, his interests focus on competitive structure, conduct, and performance in the international banking and financial service industry, as well as international trade and investment issues. He has served as a consultant to many government agencies, international institutions, banks, and corporations in Europe, Asia and the United States, and has held a number of board memberships.

Professor Walter has published papers in various professional journals in these field and is author of, co-author or editor of 25 books, including *Global Banking* (New York: Oxford University Press, 1997), *Street Smarts: Linking Professional Conduct and Shareholder Value in the Securities Industry* (Boston: Harvard Business School Press, 1997) and *Politics of European Financial Integration* (Manchester, Manchester University Press and Cambridge: MIT Press, 1997).

# CONSOLIDATION AND STRATEGIC POSITIONING IN BANKING

by Arnoud W. A. Boot

#### 1. Introduction

The financial services industry is restructuring and consolidating at an unprecedented pace around the globe. Particularly, in the United States and Western Europe transactions are numerous and breathtaking. But restructuring is also going on in Asia. Most striking is probably the ever-escalating scale of mergers in banking. In just the last few years, in the US mergers have led to a consolidation of money center banks (e.g. the Chase Manhattan and Chemical Bank merger) and the emergence of regional power houses (e.g., the expansion strategies of BankOne and Nationsbank, and their subsequent mergers with, respectively, First Chicago/NBD and BankAmerica). In Europe, mergers have also been prominent. While cross border mergers are relatively infrequent – with exceptions in Scandinavia and the acquisition of the Belgian Bank BBL by the Dutch financial conglomerate ING – mergers between domestic institutions typically involve large universal banks and are often spectacular. Noteworthy examples include the marriage of the Union Bank of Switzerland and Swiss Bank Corporation and the announced merger between Société Général and Paribas (and possibly BNP). And in Japan, a spectacular merger has produced the new Tokyo-Mitsubishi bank with over \$ 700 billion in assets.

A parallel phenomenon is the broadening of scope of many banks. Even banks that traditionally followed well motivated focused strategies now seem to give in to this trend. For example, Bankers Trust with its activities aimed at the corporate market, now puts itself in the arms of a scope expanding universal bank (Deutsche Bank). Scope-expansion also originates from investment banks. Major investment banks are redefining their domain by offering traditional commercial banking products like commercial and industrial loans and by moving into retail brokerage. The union of Salomon Brothers (investment bank) and Smith Barney (brokerage) within Travelers underscores the scope-expansion in the industry. The spectacular cross-industry merger by Citicorp and Travelers also brings the insurance activities together with bank-oriented financial services. This concept is not really new. Some European banks, – e.g. ING in the Netherlands – already engage in *bancassurance*, that is, combining banking and insurance activities. Similarly, Credit Suisse expanded into insurance by acquiring the insurance corporation Winterthur.

One question is then immediate. Why are banks consolidating so much and expanding scope? The popular financial press points to the increasingly competitive environment of banking as the culprit. As commercial banking becomes more competitive, banks need to examine all possible ways to wring inefficiencies out of their cost structures. One way to do this is to merge with other banks and realize efficiencies of scale through elimination of redundant branches and back-office consolidation. Moreover, the diminishing margins in commercial banking invite banks to look outside their traditional domain. Some non-bank-

ing activities may offer higher margins and make scope expansion attractive. These higher margins may come in part from the value customers attach to "one-stop shopping".

However, these popular explanations are inadequate. The empirical evidence on scale and scope economies in banking is far from conclusive. It is questionable whether these economies are large enough to justify banking consolidation and scope expansion (see Berger (1997) and Berger, et al. (1993)). Moreover, ample research in corporate finance points at the existence of a "diversification discount". On average diversification does seem to destroy value. There is also evidence that improvements in operating performance and stock returns have been experienced by firms that have refocused (see John and Ofek (1995) and Comment and Jarrell (1995)). Therefore, the important question is why are there so many mergers and acquisitions taking place in the industry?

This study aims to address this question and other related issues. I will examine the existing empirical evidence on scope and scale economies in banking. A recent survey paper by Berger, Demsetz and Strahan (1999) is of substantial help. An important question is whether the existing empirical evidence can be used to explain the current consolidation wave. While I will conclude that the existing evidence is of some value, I doubt that it is really helpful for understanding the current restructuring in banking. Several issues play a role here. Apart from econometric and sample-selection issues, and possibly fundamental changes in underlying "state-variables", the important issue is that strategic considerations are the driving force behind the current consolidation wave. As I will argue, these considerations may have little to do with true scale or scope economies. Rather learning, first-mover advantages and strategic advantages of market power and associated "deep pockets" may explain the current consolidation wave. Strategic positioning might be the rule of the game, and be an optimal response to the uncertainties and rapid (and unpredictable) changes facing financial institutions today. Consolidation might then be an evolutionary phenomenon and be followed by a new type of repositioning when the uncertainties become more manageable. This analysis follows recent co-authored work with Todd Milbourn and Anjan Thakor (Boot, Milbourn and Thakor (1999)).

The organization of this study is as follows. In Section 2, I start out with a discussion of the growing research in the field of financial intermediation. This research - mainly theoretical in nature – sheds light on the costs and benefits of bank funding vis-à-vis direct funding in the financial market. While primarily focused on the funding role of banks and financial markets, it provides valuable insights into the economics of banking. These insights are of great importance for understanding the role of financial institutions in the future. Subsequently, Section 3 discusses the extensive empirical literature on scale and scope economies in banking. Here, I will particularly look at scale and scope considerations that may be important in the future. An important issue in this context is that the literature needs to differentiate more between the various activities (services and products) of financial intermediaries. Section 4 introduces strategic considerations, in particular, the importance of *strategic positioning*; see the discussion above. Finally, in Section 5, I offer some thoughts on the importance of political considerations and the future path of the ongoing restructuring.

See Shaffer and David (1991), Cornett and Tehranian (1992), Mester (1992), Mitchell and Onvural (1996) and Clark (1996).

# 2. FUNDAMENTALS: THE ECONOMICS OF BANKING

# 2.1 Traditional versus Modern Banking

Traditional commercial banks hold non-marketable or illiquid assets that are funded largely with deposits. There is typically little uncertainty about the value of these deposits which are often withdrawable on demand. The liquidity of bank liabilities stands in sharp contrast to that of their assets, reflecting the banks' *raison d'être*. By liquifying claims, banks facilitate the funding of projects that might otherwise be infeasible.

The banks' assets are illiquid largely because of their information sensitivity. In originating and pricing loans, banks develop proprietary information. Subsequent monitoring of borrowers yields additional private information. The proprietary information inhibits the marketability of these loans. The access to information is the key to understanding the comparative advantage of banks. In many of their activities banks exploit their information and the related network of contacts. This relationship-oriented banking is a characteristic of value-enhancing financial intermediation. The relationship and network orientation does not only apply to traditional commercial lending but also to many areas of modern banking.

One might be tempted to interpret modern banking as transaction-oriented. So does an investment bank (IB) – generally considered a prime example of modern banking – facilitate a firm's access to public capital markets. The IB's role could be interpreted as that of a broker; i.e. matching buyers and sellers for the firms' securities. In this interpretation IBs just facilitate transactions, which would confirm the transaction orientation of modern banking. The IBs' added value would then be confined to their networks, i.e. their ability to economize on search or matching costs. As a characterization of modern banking, this would describe their economic role too narrowly. IBs do more. They – almost without exception – *underwrite* those public issues, i.e. absorb credit and/or placement risk. This brings an IB's role much closer to that of a commercial bank engaged in lending; the processing and absorption of risk is a typical intermediation function similar to that encountered in traditional bank lending.

In lending, a bank manages and absorbs risk (e.g. credit and liquidity risks) by issuing claims on its total assets with different characteristics then those encountered in its loan portfolio. In financial intermediation theory this is referred to as *qualitative asset transformation* (see Greenbaum and Thakor (1995)). Underwriting of an IB can be interpreted analogically; risk is (temporarily) absorbed and is channeled through to the claim holders of the IB. The role of IBs is therefore more than just purely brokerage. Underwriting requires information acquisition about the borrower which is supported by a relationship orientation. A relationship orientation will therefore still be present in investment banking, both in the direction of investors ("placement capacity") and towards borrowing firms. Thus, characterizing financial market funding as transaction-oriented and bank lending as relationship-oriented is too extreme. What will be true, however, is that in investment banking relationships depend much less on local presence.

# 2.2 Are Bank Loans Special?

Some see public capital market financing as a potentially superior substitute for bank lending. This, however, is unwarranted. Bank lending has distinctive comparative advantages. In particular, it may support enduring close relationships between debtor and financier that may mitigate information asymmetries. This has several components. A borrower might be prepared to reveal proprietary information to its bank, while it would have never disseminated this information to the financial markets (Bhattacharya and Chiesa (1995)). A bank might also be more receptive to information because of its role as enduring and dominant lender. This amounts to observing that a bank might have better incentives to invest in information acquisition. While costly, the substantial stake that it has in the funding of the borrower, and its, hopefully, enduring relationship – with the possibility of information reusability over time – increase the value of information.

The bank-borrower relationship is also less rigid than those normally encountered in the financial market. The general observation is that a better information flow facilitates more informative decisions. In particular, relationship finance could allow for more flexibility and possibly value-enhancing discretion. This is in line with the important ongoing discussion in economic theory on rules versus discretion, where discretion allows for decision making based on more subtle – potentially non-contractible – information. Two dimensions can be identified. One dimension is related to the nature of the bank-borrower relationship. In many ways, it is a mutual commitment based on trust and respect. This allows for *implicit* – non-enforceable – long-term contracting. An optimal information flow is crucial for sustaining these "contracts". Information asymmetries in the financial market and the non-contractibility of various pieces of information may rule out long-term access to alternative capital market funding sources as well as *explicit* long-term commitments by banks. Therefore, both bank and borrower may realize the added value of their relationship, and have an incentive to foster their relationship.

The other dimension is related to the structure of the explicit contracts that banks can write. Bank loans are generally easier to renegotiate than bond issues or other public capital market funding vehicles. The re-negotiation allows for a qualitative use of flexibility. Sometimes this is a mixed blessing because banks may suffer from a soft-budget constraint (the borrowers may realize that they can renegotiate ex post, which could give them perverse ex ante incentives). In reality, bank loans therefore often have *priority*. With priority a bank may strengthen its bargaining position and thus become tougher.<sup>5</sup> The bank could then credibly intervene in the decision process of the borrower when it believes that its long-term interests are in danger. For example, the bank might believe

<sup>2</sup> Diamond (1984) introduces intermediairies as delegated monitors. See Chan, Greenbaum and Thakor (1986) for a discussion on information reusability, and James (1987) and Lummer and McConnell (1989) for empirical evidence. For a nice illustration supporting the special role of bansk, see Berlin (1996).

<sup>3</sup> See e.g. Simon (1936) and Boot, Greenbaum and Thakor (1993).

<sup>4</sup> Mayer (1988) and Hellwig (1991) discuss the commitment nature of bank funding. Boot, Thakor and Udell (1991) address the credibility of commitments. Schmeits (1997) formally considers the impact of discretion (flexibility) in bank loan contracts on investment efficiency.

<sup>5</sup> See Dewatripont and Maskin (1995) on the issues of soft-budget constraints. Diamond (1993), Berglöf and Von Thadden (1994), and Gorton and Kahn (1993) address the priority structure.

that the firm's strategy is flawed, or a restructuring is long overdue. Could the bank push for the restructuring? If the bank has no priority, the borrower may choose to ignore the bank's wishes. This is because the borrower realizes that the bank cannot enforce its demands. The bank could threaten to call the loan, but the borrower – anticipating the dreadful consequences not only for himself but also for the bank – realizes that the bank would never carry out such a threat. However, when the bank has priority, the prioritized claim may insulate the bank from these dreadful consequences. It could now *credibly* threaten to call the loan, and enforce its wishes upon the borrower. This then identifies an important advantage of bank financing: *timely intervention*.<sup>6</sup>

These observations highlight the complementarity of bank lending and capital market funding. Prioritized bank debt facilitates timely intervention. This feature of bank lending is valuable to the firm's bondholders as well. They might find it optimal to grant bank debt priority over their own claims, and in doing so delegate the timely intervention activity to the bank. Consequently, the borrower may reduce its total funding cost by accessing both the bank-credit market and the financial market.

The overall conclusion is that bank lending potentially facilitates more informative decisions based on a better exchange of information. While not universally valuable, this suggests a benefit of relationship banking.<sup>8</sup>

# 2.3 Securitization: a Threat to Bank Lending?

Securitization is an example of a financial innovation – or an innovation in funding technology – that suggests a potential gain of (transaction-oriented) markets at the expense of bank lending. Is this true? Let's first evaluate the economics of securitization.<sup>9</sup>

Securitization is a process whereby assets are removed from a bank's balance sheet. Asset-backed securities rather than deposits would then fund dedicated pools of bank-originated assets. Securitization is an example of unbundling of financial services. More specifically, banks would no longer fund those assets, instead the investors buying the asset-backed securities would provide funding. As we will emphasize, securitization does not signal the demise of banks, even if it becomes an economically important innovation (and thus substantially reduces the banks' on-balance sheet assets). To see this point, one needs to analyze the traditional lending function in some detail.

The lending function can be decomposed into four more primal activities: origination, funding, servicing and risk processing. Origination subsumes screening prospective borrowers and designing and pricing financial contracts. Funding relates to the provi-

<sup>6</sup> One could ask whether bond holders could be given priority and allocated the task of timely intervention. Note that bond holders are subject to more severe information asymmetries and are generally more dispersed (i.e. have smaller stakes). Both characteristics make them ill-suited for an 'early' intervention task.

The bond holders will obviously ask to be compensated for their subordinated status. This – ignoring the timely intervention effect – is "a wash". In other words, the priority (seniority) or subordination features can be priced out. That is, as much as senior debt may appear cheaper (it is less risky), junior, or subordinated debt, will appear more expensive.

<sup>8</sup> See e.g. Petersen and Rajan (1994) and Houston and James (1995) for empirical evidence.

<sup>9</sup> Gorton and Pennachi (1995) provide an economic rationale for bank loan sales and securitization. See also Boot and Greenbaum (1995).

sion of financial resources. Servicing involves the collection and remission of payments as well as the monitoring of credits. Risk processing alludes to hedging, diversification and absorption of credit, interest rate, liquidity and exchange-rate risk. Securitization decomposes the funding activity; banks would no longer fund securitized assets.

The economics of securitization dictates that the originating bank *credit enhances* the issue. Credit enhancement is typically achieved through the provision of excess collateral or with a letter of credit. Effectively this means that the originating bank continues to bear part of the consequences (losses) if the securitized assets do not perform. The credit enhancement reduces the riskiness of the asset-backed claims from the investors' perspective, but, more importantly, it addresses conflicts of interest rooted in the originating bank's proprietary information. With private information in possession of the originating bank, the market requires assurances that the bank will truthfully reveal the quality of the assets it seeks to sell. As with a warranty in product markets, credit enhancement discourages misrepresentation by requiring the originator to absorb a portion of the losses owing to default. Similarly, credit enhancement signals the market that the originator will perform a thorough credit evaluation and an undiminished monitoring effort. Credit enhancement therefore reduces the information sensitivity of securitized claims by enhancing their marketability.<sup>10</sup>

Securitization could lead to a *reconfiguration* of banking. But even with widespread securitization the incremental value of banks would largely be preserved.<sup>11</sup> They would originate and service assets, while also processing the attendant risk in order to sustain these activities. Banks would therefore continue to screen and monitor borrowers, design and price financial claims, and provide risk management services.

How important will securitization become? We can only give a very tentative answer. So far, securitization barely exists in Europe. In the US securitization has spread rapidly in the last decade but mainly for car loans, mortgages and credit-card receivables. The standardization and modest size of these credits allows diversification of idiosyncratic risks upon pooling. Private information distortions – as discussed above in the context of credit enhancement – are thought to be less severe for these standardized credits. What does this imply for the larger, more customized and heterogeneous commercial loans? These tend to be more information sensitive. Their quality is therefore more dependent on the rigor of initial screening and subsequent monitoring. Hence, the pooling of commercial loans does less to dissipate their information sensitivity, attenuating the benefits of securitization.

These considerations, however, do not preclude the securitization of business credits. They merely elevate the cost. For example, with more information-sensitive assets, the originating bank may need to retain a larger portion of the credit risk; credit enhancement becomes more important. If the information sensitivity is too severe, credit enhancement, short of total recourse may not overcome the private-information

<sup>10</sup> The reputation of the originating bank will be equally important. Moreover, accreditation by credit rating agencies could also add to the marketability of the securitized claims.

See also Boyd and Gertler (1994). They argue that banks have not lost importance. They argue that a substitution from on-balance sheet to off-balance sheet banking may have (falsely) suggested a shrinking role for banks. As in the description of securitization in the text, much of the bank's value added in the primal activities would be preserved.

problem. Thus, the potential advantages of securitization would largely be lost, and traditional bank lending would continue to dominate. However, for an increasing array of moderately information-sensitive assets, securitization might become the preferred intermediation technology. As our discussion of the economics of securitization suggests, banks even then continue to be indispensable for most of the primal activities that were previously combined together in bank lending. More importantly, the comparative advantage of banks rooted in proprietary information about their clientele would be preserved.

# 2.4 Is Relationship Banking at Risk?

Relationships may facilitate a continuous flow of information between debtor and creditor which could guarantee a smooth access to funding. Banks' comparative advantages are often rooted in these relationships. Many believe that a competitive environment may threaten relationships. Borrowers might be tempted to switch to other banks, or to the financial market. In particular, increased credit market competition imposes constraints on the ability of borrowers and lenders to inter-temporally share surpluses (Petersen and Rajan (1995)). When parties anticipate a shorter expected life-span of their relationships they may respond by reducing their relationship-specific investments. More specifically, anticipated shorter relationships inhibit the reusability of information, and thus diminish the value of information. Banks may then find it less worthwhile to acquire (costly) proprietary information, and relationships suffer. Paradoxically, shorter or weaker relationships actually become a self-fulfilling prophecy.

These arguments highlight the negative spiral that may undermine relationship banking. An important observation is that this negative spiral might be self-inflicted. While competitive banking challenges relationships, the bankers' response - cutting back on information acquisition - may actually damage relationship banking most.

Borrowers, however, face an equal challenge: how to benefit from competitive pricing without jeopardizing the benefits of relationships (see Rajan (1992))? This is the relationship puzzle. The relationship puzzle has no obvious solution. Relationships may foster the exchange of information, but may simultaneously give lenders an information monopoly and undermine competitive pricing. Transaction-oriented finance, however, may give little incentive to acquire information but is potentially subjected to more competition. There might be no winners in this process; e.g. transaction-oriented finance may not be feasible where relationship-oriented finance retreats. More specifically, markets for transaction-oriented finance may fail when problems of asymmetric information are insurmountable. This argument is used by some to highlight the virtues of (relationship-oriented) bank-dominated systems (e.g. Germany and Japan) vis-à-vis market-oriented systems.<sup>13</sup>

<sup>12</sup> The informational monopoly on the 'inside' lender's side may be smaller if a borrower engages in multiple banking relationships. This would mitigate the possibilities of rent extraction by informed lenders and induce more competitive pricing (see Sharpe (1990) and also Petersen and Rajan (1995).

<sup>13</sup> A fascinating academic literature is emerging on the design of financial systems. See Allen (1993), Allen and Gale (1995) and Boot and Thakor (1997). One objective of this literature is to evaluate the pros and cons of bank-dominated and financial market-dominated systems.

As discussed in the preceding subsections, bank lending, securitization of loans and underwriting of public capital market issues may all benefit from a relationship orientation. The distinction between relationship-oriented finance and transaction-oriented finance, or between bank-dominated systems and market-oriented systems, may therefore be less well-defined than it appears. What might be true is that a bank-dominated system invites oligopolistic behavior such that competition is contained (and relationships preserved) while a market-dominated system suppresses competition less.

A less competitive financial system may thus preserve relationships more. Competition threatens relationships, but it may simultaneously elevate the importance of relationships as a distinct competitive edge. This is the *relationship paradox*. A relationship orientation can alleviate competitive pressures. Thus, a more competitive environment should encourage banks to become client-driven, and customize services. Since a relationship orientation may earn banks a substantial added-value, banks could then isolate themselves from pure price competition.<sup>14</sup>

# 3. Scale and Scope Issues in Banking

Scale and scope economies are often cited as one of the main reasons behind the current merger and acquisition wave in banking. Are scale and scope economies present? And could they rationalize the current restructuring in the industry? Scale and scope economies in banking have been studied extensively. In general, the empirical evidence cannot readily identify substantial economies of scale or scope. Scale economies could not be found beyond a relatively small size of banks as measured by total assets (i.e., beyond \$ 100 million up to \$ 10 billion in total assets), see Table 1. Only recently have some studies succeeded in showing some economies of scale at a level of total assets up to \$ 25 billion. Similar results were obtained for scope economies. These results seem hard to reconcile with the perceived wisdom of bankers and the observed mega-mergers.

Most empirical researchers in the area of industrial organization will acknowledge that scale and scope economies are difficult to measure. So, at best, very modest conclusions could ever be drawn from these empirical studies. With this in mind, we can start analyzing the evidence. A first observation is that the inconclusive results are not really surprising. Inefficiencies in managing larger organizations may mitigate possible scale and scope benefits. This would be in line with the sizable literature on the "diversification discount". A complication is also that increasing scale and scope may facilitate market power and thus elevate profitability in *absence* of scale and scope economies. This

<sup>14</sup> Boot and Thakor (1999) develop this intuition further. They show that competition may indeed induce banks to divert resources to relationship-specific activities. In their model banks choose between 'passive' transaction lending and more intensive relationship lending. Transaction lending competes head-on with funding in the financial market. Their key result is that as interbank competition increases, banks make more relationship loans, but each has lower value-added for borrowers, relative to transaction loans. Capital market competition reduces relationship lending (and bank lending shrinks), but each relationship loan has greater value-added for borrowers. In both cases, welfare increases for some borrowers but not necessarily for all.

Subject	Main findings
Market power analysis:	
effect on prices and profits	
→ Static	<ul> <li>Higher rates on small business loans, lower deposit rates</li> </ul>
	• Effect on deposit rates has become less in the 90's
	Deposit rates sticky (show downward rigidity)
	• Multi-state BHC's charge higher fees to retail customers
	Small effect of concentration on bank profits
	• Most profitable banks are <i>not</i> in most concentrated markets
→ Dynamic	• Downward effect on deposit rates if related to increase in con-
(effect of M&A)	centration
	<ul> <li>Effect on profitability ratio's mixed, but possibly positive</li> </ul>
	• Event studies show mixed results on combined value of target
	and acquirer: but focus (both geographic and activity) adds
	value. International mergers more profitable vis-à-vis domest
7307.4	US mergers
Efficiency consequences	
→ Static	• Main focus on cost-control: scale economies disappear
	between \$ 100 million and \$ 10 billion in total assets
	<ul> <li>Scope economies studies find similar results to scale economies studies</li> </ul>
	• Recent 1990's studies find greater potential of scale econo-
	mies (up to \$ 25 billion in total assets, but possibly beyond)
	<ul> <li>Potential for scale, scope and product mix efficiencies in</li> </ul>
	managing risk, particularly diversification benefits of geo-
	graphical expansion
	Combining bank and non-bank (insurance) activities has
	mixed effect on total risk
	mixed circle on total risk
→ Dynamic	• Cost efficiency (controlled for market power effects) shows
,	little improvement
	• Efficiency gains in US mega-mergers, some for large in-
	market mergers
	• Some diversification benefits: higher proportion of loans per
	dollar of capital (at expense of securities holdings)
Source: Berger, Demsetz and St	

effect might be less important in inter-(geographic) market mergers. Moreover, alternative distribution network (e.g., direct banking) and the proliferation of financial markets may have reduced the effective market power of locally concentrated financial institutions. This points at a more general issue: the level of concentration may no longer be a good proxy for the (non-) competitiveness of a market. What more can be said?

Several other qualifications should be made. First, most studies concern the US. Contrary to banking in many other countries, US banking has historically been quite fragmented.<sup>15</sup> The mergers and acquisitions that were included in most studies (mostly dating back to the 70's and 80's) took place in an environment where severe constraints existed on the type and geographic dispersion of activities. It is conceivable that these restrictions made it difficult to benefit from scale and scope economies (see also Calomiris and Karceski (1998)).

Second, the level of aggregation in most studies may obscure benefits to scale and scope. In particular, we should look at what type of mergers and acquisitions involve scale and/or scope benefits. For example, Flannery (1999) points at recent research that suggests that mergers with both a geographic and activity focus are most value enhancing. <sup>16</sup> Similarly, in analyzing scope and scale issues we should focus on the type of activities. What are the scale economies in each activity? And what product-mix offers true scope economies? <sup>17</sup> Some of these and other concerns are summarized in Table 2.

Subject	Issues	
Market power analysis: effect on prices and profits → Static	• Is concentration the right measure? What about contestability of markets?	
→ Dynamic (effect of M&A)	<ul> <li>Combined effect of market power and efficiency changes difficult to disentangle</li> <li>Profitability ratio's affected by market power</li> <li>Cost ratio's via costs of deposits linked to market power. Operational costs affected by relative importance of deposits versus purchased funds</li> <li>Event studies affected by "signaling". That is, the immediate effect of a merger announcement on stock prices incorporates all types of changes in expectations</li> </ul>	
Efficiency consequences	,	
→ Static	<ul><li> How to measure scope economies</li><li> Lack of data points for mega-institutions</li></ul>	
→ Dynamic	<ul> <li>Little differentiation between type of merger and/or type of activities</li> </ul>	

<sup>15</sup> This is not really surprising. U.S. banks face(d) substantial regulatory constraints on their activities concerning both the type of their activities (e.g. banks could engage in commercial banking or investment banking, not both) and their location (e.g. limits on interstate banking). More recently, however, regulatory constraints have become less binding. This undoubtedly partially explains the surge in mergers and acquisitions.

<sup>16</sup> An important issue is whether this only points at market-power benefits (see also Table 1) or whether also true efficiency gains could be at work.

<sup>17</sup> Surprisingly, this type of research is yet hard to find. A lot of research has been done on potential conflicts of interest in universal banking. To some extent, this is activity specific (investment banking versus commercial banking). However, this research is of very limited interest because it ignores the question of complementarity between activities. This is not really surprising because the literature is solely motivated by the obscure Glass-Steagall regulation in the U.S. (see Kroszner and Rajan (1994) and Puri (1996)).

These observations offer yet little proof for true scale and scope economies. I see the following five primary sources of scale and scope economies (see also Canals (1994)):<sup>18</sup>

- i. Information technology related economies;
- ii. Distribution-network related benefits (strengthened by IT developments);
- iii. Marketing/brand name and reputation related benefits;
- iv. Financial-innovation related economies;
- Benefits of diversification.

The first source, information technology, is potentially of great importance. Most of the existing studies on scale and scope economies involve data that precede the information technology revolution. It is likely that recent information technology developments facilitate a much more efficient and effective utilization of information over ranges of services and customers. That is, client-specific information may allow for scope economies and facilitate a competitive advantage to financial institutions that can offer a range of services to their clientele. Similarly, possibilities for reusability of information across customers may have increased. Also, information technological developments may help facilitate differentiation of products and services. Together with the sizable investments projected in information technology, scale and scope benefits may have become more important. The implication is also that sizable investments in information technology are needed to truly benefit from scale and scope economies. This relates also to the second source: distribution network related benefits may be rooted in information technology developments. In particular, IT developments may facilitate scale economies offering gains in running a sizable distribution network.

The third source of scale and scope economies is linked to marketing and reputation. Marketing expenses involve substantial fixed costs. This suggests some economies of scale. Also, scope benefits may be present in the joint marketing of products to customers. Brand image is partially marketing related but is also linked to the notions of "trust", "reputation" and "confidence". These notions play an important role in the financial services industry. Increasingly, financial service providers offer services that crucially depend on their reputation. For example, the growing importance of off-balance sheet claims puts great emphasis on the ability of financial institutions to honor these contingent liabilities. Also, under certain conditions, increasing scale and scope allows financial institutions to capitalize more on their reputation. That is, a wider scope (or scale) may help a financial institution "to put its reputational capital at work" (see Boot, Greenbaum and Thakor (1993)).

The next source of potential scale and scope economies is financial innovation. Financial innovation as a source of scope and scale economies is a two-edged sword. Some suggest that larger institutions are less likely to innovate due to the inherent

<sup>18</sup> Observe that some of these sources of scope and scale economies are inter-related.

<sup>19</sup> In Section 2.4, I have discussed the effect of increasing competition on the reusability of information. The conclusion there was that bank-borrower relations may have shortened in duration and hence reduced the reusability of information, but that simultaneously investing in information acquisition may have gained in importance for competitive reasons.

bureaucracy. This might be true but this is a governance issue. Ceteris paribus, larger institutions could better recoup the fixed costs of financial innovations. Innovations could be marketed to a larger customer base and/or introduced in a wider set of activities. For financial innovations scale and scope might be particularly important given the rapid imitation by competitors. Only for a short period of time does a true competitive advantage exist. A wider scope and larger scale may help recoup the fixed costs in this short period of time.

The last potential source of scale and scope economies is the benefit of diversification. From a corporate finance perspective, this benefit is controversial. After all, investors (shareholders) could diversify and why would a financial institution itself need to do this? But, nevertheless, low variability of returns is considered very important in banking.

My assessment is that scale and scope economies are present. However, the complexity of running the larger organizations needed to exploit these are far from trivial. I would expect, therefore, that the empirical evidence in a cross-section of financial institutions will continue to be mixed. In terms of observed bank strategies this will translate into the co-existence of specialized and more universal financial institutions.

# 4 SCOPE AS A STRATEGIC ADVANTAGE

#### 4.1 General Framework

The explanation developed in this section is that strategic uncertainty about future exploitable core competencies may dictate broadening of scope. The basic idea is as follows. Suppose a bank knows that – perhaps due to deregulation – it can participate in a non-banking market at some time in the future. The problem is that this is a new market for the bank, so the bank is highly uncertain about whether it has the skills to compete effectively in that market. It has two choices. It can wait until that future time to find out whether it has the capabilities and "core competencies" (as defined by Hamel and Prahalad (1990)) for this new market. Or it can enter the market "early" and discover what its skills are prior to making costly resource allocation decisions. The advantage of the second approach is that it permits the bank to "experiment" with a new business and learn whether it has the skills to compete in that business. This learning permits better decisions when competition commences. In particular, having better knowledge about its own skills allows the bank to be more aggressive in its output decisions and gain market share when it knows that its skills are superior to those of its competitors, and to exit the market when its skills are inferior.

We can explain scope expansion as the bank reserving the right to play in a variety of "new" activities. By making incremental investment today, the bank puts itself in a privileged position through the acquisition of superior information by learning. This allows

the bank to wait until the environment becomes less uncertain before determining whether to compete in the new market and if so, how aggressively; see also Courtney et al. (1997) for the link between strategy and uncertainty. In a recent paper (see Boot, Milbourn and Thakor (1999)) a formal model of banking has been developed that formalizes these ideas and incorporates scope as a potential competitive advantage. The framework in that paper is as follows. It starts out with a banking sector with narrowly defined existing activities and asks whether banks should expand into a "new" activity. A key feature of the analysis is that there is strategic future uncertainty about the demand for this new activity, i.e. the activity has prospects only in the long run and demand may not materialize. The bank must decide whether or not to expand in this activity, and if so, whether to enter early or late. Early entry is costly because the activity becomes important only later. Demand may not materialize, and entering early requires investments to be made prior to the resolution of demand uncertainty. Moreover, the scope expansion associated with investing in strategic options could reduce the competitiveness of existing operations (say due to dilution of focus). However, early entry offers potential strategic advantages. In particular, early entry could lead to the discovery of skills that would allow for a more efficient delivery of the new activity and hence make the commercial bank a more credible competitor once the prospects of this activity become clear.

The question is: when will the benefits of early entry outweigh the costs? The uncertainty about skills plays a key role here. If this uncertainty is substantial, early entry may be beneficial. The other key factor is the competitive environment of the banking sector, and the anticipated competition for the new activity. Suppose that the new activity can also be offered by a specialized provider (a "boutique" specializing in this activity). If the commercial bank enters (early or late), we could consider the market for this activity as a Cournot duopoly game. Early entry is beneficial because the bank would then learn its skills in the new activity. This allows the bank to compete more aggressively when it has favorable information about its skills and more cautiously when it has poor information about its skills. The benefits of early entry also depend on how likely it is that a specialized provider will come along. Whether early entry is optimal will thus crucially depend on the competitive environment.

# 4.2 Importance of the Competitive Environment

Also the competitive environment of the existing banking activities enters the analysis because of the investment and risk associated with early entry in the new activity. If banking is sufficiently competitive, banks would be unable to absorb the investment and risk that come with early entry. An immediate implication is that investments in strategic options and thus the adoption of broader, less-focused strategies will be observed in less competitive industries, whereas firms in competitive industries will embrace more focused strategies. This could explain why Continental European banks generally follow broad strategies. Their local market power allows them to afford the "widening of scope" strategy and benefit from its potential future strategic advantages.

Moreover, as stated earlier, the anticipated future competitive environment for the new activity matters as well. If the bank anticipates facing little or no competition in this activity in the future, early entry – with its accompanying cost of focus dilution – is unnecessary because a competitively unchallenged bank can operate successfully in this market without the benefit of early skills discovery. At the other extreme, when the anticipated competition for the new activity is very intense (perhaps due to many potential future competitors), early entry may once again be sub-optimal. The analysis in Boot, Milbourn and Thakor (1999) thus leads to the prediction that *moderate* anticipated competition in the new activity facilitates early entry. In Table 3 I have summarized the main insights.

The analysis shows that the competition in the bank's current activity, the competition it anticipates in the future in a new activity, and the degree of uncertainty about future skills needed for this new activity combine to lead to predictions about early entry and hence optimal scope. Scope expansion is seen to be optimal when there is high strategic uncertainty, moderate competition expected in the new activity, and low-to-moderate competition in the existing activity. In this context also the benefits of consolidation could be explored.

Anticipated competitive environment in the strategic option (new activity)	Current competitive environment in existing bankin activities	
,	Little competition	High competition
Little competition	Narrow	Narrow
Medium competition	Broad	Narrow
High competition	Narrow	Narrow

Now assume that there are multiple competing banks at the outset. Consider two of these banks contemplating a merger. The question before them is whether consolidation (merging) today gives them a competitive advantage in undertaking the new activity tomorrow. Boot, Milbourn and Thakor (1999) show that the benefit of such a merger is twofold. First, merging may help create "deep pockets" making investments in strategic options more affordable. Second, merging leads to *diversification* in skills. The two banks jointly have a higher probability of having the right skills to compete in the new activity than each has separately. While both effects may work in concert in many mergers, either effect by itself could rationalize a merger. It should be clear that these effects have little significance in an environment without strategic uncertainty. The analysis thus predicts greater consolidation in industries with more strategic uncertainty.

# 4.3 Is Strategic Uncertainty Special to Financial Services?

Why does this model of strategic uncertainty fit banking so well? There are at least three reasons. First, deregulation in financial services is opening doors to new activities for banks at a rate that is unprecedented since the Great Depression. Second, the swirling tides of technological and regulatory changes are generating a level of uncertainty about the skills needed to operate successfully in the future that is perhaps greater in banking than in any other industry. Lastly, banks have traditionally faced limited competition in their home markets. This has created "deep pockets" across the industry, and serves to support the broad strategies observed in banking. In particular, the combined validity of these arguments makes the model especially suited for the banking industry.<sup>20</sup>

The precise interpretation of the model of strategic uncertainty could also be amended to fit banking even better. In particular, we could interpret the bank's problem as the bank not knowing what combination of activities will give it a competitive edge in the future. Now we would not necessarily be talking about a bank entering new activities but possibly about the bank entering "old" activities that it traditionally chose to abstain from. Early entry, or better, choosing a wider set of activities would let the bank discover what activities optimally fit together. This interpretation would be fully consistent with the analysis in Boot, Milbourn and Thakor (1999).

# 5 FINAL THOUGHTS

# 5.1 Relevance of Strategic Options

Let me highlight a broader interpretation of the strategic option explanation in Boot, Milbourn and Thakor (1999) in the context of the restructuring of the European financial services industry. Bankers strongly belief that a strong position in the home market is crucial for a successful expansion in foreign markets. Generally, this seems to be the case. I will give a few examples. Belgian banks have weak foreign operations: the Belgian political situation (the split between the French and Dutch speaking regions) did *not* allow for strong domestic powerhouses. Swedish and other Scandinavian banks suffered from a financial crisis in the late eighties, early nineties inhibiting their foreign aspirations. Spanish banks started to consolidate "late". Their foreign aspirations seem limited, but some (e.g. Santander) choose to expand in the South American market (with some success). The Dutch, Swiss and – to a lesser extent – German powerhouses have strong franchises in their home markets and may well be the only Continental European banks with credible foreign aspirations.<sup>21</sup>

<sup>20</sup> However, this does not limit the applicability of our model. In fact, any industry with similar characteristics to those given above – such as pharmaceuticals or telecommunications – is amenable to the interpretations and insights provided.

<sup>21</sup> I deliberately leave out the U.K. banks whose prospects are mixed, but definitely have a strong potential. One of my more favorable consolidation scenario's would involve cross-border mergers of Dutch and British institutions.

In the interpretation of the Boot, Milbourn and Thakor (1999) paper, strength in the home markets allows banks to invest in strategic options. An important one is investment banking (IB). While Continental European banks traditionally dominated the *domestic* activity in investment banking, they have had a more marginal role in IB in foreign markets and now also face severe competition in their domestic IB activity. Many of them feel that a presence in IB *might* be important for their existence as powerful banks in the future. They are willing to accept – for the moment at least – relatively low returns on those activities. The potential but uncertain vital role of these activities in the future defines them as a strategic option.

From a shareholder value maximization point of view, investing in strategic options might be desirable (if at least *potentially* sufficiently lucrative). However, how can we distinguish the "strategic option" explanation from a simple managerial entrenchment explanation? That is, managers (and governments!) may just want powerful institutions for their own sake. Distinguishing between those explanations is difficult. As the experiences of the French bank Credit Lyonnais teach us, banks that are not accountable, and even worse, operate as playground for government-appointed crownies are unlikely to follow value maximizing strategies. Growth then becomes a managerial entrenchment strategy.

Banks themselves are *ambivalent* too. The struggle of European banks in investment banking is a perfect example: while some see it as a strategic option, others (NatWest and Barclays) have retreated, albeit not really voluntarily! We see a similar ambivalence vis-àvis insurance activities. Some think that it is perfectly complementary to commercial banking activities (e.g. to economize on the distribution network) and have embraced it – see ING and Credit Suisse-Winterthur – others choose to stay out of it (e.g. AEGON).

Nevertheless, as attested to in Section 3, I do believe that scale and scope economies are present in banking. I am tempted to subscribe to Calomiris and Karceski's (1998) notion of "client based universal banking strategies" where a bank seeks to optimally service its client base by choosing the appropriate products, services and geographical presence. Simultaneously, however, I observe that much of the consolidation in European banking is defensive. Consolidation has increased scale and scope mainly in domestic markets and facilitated local market power. Size has reached proportions that seriously questions whether anymore benefits of scale are present. And is the wider scope truly sustainable? Will it not cause dilution and loss of focus? If so, it will clearly limit the desirability of investing in strategic options. Instructive in this respect is that the operations of European universal banks in foreign markets (where they face more competition) are generally well-focused.

# 5.2 Political Considerations: Is National Identity Important?

I will discuss political considerations in the context of differences between the banking industry in Europe and the US. In both, government interference has been quite dominant. Consolidation has been observed in Europe already for some time and in the US

more recently. But is there really something to be learned from the European experience, or from the American experience for that matter? And are experiences across continents and countries comparable? In a recent paper on corporate governance, Jon Macey and I describe one of the big fallacies in comparing models of corporate governance. We say "the rhetoric about corporate governance appears to us to be divorced from reality in that two paradigmatic governance systems – the German model and the US model – are not really models at all. [...] The German model is not even a model for the rest of Europe" (Boot and Macey (1999)). I feel the same in the context of discussing European or American trends. Of course, some obvious lessons can be learned. For example, the more consolidated financial sector observed in Europe gives a clear hint about what can be expected in US banking when regulatory constraints become less binding (as they have become in recent years). But what can be said more fundamentally about the *diverse* European experience? And what can be learned from the US experience?

Let me first focus on the arguable superficial common European experience as it may relate to the US Europe and the US share some similar dynamics. In particular, the relaxation of constraints on interstate banking in the US is reminiscent of the European Union banking directives liberating cross-border banking. However, immediately, a fundamental difference between US and Europe surfaces. The domestic banks in Europe were – and are – protected as domestic flagships. A fundamental belief that financial institutions should not be controlled by foreigners has (so far) almost prevented any cross-border merger.

The political dimension is at the root of this. Even in countries that do not have any direct interference by governments in banking operations and where banks are considered truly commercial enterprises (and have generally been successful, e.g. ABN AMRO and ING in The Netherlands), the political dimension is important. Central banks, ministries of finance and the banks operate in close concert. This is not very surprising: a very homogeneous group of executives is in charge of the financial sector, central bank and government ministries guaranteeing a clear national identity of domestic institutions. In countries with explicit government involvement (e.g. France and Italy), foreign control over domestic institutions is even more unlikely unless banks become so inefficient and weak that involvement of foreigners becomes almost inevitable. To some extent this is happening. For example, in the bidding war for the French bank CIC, ABN AMRO was favored by some because of its excellent track record vis-à-vis competing French bidders.

The primary response to the liberating E.U. directives has so far been defensive: domestic mergers are generally encouraged to protect national interests. A case in point is Germany. Many have observed that banking in that country is surprisingly dispersed despite the powerful images of Deutsche Bank, Commerzbank and Dresdner Bank. Public policy definitely aims at protecting the interests of these powerful institutions, but the consolidation is played out mainly on the Länder-level (the separate states). Indeed, precisely at the level where the political dimension is at work. This is an important explanation for the regional consolidation in German banking.

So, wherever we look in Europe, I dare to conclude that the national flagship dimension has been of primary importance. Cross border expansion is rare and consolidation is primarily observed within national borders. For the US this gives little direction. Interstate expansion has been a driving force behind the consolidation in US banking. Politics does now seem to interfere little with interstate expansion. The political dimension in the US seems focused on the demarcations between commercial banking, investment banking and insurance. Powerful lobbies are successful in mobilizing (local) politicians and in this way have been able to obstruct major banking reform in the US Congress.

In other words, in both the US and Europe vested interests are at work. In Europe there are national authorities preserving their national flagships, in the US, powerful lobbies that seek to preserve traditional demarcations between financial institutions. These observations do not yet answer the question whether national (European) authorities are serving the interests of their constituencies when advocating national flagships. This is a different issue, and may have to be looked at in a game-theoretic context. If *other* countries are following these policies, an individual country may be well advised to follow the same policy. However, all would possibly be better off if none would follow a "national flagship policy". The ultimate success of such policy depends crucially on the efficiency of the financial institutions involved.

I would not dare to say that the national identity or ownership of financial institutions does not matter, albeit as free-market economist, I would choose to leave it open to market forces. As I have stated, individual countries may *sometimes* be well advised to preserve national flagships. However, I am not suggesting in any way that the state should subsidize its financial institutions. Rather it should facilitate their healthy growth and development. But favoritism should not always be excluded.

# 5.3 Value of Alliances

A potentially important alternative to consolidation is the concept of an alliance. This concept is underdeveloped in the context of banking. This is to some extent surprising. Banks did, and still do, engage in correspondent banking, particularly in the context of cross-border payment services. But correspondent banking is losing its importance. Why? With the advent of information technology international payment and settlement systems have become available (e.g. the emergence of TARGET and settlement systems like Cedel and Euroclear). These developments reduce the need for correspondent banking. More importantly, correspondent banks may have become competitors in the areas they were cooperating in before. For example, some banks seek to gain a competitive edge by offering proprietary cross border payment facilities. This points at an important consideration for the feasibility of correspondent banking, or alliances for that matter. It only works if the interests of the participating institutions are sufficiently aligned.<sup>22</sup> But why may alliances become important?

<sup>22</sup> Observe that correspondent banks could traditionally not enter each other's markets. Interests were therefore more readily aligned.

The main reason I see is that institutions that seek to capitalize on their local presence, with benefits rooted in strong relationships, cultural adaptation, etc., may need smooth access to some investment banking and asset management services that are scale intensive and globally, rather than locally oriented. It may well be possible to offer some of these services in an alliance (i.e. "to join forces") and still capitalize on customer-related synergies. While some will argue that a merger with these institutions would allow for a smoother operation of these services, I would like to take issue with this point of view.

First, for several reasons, cross border mergers may not (yet) be feasible. A focused alliance would create valuable linkages between institutions with immediate synergy benefits (see above), but could also allow the possibly nationally-rooted partners to "get to know" each other. In that sense, it would be an intermediate phase. As a second argument, the alliance-model based on asset management and/or specific investment banking activities may, if properly designed, combine the benefits of an integrated universal banking structure and a stand-alone type of organization of those activities. For example, the alliance partners all have a limited exposure to these activities which helps them maintain focus. In particular, "cultural" conflicts and distractions associated with trying to build up (or buy) an investment bank next to running the relationship-rooted regional bank are prevented.<sup>23</sup> Obviously, the alliance model does not come without cost. The important task is to define a clearly defined portfolio of activities that would become part of the alliance. This will not be investment banking in the broadest sense of the word. Similarly, in the case of asset management, the alliance partners would each maintain their own proprietary access to the customers but join forces in the asset management operations including research and back office activities. This would facilitate the information technology investments that allow the partners to capitalize on scale economies. Maintaining proprietary access by the individual alliance partners preserves customerrelated scope economies.

#### 5.4 The Future

There are powerful forces behind consolidation. I believe that consolidation is only partially driven by value-maximizing behavior. As I have emphasized, also the political dimension cannot be ignored. Consolidation in Europe and the US will continue. The regional expansion that characterizes much of the US merger wave will carry over to Europe. Cross-border acquisitions are coming, particularly with the arrival of the Euro and the European Monetary Union (EMU). The Euro and EMU are catalysts and will accelerate the integration of national financial markets, and induce a more pan-European view on financial services.<sup>24</sup>

<sup>23</sup> The experience of some western banks is that top managements gets fully distracted by the investment banking activities and spends disproportionally little time on the often more profitable non-investment banking activities.

<sup>24</sup> I have said little about moral hazard and regulation in light of the consolidation. For one reason there is broad agreement: certifying risk management processes is the primary task of supervision, and the EU has quite wisely allocated this task unambiguously to home country supervisors. This is something still to be addressed in the U.S. observing the multiplicity of regulators. The consolidation, and broadening of scope now also observed in the U.S. (e.g. Travelers and Citicorp), amplifies the importance of this issue.

The merger wave will continue and, in my view, become excessive (overshooting). Ultimately, it will lead to a level of consolidation in the industry that will partially be reversed and lead to downsizing and refocusing. Competitive pressures will force financial institutions to discover their true competitive advantages, and choose an optimal configuration of services and activities. The new demarcations between the financial institutions may be very different from the past. The process of restructuring will be a fascinating one. The current developments are just an interesting start.

# REFERENCES

- Allen, F., (1993), Stock Markets and Resource Allocation, in C. Mayer and X. Vives, eds., *Capital Markets and Financial Intermediation*, Cambridge University Press.
- Allen, F. and D. Gale, (1995), A Welfare Comparison of the German and US Financial Systems, *European Economic Review*, 39, 179-209.
- Berger, A.N., A.K. Kashyap and J.M. Scalise, (1995), The Transformation of the US Banking Industry: What a Long, Strange Trip It's Been, *Brookings Papers on Economic Activity*, 2, 55-218.
- Berger, A.N., (1997), The Efficiency Effects of Bank Mergers and Acquisition: A Preliminary Look at the 1990s Data, forthcoming in Yakov Amihud and Geoffrey Miller, eds, *Bank Mergers and Acquisitions*, Klumer Academic, Boston, MA.
- Berger, A.N., R.S. Demsetz and P.E. Strahan, (1999), The Consolidation of the Financial Services Industry: Causes, Consequences and Implications for the Future, *Journal of Banking and Finance*, 23, 135-194.
- Berger, A.N., W.C. Hunter, and S.G. Timme, (1993), The Efficiency of Financial Institutions: A Review and Preview of Research Past, Present and Future, *Journal of Banking and Finance*, 17, (special issue on *The Efficiency of Financial Institutions*), 221-249.
- Berger, P.G. and E. Ofek, (1995), Diversification's Effect on Firm Value, *Journal of Financial Economics*, 37, 39-65.
- Berglöf, E. and E.L. von Thadden, (1994), Short-Term versus Long-Term Interests: Capital Structure with Multiple Investors, *Quarterly Journal of Economics*, 109, 1055-1084.
- Berlin, M., (1996), For Better and for Worse: Three Lending Relationships, *Business Review Federal Reserve Bank of Philadelphia*, December, 3-12.
- Bhattacharaya, S. and G. Chiesa, (1995), Proprietary Information, Financial Intermediation, and Research Incentives, *Journal of Financial Intermediation*, 4, 328-357.
- Boot, A.W.A., S.I. Greenbaum and A.V. Thakor, (1993), Reputation and Discretion in Financial Contracting, *American Economic Review*, 83, 1165-1183.
- Boot, A.W.A. and S.I. Greenbaum, (1995), The Future of Banking: What Should Corporate America Expect?, *Business Week Executive Briefing*, 8.
- Boot, A.W.A. and J. Macey, (1998), Objectivity, Proximity and Adaptability in Corporate Governance, working paper, University of Amsterdam.
- Boot, A.W.A., T. Milbourn and A.V. Thakor, (1999), Evolution of Organizational Scale and Scope: Does It Ever Pay to Get Bigger and Less Focused?, working paper, University of Amsterdam
- Boot, A.W.A. and A. Schmeits, (1998), Challenges to Competitive Banking: A Theoretical Perspective, *Research in Economics*, 52, 255-278.
- Boot, A.W.A. and A. V. Thakor, (1997), Financial System Architecture, *Review of Financial Studies*, 10, 693-733.

- Boot, A.W.A. and A.V. Thakor, (1999), Can Relationship Banking Survive Competition?, forthcoming, *Journal of Finance*.
- Boot, A.W.A., A.V. Thakor and G. Udell, (1991), Credible Commitments, Contract Enforcement Problems and Banks: Intermediation as Credibility Assurance, *Journal of Banking and Finance*, 15, 605-632.
- Boyd, J.H. and M. Gertler, (1994), Are Banks Dead, or Are the Reports Greatly Exaggerated?, working paper, Federal Reserve Bank of Minneapolis.
- Calomiris, C.W. and J. Karceski, (1998), Is the Bank Merger Wave of the 90's Efficient? Lessons from nine Case Studies, working paper, Columbia University.
- Canals, J., (1994), Competitive Strategies in European Banking, Oxford University Press, Oxford.
- Chan, Y., S.I. Greenbaum and A.V. Thakor, (1986), Information Reusability, Competition and Bank Asset Quality, *Journal of Banking and Finance*, 10, 255-276.
- Clark, J.A., (1996), Economic Cost, Scale Efficiency, and Competitive Viability in Banking, *Journal of Money, Credit and Banking*, 28, 342-364.
- Comment, R. and G.A. Jarrell, (1995), Corporate Focus and Stock Returns, *Journal of Financial Economics*, 37, 67-87.
- Cornett, M.M. and H. Tehranian, (1992), Changes in Corporate Performance Associated with Bank Acquisitions, *Journal of Financial Economics*, 31, 211-34.
- Courtney, H., J. Kirkland and P. Viguerie, (1997), Strategy under Uncertainty, *Harvard Business Review*, November-December, 67-79.
- Dewatripont, M. and E. Maskin, (1995), Credit and Efficiency in Centralized and Decentralized Economies, *Review of Economic Studies*, 62, 541-555.
- Dewatripont, M. and J. Tirole, (1995), *The Prudential Regulation of Banks*, MIT Press, Cambridge, Massachussets.
- Diamond, D., (1984), Financial Intermediation and Delegated Monitoring, *Review of Economic Studies*, 51, 393-414.
- Diamond, D., (1993), Seniority and Maturity of Debt Contracts, *Journal of Financial Economics*, 33, 341-368.
- Flannery, M., (1999), Comment on Milbourn, Boot and Thakor, *Journal of Banking and Finance*, 23, 215-220.
- Gorton, G. and J. Kahn, (1993), The Design of Bank Loan Contracts, Collateral, and Renegotiation, NBER working paper 4273.
- Gorton, G. and G. Pennacchi, (1995), Banks and Loan Sales: Marketing Nonmarketable Assets, *Journal of Monetary Economics*, 35, 389-411.
- Greenbaum, S.I. and A.V. Thakor, (1995), *Contemporary Financial Intermediation*, Dryden Press.
- Grossman, S.J. and O. Hart, (1986), The Costs and Benefits of Ownership: A Theory of Vertical and lateral Integration, *Journal of Political Economy*, 94(4), 691-719.
- Hamel, G. and C.K. Prahalad, (1990), The Core Competence of the Corporation, *Harvard Business Review*, May-June, 79-91.
- Hellwig, M., (1991), Banking, Financial Intermediation and Corporate Finance, in A. Giovanni and C. Mayer, eds., *European Financial Integration*, Cambridge University Press.

- Houston, J. and C. James, (1995), Bank Information Monopolies and the Mix of Private and Public Debt Claims, working paper, University of Florida.
- James, C., (1987), Some Evidence on the Uniqueness of Bank Loans, *Journal of Financial Economics*, 19, 217-235.
- John, K. and E. Ofek, (1995), Asset Sales and Increase in Focus, *Journal of Financial Economics*, 37, 105-126.
- Kroszner, R.S. and R. Rajan, (1994), Is the Glass-Steagall Act Justified? A Study of the US Experience with Universal Banking Before 1933, *American Economic Review*, 84, 810-832.
- Kulatilaka, N. and E. Perotti, (1998), Strategic Growth Options, *Management Science*, 44, (8),1021-1031.
- Lummer, S. and J. McConnell, (1989), Further Evidence on the Bank Lending Process and the Reaction of the Capital Market to Bank Loan Agreements, *Journal of Financial Economics*, 25, 99-122.
- Mayer, C., (1988), New Issues in Corporate Finance, European Economic Review, 32, 1167-1183
- Merton, R.C., (1993), Operation and Regulation in Financial Intermediation: A Functional Perspective, in P. Englund, ed., *Operation and Regulation of Financial Markets*, Economic Council.
- Mester, L.J., (1992), Traditional and Nontraditional Banking: An Information-Theoretic Approach, *Journal of Banking and Finance*, 16, 545-566.
- Mitchell, K. and N.M. Onvural, (1996), Economies of Scale and Scope at Large Commercial Banks: Evidence from the Fourier Flexible Functional Form, *Journal of Money, Credit, and Banking*, 28, 178-199.
- Petersen, M. and R. Rajan, (1994), The Benefits of Lending Relationships: Evidence from Small Business Data, *Journal of Finance*, 49, 1367-1400.
- Petersen, M. and R. Rajan, (1995), The Effect of Credit Market Competition on Lending Relationships, *Quarterly Journal of Economics*, 110, 407-443.
- Puri, M., (1996), Commercial Banks in Investment Banking: conflict of Interest or Certification Role? *Journal of Financial Economics*, 40, 373-401.
- Rajan, R., (1992), Insiders and Outsiders: The Choice Between Informed and Arm's Length Debt, *Journal of Finance*, 47, 1367-1400.
- Sharpe, S., (1990), Asymmetric Information, Bank Lending, and Implicit Contracts: A Stylized Model of Customer Relationships, *Journal of Finance*, 45, 1069-1087.
- Schmeits, A., (1997), Discretion in Bank Contracts and the Firm's Funding Source Choice between Bank and Financial Market Financing, working paper, Washington University.
- Shaffer, S. and E. David, (1991), Economies of Superscale in Commercial Banking, *Applied Economics*, 23, 283-293.
- Simon, H.C., (1936), Rules versus Authorities in Monetary Policy, *Journal of Political Economy*, 44, 1-30.

# NOTE ON THE CONTRIBUTOR

Arnoud W.A. Boot is Professor of Corporate Finance and Financial Markets and Associate Dean of the Faculty of Economics and Econometrics at the University of Amsterdam. He is also a Director of the Tinbergen Institute in Amsterdam and Research Fellow at the Centre for Economic Policy Research (CEPR) in London and at the Davidson Institute of the University of Michigan. Prior to his current positions, he was on the faculty of the J.L. Kellogg Graduate School of Management at Northwestern University in Chicago.

Arnoud Boot held visiting appointments at several universities. Recently, he was Bertil Danielsson Visiting Professor at the Stockholm School of Economics in Sweden and Olin Fellow at Cornell University in the U.S. He has taught in a number of MBA programs and in a variety of executive education programs. His research focuses on corporate finance and financial intermediation. He has written on regulation of financial institutions, the design of securities, capital structure, corporate divestitures and take-overs, rescheduling of sovereign debt and corporate governance.

In addition to his academic activities, professor Boot is consultant to several financial institutions and corporations. His consultancy activities concern the regulation and organisational structure of financial institutions, the organisation of risk management activities, corporate governance and the ownership and financial structure of corporations. For these activities, he recently established the Amsterdam Center for Corporate Finance, a "think tank" designed to improve the interaction between theory and practice.

Professor Boot is co-editor of the Journal of Financial Intermediation, and associate editor of several other journals, including the Journal of Banking and Finance and the Journal of Corporate Finance. His research has been published in prominent academic journals, including the Journal of Finance, American Economic Review, Economic Journal and International Economic Review.

# Amsterdam Center for Corporate Finance

The Amsterdam Center for

Corporate Finance (ACCF) is a thinktank specializing in the financial management of corporations and the operations of the financial sector. The ACCF promotes high quality research on the interface between financial theory and corporate policy. With a variety of activities, it provides a forum for dialog between academics and practitioners. The ACCF is an independent foundation and is supported by major financial and industrial corporations, consultancy

agencies and (semi) government

#### Directors

bodies.

A.W.A. Boot J.E. Ligterink

#### Board

Jhr. A.A. Loudon R. Soeting A. Verberk

Roetersstraat 11

#### **Address**

1018 WB Amsterdam The Netherlands Phone: +31 20 525 4162 Fax: +31 20 525 5285

E-mail: office@accf.nl http://www.accf.nl