STANDARD &POOR'S

Industry Surveys
Banking: Europe

Derek Chambers, Banking Equity Analyst

JULY 2009

CONTACTS:

INQUIRIES & CLIENT RELATIONS
800.852.1641
clientrelations@
standardandpoors.com

MEDIA
Michael Privitera
212.438.6679
michael_privitera@
standardandpoors.com

Replacement copies
800.852.1641

Standard & Poor's
Equity Research Services
55 Water Street
New York, NY 10041

Topics Covered by Industry Surveys

Aerospace & Defense
Airlines
Alcoholic Beverages & Tobacco
Apparel & Footwear: Retailers & Brands
Autos & Auto Parts
Banking
Biotechnology
Broadcasting, Cable & Satellite
Chemicals
Communications Equipment
Computers: Commercial Services
Computers: Consumer Services & the Internet
Computers: Hardware
Computers: Software
Computers: Storage & Peripherals
Electric Utilities
Environmental & Waste Management
Financial Services: Diversified
Foods & Nonalcoholic Beverages
Healthcare: Facilities
Healthcare: Managed Care
Healthcare: Pharmaceuticals
Healthcare: Products & Supplies
Heavy Equipment & Trucks
Homebuilding
Household Durables
Household Nondurables
Industrial Machinery
Insurance: Life & Health
Insurance: Property-Casualty
Investment Services
Lodging & Gaming
Metals: Industrial
Movies & Home Entertainment
Natural Gas Distribution
Oil & Gas: Equipment & Services
Oil & Gas: Production & Marketing
Paper & Forest Products
Publishing
Real Estate Investment Trusts
Restaurants
Retailing: General
Retailing: Specialty
Savings & Loans
Semiconductor Equipment
Semiconductors
Supermarkets & Drugstores
Telecommunications: Wireless
Telecommunications: Wireline
Transportation: Commercial

Global Industry Surveys

Airlines
Autos & Auto Parts
Banking
Food Retail
Foods & Beverages
Media
Oil & Gas
Pharmaceuticals
Telecommunications
Tobacco

Standard & Poor's Industry Surveys
55 Water Street, New York, NY 10041

EXECUTIVE EDITOR: EILEEN M. BOSSONG-MARTINES ASSOCIATE EDITOR: CHARLES MACVEIGH STATISTICIAN: SALLY KATHRYN NUTTALL

CLIENT SUPPORT: 1-800-523-4534. ISSN 0196-4666.

VISIT THE STANDARD & POOR'S WEB SITE: HTTP://WWW.STANDARDANDPOORS.COM

The McGraw·Hill Companies

CURRENT ENVIRONMENT

Restructuring the financial architecture

This commentary is from the perspective of mid-2009. The salient feature of the environment for banks in Europe and more widely from this perspective is the shifting relationship with regulators, who have had to step in to protect depositors (so far mainly with success, as far as retail depositors are concerned) and to try to revive the financing of global trade and the global economy (with limited success so far).

The global financial crisis that started to become evident in 2007 has been punctuated by periods of lower turbulence. But even in these relatively becalmed periods, any attempt to estimate how long it will take to get to a new stable environment—or to state with any precision what that new environment would look like—is unlikely to be successful.

It remains likely, however, that current developments will have an impact on the structure of the financial system, both globally and at regional level, for some time. After two or three decades during which the dominant economic philosophy was deregulation, the current environment might be better characterized as one of re-regulation. This might give existing established institutions opportunities to improve their positions, or new or currently minor institutions opportunities to become more significant. At the same time, we would expect some of the institutions that thrived or grew large in the past to be less successful in the future, with market share shrivelling gradually or more precipitately, either naturally or under regulatory pressure.

Despite the continuing instability, some measures show little net change. Overall, European equities (as measured by the Standard & Poor's European 350 Index) were 1% lower at the end of June 2009 than they were at the end of December 2008. Financial stocks in the S&P European 350 Index were up 7% over the same period, and within that, the Banks sub-index was up 13%. (All of these indices are reported in euros.)

We note, however, that measurements from the beginning to the end of the first half of calendar 2009 fail to capture the volatility of the recent past. In the six months from the second week of September 2008 to the second week of March 2009 (September 12 to March 9), European equities declined by 43%, Financial stocks by 67%, and the Bank sub-sector by 71%. In the following three months (to June 11, 2009), European equities rallied by 35%, but Financials nearly doubled (+98%) and the European Banks sub-index more than doubled (+110%). Despite this recovery, by the end of June 2009, all of these measures were below their levels of the second week of September 2008: European equities were down by 26%, Financials by 39%, and the Banks sub-index by 41%.

Deleveraging still to come

Our view is that a major contributor to the current financial crisis was the preceding build-up in financial assets and in leverage. Increased leverage involved higher borrowing by households (both gross and net), higher borrowing by non-financial corporations, and higher ratios of total assets to net equity in the banking and broader financial system. All of these increases in leverage and financial liabilities had their counterparts in an increase in financial assets, which grew relative to national income.

In the aftermath of past financial crises, there usually has been a prolonged, multi-year period of declining private sector leverage, as well as a substantial increase in government debt relative to national income. Although there have been previous global financial crises (going back at least to the mid-nineteenth century, with multinational crises going back a few centuries more), most of the historical national examples have been more restricted to particular countries. Nevertheless, we see no reason to doubt that the current crisis, which has affected all developed economies and most of the world's economies, is likely to be followed by a period of deleverage.

In 2007 and much of 2008, bank lending to the private sector in Western Europe (whether in the Eurozone or in major non-euro economies such as the UK) was still growing at 10% or more. Some commitments came back onto bank balance sheets from non-bank entities such as structured investment vehicles. In some instances, non-financial corporations may have wanted to draw on their facilities while they were still available. Commercial real estate projects also continued to draw down loans. The year-on-year growth in banking lending to businesses and households, however, has declined as 2009 has progressed. As of May 2009 (the latest figures available at mid-year), bank lending in both the Eurozone and the UK was almost flat with a year earlier.

Meanwhile, nominal GDP has declined. Real GDP in all major developed economies shrank significantly in both the fourth quarter of 2008 and the first quarter of 2009, as indeed in the world as a whole for the first time in over 60 years, according to current estimates. With consumer prices flat or declining, nominal national income has declined in most major European countries. Thus, bank lending that is flat or slightly up in nominal money terms is still rising relative to GDP. There is a common viewpoint that the economy can only recover when banks start lending again. In our view, however, lending will ultimately have to shrink relative to the economy, and this process has not yet started.

No safe havens

Many commentators have seen the current crisis in global banking as having originated in the US subprime mortgage market. This is understandable in terms of chronology. However, it does not fully explain why a problem in such a limited subset of global financial assets could have had such wide-ranging effects. Instead, we see the development of the US subprime market, and more generally other real estate bubbles, including prime residential and commercial mortgages, as symptoms of an expansion of liquidity that had gone on for the better part of 10 years.

When the crisis struck, investors who wished to maintain exposure to the banking sector sometimes sought safe havens. This reflected the belief that some banks may have still been doing old-style retail deposit collection and lending to customers, without entangling themselves with new banking models based on securitization and derivatives. However, the margins on this style of banking had suffered considerable erosion. Depositors benefiting from the increased availability of comparison information demanded close to wholesale returns on their deposits, while borrowers expected lower and lower funding costs. As far back as 1986, the Basel Committee on Banking Supervision issued a paper on the management of banks' off–balance sheet exposures. This report noted that the margins available on many types of conventional on–balance sheet business had been diminishing and that banks were increasingly using novel off–balance sheet techniques to bypass prudential capital requirements, which raised macro-prudential issues concerning the financial system as a whole.

Banks operating in mature western European markets—such as France, Germany, Belgium, and the UK — found since the late 1990s that domestic retail banking revenues were little more than static: even if volumes rose, margins declined. This gave banks the incentive to improve efficiency, but only those with comparative efficiency would prosper. Banks also began starting up or acquiring operations in markets that were less overbanked and might have greater revenue growth potential. Some banks went into markets contiguous to Western Europe—Central and Eastern Europe, Turkey, North Africa—while others went farther afield to Latin America, southern Africa, the Middle East, and Southeast Asia.

A further common response of banks in Western Europe, as elsewhere, to the commoditization and the erosion of margins on traditional banking was an increase in leverage. This was facilitated by securitization and derivatives as well as a regulatory capital regime that favoured such trends. In 2000, there might have been some banks in Europe with high deposit-to-loan ratios and minimal exposure to wholesale markets. By 2007, however, such banks had largely changed their business models and had become much more involved with wholesale markets, both for funding and for the services provided to customers.

The assumption that there is still some safe haven retail banking activity is implicit in the comments of central bankers and other regulators and commentators that what may be required is a separation of casino banking

from utility banking, or a reintroduction of the Glass-Steagall separation of investment banking from commercial banking. But this separation could hardly be reintroduced in Europe, as it had never existed. While there have been specialized financial institutions under different national European banking systems, there was a tradition of universal banking in much of Europe, well before the recent crisis.

There have also been calls for narrow banking, or utility banking. Such banking would presumably provide secure deposits and money transmission, but it might not provide credit to make a national or global economy work.

Securitization, derivatives drove growth

One of the well recognised functions of banking is to allow groups of people (households or businesses) with different time horizons for consumption, saving, and investment to match their needs and requirements. Globalization and securitization allowed this to happen on a large scale. In many European countries between 2000 and 2007, the growth in retail lending to households and businesses far exceeded the growth in deposits from households and businesses. This imbalance in demand from the domestic retail side was met by cross-border wholesale fund flows.

Securitization was one of the main drivers of the growth of the European banking industry from the 1990s until 2007. In some markets, such as the UK, wholesale funding via securitization became the main source of funds for the expansion of lending. Nevertheless, even in markets that had and continued to use alternatives (such as Germany, with its covered bond, or *Pfandbrief*, system), the use of derivatives fostered by securitization had a major impact.

Although in theory, securitization and disintermediation reduce bank balance sheets, in practice the combination of international expansion and increase in wholesale business meant that European bank balance sheets grew substantially more rapidly than local economies from the late 1990s until 2007. To the extent that securitization techniques were first introduced and used on a wide scale in the US housing finance market from the 1970s and 1980s, they can be considered as an import from the US to Europe.

A linked development was the rapid global growth since the 1980s of interest rate derivatives, many of which were originally created to hedge against risks attendant to mortgage securitization. For more than two decades, volumes grew at nearly 40% per annum, compounding to a notional total of US$465 trillion as of mid-2008, according to the International Swaps and Derivatives Association (ISDA)—some seven times global GDP. In the second half of 2008, interest rate derivatives declined for the first time since ISDA surveys began, falling 13% from the peak to US$403 trillion at the end of 2008. Globally, credit derivative notional outstandings were less than US$1 trillion in 2001—about the same level as interest rate derivatives had been in 1987. However, credit derivative outstandings grew at 100% per annum for the six years through 2007, reaching US$62 trillion, before declining to US$55 trillion in mid-2008 and US$38 trillion at the end of 2008.

The notional value underlying derivative contracts does not feature on bank balance sheets, but the fair value does. Despite the decrease in underlying notional volumes, the fair value mark-to-market exposure increased with higher volatility in the second half of 2008. This has been a significant driver of the size of European bank balance sheets, especially given that netting is more limited under International Financial Reporting Standards (IFRS) accounting than under US GAAP (Generally Accepted Accounting Principles). We expect on–balance sheet fair values of derivatives to have declined significantly in the first half of 2009 as a result of both lower volatility and more efforts to net off exposures.

As with the development of securitization, much of the growth of interest rate risk originated, in our view, in retail banking. Deposit and lending products offered to retail customers often include implicit as well as explicit interest rate derivative positions. Although there were many complaints when accounting standards began to force disclosure of these implicit derivative positions, the positions and risks were already there in retail banking.

Despite the excesses that have occurred, it is still reasonable to argue, we believe, that the development of securitization and the growth of derivatives can have positive features, in that increased liquidity and transferability of financial claims made possible transactions and investments that could bring general benefit. At the same time, however, an excess of liquidity can mislead economic actors about the value of transactions and financial claims.

Although securitization and derivatives in their current scale and form originated in the US housing finance market, they were soon extended to other forms of credit. Many European banks adopted the originate-and-distribute model, which they claimed accelerated revenue growth and optimized the use of capital by not retaining credit risk on their balance sheet to maturity as in the buy-and-hold model. Many European banks also sought to reduce credit risk and capital requirements by using credit risk mitigation techniques. Such techniques (which included securitization and structures based on or embedded with credit default swaps) were at the centre of much of the discussion of new regulatory capital requirements under the international Basel II accord and its implementation in the European Union Capital Requirements Directive.

OUT OF THE SHADOW BANKING SYSTEM

The increase in leverage of the financial system in Europe, as elsewhere globally, was not centrally planned. With the benefit of hindsight, there is now general acknowledgement that regulators, politicians, commentators, and the banks themselves lacked an overview of the aggregate implications of what was happening as what has been termed the shadow banking system sponsored financial growth and liquidity.

Some of the purported distribution of risk turned out to be entities that in reality were connected to the distributing banks themselves. These conduits—supposedly third-party vehicles—ultimately relied on backstop liquidity lines from the banks or from third-party insurers that could not in practice provide the aggregate guarantees for which they had received premiums.

The shadow banking system is a term which means different things to different users of the phrase. The man who claimed naming rights for the shadow banking system, Paul McCulley of the fixed income asset manager PIMCO, defined it once as "the whole alphabet soup of non-bank intermediates" [PIMCO's *Global Central Bank Focus*, December 2007]. One defining characteristic is that these intermediaries financed themselves with short-term paper and had no direct recourse to the central monetary authorities. Even some of the shrewder participants in the market and commentators who picked up on part of the story—for example, in the Bank for International Settlements (BIS) annual reports from 2001 on, or in International Monetary Fund (IMF) Financial Stability Reports in 2003 to 2005—did not have a full view, we believe, since reporting and accounting frameworks designed for earlier stages of financial markets failed to capture what was really happening.

This has led to calls for macro-prudential surveillance at global, regional, and national levels. (Central bankers had been pointing to macro-prudential issues arising from banks' non-transparent off–balance sheet exposures at least since the 1980s.) Globally, the G20 world leaders' meeting in April 2009 decided to upgrade the Financial Stability Forum, founded by the G7 in 1999 to link regulators from the main industrialized economies, into a Financial Stability Board. The latter would represent the largest developing as well as developed economies, with a mandate to oversee vulnerabilities in the global financial system and co-operate with the IMF on early warnings.

In the European Union, there are proposals to create a European Systemic Risk Board that would be charged with monitoring and assessing potential threats to financial stability and issuing risk warnings and recommendations for action. At the national level, in the UK for example, central banks and financial regulators have also been discussing revised institutional arrangements for enhanced macro-prudential regulation. Nevertheless, to the extent that politicians are talking about the need for more warnings, we find it disheartening that they did not pay heed to the often accurate warnings that were already presented, as noted above, by the BIS and on some occasions by the IMF.

In the initial stages of the crisis, it appeared that the problems arose from the US subprime market. Chaos theory has popularized the notion that, as in meteorology, large differences in effect can arise from small differences in initial perturbation. Although it has been clear for some time that the damage has spread far beyond the instruments and institutions directly or indirectly linked to US subprime mortgages, many commentators still assume, often explicitly, that the initial perturbation to the system came from US subprime lending. We would tend more to a view that the financial system created liquidity (a good thing) but too much of it (which was bad), and that resulted in creation of some financial instruments and investments (good) but then too much (bad). The crucial question for regulation, which to our knowledge has not been solved, is how to identify and then control the quantity of credit and liquidity.

Proximity to US subprime debt has not been directly correlated with success or failure, in our view. Businesses whose whole *raison d'être* was the US subprime mortgage business have failed. But tellingly, HSBC, the European headquartered bank with the largest direct exposure to US subprime mortgages, has, despite some large credit impairments, suffered proportionally less than almost all of its peers in terms of share price and has been able to tap capital markets without undue stress.

WRITEDOWNS

The bottom-up approach to a crisis that started with US subprime mortgage lending (or that subset of it which had been securitized) would find a market that we believe was worth about US$1 trillion. A 25% writedown of value in this market could have been absorbed comfortably within the banking sector capitalization. Even adding on a few more quarter trillion dollars for related markets (*i.e.,* Alt-A, commercial real estate), and increasing the pure subprime writedown to a complete one-trillion-dollar wipeout would still not have had the impact of the current crisis.

ESTIMATED FINANCIAL SECTOR WRITEDOWNS — CUMULATIVE 2007–2010

				--- BY INSTITUTION ---	
REGION	LOANS	SECURITIES	TOTAL	BANKS	INSURERS & OTHER
US	1068	1644	2712	1604	1108
Europe	888	305	1193	737	456
Japan	131	18	149	129	20
Global total	2087	1967	4054	2470	1584
US residential mortgage portion	431	990	1421	810	611
US residential mortgages as a % of total	21	50	35	33	39

Source: International Monetary Fund, April 2009 *Global Financial Stability Report.*

In April 2009, the IMF published an estimate that financial sector writedowns in the US, Europe, and Japan for the period 2007–2010 inclusive would cumulate to more than US$4 trillion. Of this loss, US, European, and Japanese banks would suffer US$2.5 trillion, while insurers and other financial institutions would take the remaining loss. Of the total loss, about a third was estimated to come from US residential mortgages (including prime, Alt-A, and subprime). According to our estimates, however, only a fifth of the total losses have likely come from US subprime mortgages, whether directly or through securitization.

In our view, this perspective—that possibly 80% of financial sector writedowns by the end of 2010 will *not* have not been linked to US subprime mortgages—indicates that a deeper cause for the crisis needs to be found. Securitization and derivatives created a highly liquid global capital market which offered considerable advantages, in our view. Monetary policymakers implemented low interest rates to revive sluggish economies. Low interest rates, combined with the new techniques of creating liquidity, led to the manufacture of financial instruments that provided higher returns and the appearance of guaranteed capital return. However, a crucial question was not asked, and even if it had been asked, it would have been difficult to answer: What quantity of financial claims is too much for the global economy?

While we are not aware that anyone has yet been able to answer this question, we suspect that more claims were created than could be sustained, and these claims might have been an uncomfortable multiple of one

year's global output. As to who were the buyers, the answer that has been emerging is that, unbeknownst to most of the market (including the regulators and even the banks themselves), the buyers were the banks, or vehicles controlled by the banks. These had multiplied financial claims and financial system leverage, while using risk mitigation techniques to apparently reduce at least their risk-weighted assets (if not their actual balance sheets, which continued to rise much faster than equity or risk-weighted assets). Thus, regulatory arbitrage ended up deceiving not just the regulators, but also the banks themselves.

The excess liquidity generated in the process of regulatory arbitrage appeared to have allowed the build-up of global imbalances. This drove excess consumption, resulting in bubbles in real estate market values in some countries—the UK and Spain, as well as the US. However, even countries that avoided excesses in the real estate market and household debt are not immune to the fallout. The reaction to excess leverage is already resulting in GDP slowdowns that are just as great in the financially prudent countries of Europe as in the less prudent, while the emerging creditor nations which had produced more than they consumed also appear to be experiencing slowdowns, in our view. Even those countries where regulators avoided some of the pro-cyclical elements of the capital rules—Spain, for example—have still suffered real estate bubbles and crashes and a sharp rise in unemployment.

The process of reversing the excess leverage created by the banking and shadow banking system is likely to take some time. This is especially the case, given that banks' own capital bases are under pressure, consumers are overleveraged, and the global economy is having to adapt to shifts in demand following the boost to growth that excess liquidity provided.

SHAKE-UP OF PARTICIPANTS IN FINANCIAL MARKETS

The 1990s saw the US and European banking sectors engaging in a major merger movement that led to a shift in market shares and rankings. The period 2000–2007, although it saw some merger activity in financials, was more stable. Concentration did not change markedly. Investment banking league tables generally reshuffled the same participants. This gradualism gave way to abrupt change in late 2008.

EUROPEAN BANK CREDIT CRUNCH WRITEDOWNS
(Cumulative for the period Q3 2007 through Q1 2009)

BANK	BIL. $
UBS	53.1
HSBC	42.2
Royal Bank of Scotland	31.9
HBOS	29.4
Barclays	20.1
Deutsche Bank	19.3
Credit Suisse	17.9
Bayerische Landesbank	16.8
ING	16.1
IKB	14.5
BNP Paribas	14.4
KBC	11.9
Société Générale	11.6
Fortis	9.3
Natixis	9.0
Credit Agricole	8.7
Banco Santander	8.5
DZ Bank	7.3
Dexia	6.7
Hypo Real Estate	6.5
Unicredit	6.3
Commerzbank	5.5
Dresdner Bank	5.1

Source: Company reports.

Major changes in the US in September 2008

In September 2008, Fannie Mae and Freddie Mac were taken into conservatorship by US authorities, Lehman Brothers filed for bankruptcy, Merrill Lynch was acquired by Bank of America, the US government acquired a majority stake in AIG, Goldman Sachs and Morgan Stanley announced their transformation into bank holding companies, JP Morgan acquired certain parts (but not the junior liabilities) of Washington Mutual, and plans were announced to sell Wachovia to Citigroup with the aid of federal deposit insurance (though in October, Wells Fargo acquired Wachovia without FDIC participation).

Europe also took action

In Europe, national governments and some regional governments also took action to ensure that depositors were protected and that banks were adequately capitalized. Several countries (including Germany, France, Italy, Ireland, and Sweden) set up funds to inject equity or preference capital into banks; in Germany some of the Landesbanken also received funds from their local states. Switzerland injected funds into UBS, and the Netherlands injected capital into ING. The Icelandic government nationalized its main banks, but some of the local operations in other countries, including the UK, were taken over by host country supervisors.

In the UK, the government required the major credit institutions to provide additional capital for their UK operations, and injected capital

into the merging Lloyds TSB-HBOS group and into Royal Bank of Scotland, emerging with a large minority stake in the former and a majority stake in the latter. It also nationalized Bradford & Bingley, the former building society, selling its branches and retail deposit base to Banco Santander.

Where the private sector cannot recapitalize a bank, the national treasury has had to step in. Steps have been taken towards a common banking market in the European Economic Area (which includes not just the 25 members of the European Union, but also Norway, Iceland, and Liechtenstein). When banks' core operations span borders, rescues can be more complicated. The Belgian, French, and Luxembourg governments cooperated with existing shareholders in providing additional equity for Dexia. The Belgian, Dutch, and Luxembourg governments intervened to assist Fortis. In October 2008, however, the Dutch government nationalized the company's Dutch operations, and BNP Paribas announced its preparedness to acquire most of the remaining banking operations and some insurance operations of Fortis, though shareholder court actions delayed implementation for several months.

LEADING EUROPEAN BANKS—TOTAL ASSETS AND SHAREHOLDERS' FUNDS
(In millions of US dollars)

	------ TOTAL ASSETS ------		SHAREHOLDERS' ---------- FUNDS ----------	
BANK	2007	2008	2007	2008
HSBC	2,354,266	2,527,465	128,160	90,053
Banco Santander	1,334,727	1,484,651	80,705	81,454
Unicredit Group	1,493,861	1,478,966	84,395	77,793
BNP Paribas	2,477,376	2,935,763	78,657	75,288
Intesa Sanpaolo	879,715	899,778	75,381	67,188
Royal Bank of Scotland	3,294,702	3,201,241	88,948	65,686
Credit Agricole	2,067,665	2,338,369	59,492	59,026
Barclays	2,443,185	2,962,142	46,363	52,834
Societe Generale	1,566,970	1,598,333	39,828	51,040
Deutsche Bank	2,953,851	3,115,217	54,160	43,428
BBVA	734,247	768,772	36,274	37,604
UBS	2,007,479	1,914,677	31,108	30,914
Credit Suisse	1,201,855	1,111,210	38,157	30,697
Nordea	568,816	670,554	25,089	25,181
Standard Chartered	329,871	435,068	20,851	22,140
KBC Group	519,901	502,580	25,364	20,099
Danske Bank	656,766	672,614	20,462	19,998
Lloyds Banking Group†	703,371	629,130	24,705	16,094
Commerzbank‡	901,316	884,308	22,128	15,625
Allied Irish Banks	260,043	257,632	14,368	12,642
Erste Bank	293,169	284,928	12,357	11,427
Swedbank	248,791	233,967	10,522	11,136
DnB Nor	271,447	261,636	13,502	11,008
Bank of Ireland	251,338	312,844	8,996	10,334
SEB	362,740	320,937	11,870	10,013
Svenska Handelsbanken	287,687	278,792	11,525	9,681
Banco Popular Espanol	156,687	156,121	9,100	9,525
National Bank Of Greece	132,148	144,046	9,460	8,447
Dexia	883,903	920,815	21,236	5,539
Total	31,637,893	33,302,558	1,103,164	981,896

†Prior to acquisition of HBOS in 2009. ‡Prior to acquisition of Dresdner Bank in 2009.
Source: Company reports; Standard & Poor's Equity Research.

The recent crisis has also affected smaller institutions. Several UK mutual building societies have been forced into mergers. One society in Scotland could not be rescued by a straightforward merger, and some of its assets had to be taken over. Smaller and relatively simple institutions elsewhere in Europe have also required rescue.

Credit writedowns have had a major impact on the European banking system. From mid-2007 through the first quarter of 2009, European banks reported nearly US$500 billion of writedowns related to the credit crunch. (See the table "European Bank Credit Crunch Writedowns" on page 6 for details by company.)

While some of the banks in this list have needed state capital injections or rescue, others (including some of the largest sufferers) have managed to absorb losses and raise capital without calling on their home supervisory states. This latter group includes HSBC (which raised nearly US$18 billion through a rights issue), Barclays, Deutsche Bank, and Credit Suisse. These are all large, complex banks with a global spread of operations, which included exposure to structured finance. Meanwhile, in some cases, smaller, narrower, more regionally focused banks have proved to be unviable.

Leading European banks slightly increased total assets in 2008. Nevertheless, even after capital injections, they had a shrinkage of shareholders' equity (details in the table on page 7). As a result, leverage (as measured by assets to equity) rose slightly to over 30 times.

Aggregate revenues of leading European banks in 2008 were depressed by securities and other trading writedowns. (See the accompanying table "Leading European Banks—Revenues and Pre-Tax Profits" for details by company.) Aggregate profits for 29 leading banks shown in the table on this page were just above breakeven. Including the operations of banks subsequently included in their consolidation perimeters would show an aggregate loss.

LEADING EUROPEAN BANKS—REVENUES AND PRE-TAX PROFITS
(In millions of US dollars)

	NET REVENUES*		REPORTED PRE-TAX PROFITS	
BANK	2007	2008	2007	2008
HSBC	78,993	81,682	24,212	9,307
Banco Santander	37,070	50,128	14,927	17,239
Barclays	46,011	42,305	14,155	11,122
BNP Paribas	42,465	39,988	15,129	5,732
Unicredit Group	40,364	39,243	14,380	7,973
Societe Generale	29,995	31,940	2,580	5,854
Royal Bank of Scotland	52,939	31,694	19,805	(45,825)
BBVA	23,707	27,721	11,490	10,117
Intesa Sanpaolo	26,312	26,522	9,974	5,242
Credit Agricole	22,942	23,307	6,591	1,712
Deutsche Bank	42,065	19,705	11,970	(8,386)
Lloyds Banking Group†	21,417	18,068	8,002	1,477
Standard Chartered	11,067	13,818	4,035	4,801
Nordea	10,790	12,052	5,313	5,057
Credit Suisse	29,270	11,243	11,453	(13,747)
Erste Bank	8,469	10,223	2,637	842
Commerzbank‡	11,435	9,397	3,966	(589)
Danske Bank	8,275	8,433	3,545	437
Allied Irish Banks	6,660	7,403	3,431	1,503
National Bank Of Greece	6,238	7,169	2,604	2,829
KBC Group	13,411	7,058	5,983	(4,384)
DnB Nor	5,388	6,101	2,968	2,184
SEB	5,934	6,095	2,517	1,886
Bank of Ireland	5,356	6,048	2,511	2,734
Swedbank	4,870	5,514	2,306	2,302
Banco Popular Espanol	4,690	5,341	2,645	2,259
Dexia	9,408	5,195	3,956	(5,664)
Svenska Handelsbanken	4,013	4,520	2,868	2,346
UBS	26,562	3,677	(3,117)	(25,430)
Total	636,117	561,590	212,838	930

*Net revenues (S&P Equity Research basis) are net of insurance claims. †Prior to acquisition of HBOS in 2009. HBOS reported a 2008 pre-tax loss of $15,797 million. ‡Prior to acquisition of Dresdner Bank in 2009. Dresdner Bank reported a 2008 pre-tax loss of $6,568 million.
Source: Company reports; Standard & Poor's Equity Research.

Outlook

In 2009, with all the leading European economies in recession, we expect rising corporate defaults and growing unemployment to lead to higher personal sector defaults, with increasing delinquencies on consumer lending and rising losses on both residential and commercial real estate.

In retail banking divisions, revenues have been flat to down; this, in combination with rising credit impairments, often leads to declining profits. Low policy interest rates have led to low margins on deposits, generally more than offsetting any gains in spreads on assets.

Wholesale revenues have been much more buoyant. Although underlying international trade volumes have declined sharply as a result of the fall in global output and the inventory correction seen in the fourth quarter of 2008 and the first quarter of 2009, spreads have widened considerably, allowing those banks that have maintained or expanded their presence to increase revenues. Wholesale funded operations and balance sheet management business have also benefited from low policy interest rates. ■

INDUSTRY PROFILE

Convergence: national differences becoming less pronounced

The European banking system consists of a network of national systems that are becoming more closely linked as European Union (EU) nations pursue their goal of a true single market. The network is expanding as more nations join the EU. Nevertheless, there are still some differences. During the eighteenth and nineteenth centuries, each of the nations in Western Europe developed some mixture of mutual credit co-operatives, local government or charitable foundation–sponsored credit institutions, and joint stock commercial banks.

In the last quarter of the twentieth century, most systems appeared to be converging towards joint stock commercial banks, with the barriers between mergers of the different institutions coming down in most nations, with the partial exception of Germany. In the early 1990s, the financial crisis in several Nordic countries gave rise to a relatively new category of central government–rescued banks. This new category has expanded considerably since 2007, with the implications still to be seen. Although most governments see this development as temporary, it is worth remembering that not all of the stakes taken in the early 1990s had been privatized by the time that the new crisis appeared in 2007.

Financial supervision within the European Union is converging, with a broad consensus in favour of the main recommendations of the February 2009 *de Larosière Report*. This suggested upgrading the three bodies representing the supervisors of banks, insurance companies, and securities firms into more powerful bodies, which could lead to greater harmonization of rules. More controversially, and still to be decided in detail, these supervisory boards might be able to overrule national supervisors. While the fiscal responsibility for bailout remains with national treasuries, there are likely to be limits to how far national interests can be overridden.

The *de Larosière Report* also represented a new body for macro-prudential supervision to cover both the Eurozone and non-Eurozone member states. While there may be some debate about the role of European Central Bank officials in this organization, the main purpose is to create a forum in which both non-Eurozone economies and those that have the euro as their currency can be represented.

EUROPE: STILL HOME TO SOME OF THE WORLD'S BIGGEST BANKS

European financial conglomerates figure prominently at the head of global banking industry league tables. In terms of total assets, International Financial Reporting Standards (IFRS) reporting, which most European banks follow, does not permit the same amount of netting as US GAAP (Generally Accepted Accounting Principles), so that a similar underlying position would be represented by a higher balance sheet footings for a European reporter. There is more convergence in terms of net equity: on the broadly comparable measure of Tier 1 capital, European banks account for about half of the leading 20 or 30 global banks.

The United Kingdom's leading banks include the more Asia-focused banks HSBC Holdings plc and Standard Chartered PLC. The heavy recapitalizations of Royal Bank of Scotland Group plc and Lloyds Banking Group plc (which was formed in January 2009 from Lloyds TSB Group plc and HBOS plc) keep them among the global industry leaders by size, while Barclays PLC, which has rejected government capital to be free to pursue its global ambitions, remains a significant market participant.

Mergers have shaken up the standings a bit since 2004. Spain-based Banco Santander S.A.'s purchase of UK-based Abbey National in 2004 has been followed by other acquisitions in the UK and elsewhere, including Brazil, which moved Santander up the rankings. A merger between France's BNP Paribas and Italy's Banca Nazionale del Lavoro (BNL) in 2006 gave it a significant cross-border presence, and despite a prolonged legal process, it eventually acquired most of Fortis's operations in Belgium and France.

UniCredit's acquisition of HVB Group in 2005 gave it a major presence not just in Germany but also, via Bank Austria, in Poland and other parts of Central and Eastern Europe.

BANKING SYSTEMS WITHIN EUROPE

Although EU financial markets are becoming more unified as efforts to set up a common regulatory regime move forward, banking systems vary widely from country to country. Germany, France, Italy, and Spain have the most bank branches in absolute terms in the European Union, and rather more relative to their populations than countries such as the UK, the Netherlands, and Switzerland. However, the size of the individual branch can vary, and those countries with large numbers of branches typically have many small branches. Numbers of credit institution employees are more proportional to population, with Germany well in the lead, France and the UK about equal in second place, and Italy then Spain further behind.

Managements have sometimes used rigid national labour laws as an excuse for relative inefficiency. Nevertheless, good managements at individual banks have shown the capability to improve efficiency, even when operating in the context of the social and labour laws of France, Germany, or Italy—some of the banking markets where the excuse that it was not possible to improve efficiency has been used. Differences among European banking systems go far beyond the question of efficiency, however, as the following brief profiles of the region's biggest markets illustrate.

UK: Europe's biggest banking sector

The UK banking sector was still the largest in Europe at year-end 2007, with total assets of €10.1 trillion at that time, according to the latest available data from the European Central Bank (ECB). Although the UK market is seen as relatively concentrated, the share of the five largest credit institutions in total assets at the end of 2007 was 40.7%, below the EU-weighted average of 44.4% and well below the unweighted average of 59.4%. The retail banking market (mortgages, savings, and current accounts) is more concentrated than the overall market, which also includes the international wholesale business.

The retail banking market is now largely dominated by five institutions. The acquisitions made by Banco Santander (Abbey National, Alliance & Leicester, and parts of Bradford & Bingley) have made it one of the larger UK banks, while the takeover of HBOS by Lloyds TSB to form Lloyds Banking Group represents another large part of the market. Royal Bank of Scotland, which has owned National Westminster Bank since 2000, also has a large share of the retail banking market, while Barclays and HSBC have smaller domestic retail businesses alongside larger international businesses.

Up to 2007, the UK (unlike many other European countries) had no banks controlled by national or local governments. That has now changed, with UK Financial Investments Limited (UKFI) established in November 2008 to hold the government's stakes in the nationalized Northern Rock, parts of Bradford & Bingley, a stake of 70% in Royal Bank of Scotland, and 43% of Lloyds Banking Group.

Because London is a major international finance centre, international banks play a large role in the industry. Assets of subsidiaries of non-EU banks held in the UK represent 60% of the total for the whole EU. We note, however, that inter-EU cross-border assets held by subsidiaries of banks headquartered in other EU states are higher in Luxembourg, Germany, France, and Ireland. The foreign banks tend to concentrate on wholesale business, but a few foreign banks (including National Australia Bank, Bank of Ireland, Allied Irish Banks, and Svenska Handelsbanken) own retail businesses in the UK.

The UK led a trend toward unified regulation of financial markets. It was among the first countries to set up a single regulator when it combined the functions of nearly a dozen government agencies and self-regulatory groups into the Financial Services Authority (FSA) in 1998. While this system had achieved some praise for its light touch, principles-based approach, this is no longer so fashionable, in our view. The stresses caused by handling the financial crisis have led to a reappraisal of the tripartite authorities, including Her Majesty's Treasury and the Bank of England, in addition to the FSA.

Germany: not quite as fragmented as sometimes thought

With total assets of €7.6 trillion at year-end 2007, according to the ECB, the German banking sector was second only to the UK's in size. By number of credit institutions, Germany's banking industry appears to be highly fragmented, although this appearance does not fully take account of the way the industry operates. Within each of the two categories of credit co-operatives and state savings banks (*Sparkassen*), individual entities operate on a strictly local basis, but co-operate with other institutions in the same sector to provide customers with a national network.

While the strength of these two sectors limits the share of joint stock commercial banks, the share of the largest banks is somewhat understated by national statistics. These typically show the share of the largest banks at 20%–25% of the market, since these statistics are based on parent companies only and do not reflect the consolidated size of the larger shareholder-owned banks.

Nevertheless, ECB statistics do show that Germany has by far the smallest share of the five largest credit institutions in total assets of any banking system in the EU (22.0% at end 2007). Germany has about 2,000 banks, but there has been a steady decline in numbers as the smaller institutions consolidate.

The country's biggest joint stock commercial banks, having been involved in various potential merger combinations, are now in the process of combining further. Deutsche Bank AG has an option to make a staged acquisition of a majority stake in Deutsche Postbank AG, which might lead to a complete takeover. Commerzbank AG has acquired Dresdner Bank from the insurer Allianz SE. Italy's UniCredit S.p.A. acquired Bayerische Hypo- und Vereinsbank Aktiengesellschaft (HVB).

The public sector savings bank system is served by regional wholesale banks (*Landesbanken*). Almost every one of the sixteen federal states (Länder) used to have its own, but by process of consolidation, the number has declined. The European Commission, urged on by the private sector banks, forced the German government to end guarantees that gave the Landesbanken a funding advantage. Since this funding advantage had led several of the Landesbanken into ventures of what we view as dubious economic value, the removal of the guarantees should ultimately enhance the efficiency of the system. However, further support has been required as a result of losses incurred during the financial crisis, and further reorganization of the system is likely, in our view.

As is the case in the UK, Germany has a unified financial services regulator. The Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, or BaFin), formed in May 2002 through the combination of the former banking, insurance, and securities regulators, oversees the entire German financial services sector. The Bundesbank, Germany's central bank, also plays a role in bank supervision, although it has passed on its role in monetary policy to the European Central Bank.

France: seven groups dominate

The French banking system is also among Europe's largest, with banks controlling €6.7 trillion in assets at the end of 2007, according to the ECB. Following an extended period of consolidation that reduced the number of credit institutions from more than 2,000 in 1989 to just over 800 recently, seven main vertically integrated groups dominate the French banking sector.

These groups, controlling 86% of system assets at the end of 2007 according to the *Report of the Commission Bancaire*, were BNP Paribas, Société Générale, Crédit Agricole S.A., Crédit Mutuel group, HSBC France (formerly CCF), Dexia Crédit Local, and BPCE (following the merger announced in 2009 between Banque Populaire group and Caisse d'Epargne group).

Although not regulated as a bank, La Poste (the French post office) represents a further major player in the industry. La Poste traditionally offered only a limited range of services, but in December 2005, the government granted the postal service the authority to establish its own bank. La Poste's financial services operations are to be spun off as a publicly owned bank ahead of the full opening of EU postal services to private competition that has been scheduled for 2009. The move has not been well received by the banking industry, which already faces stiff competition.

Oversight of the industry gives the institutional appearance of segmentation, with separate bodies responsible for regulatory policymaking, licensing, and supervision. The Advisory Committee on Financial Legislation and Regulation (Comité Consultatif de la Législation et de la Réglementation Financières, or CCLRF) lays out regulations for credit institutions, insurance and investment firms, while the Credit Institutions and Investment Firms Committee (Comité des Établissements de Crédit et des Enterprises d'Investissement, or CECEI) is in charge of licensing. The Banking Commission (Commission Bancaire) makes sure banks are sound and enforces regulations. In practice, these bodies share common personnel, with the Governor of the Banque de France and appointees of the Ministry of Economy, Finance, and Industry represented on each of the committees.

Italy: still one of the less concentrated markets

The Italian banking industry has been consolidating, after moves to deregulate and restructure the industry in the 1990s. According to ECB data, the entire Italian banking system had total assets of €3.3 trillion at the end of 2007, making it one of the largest in Europe. The major industry players are Intesa Sanpaolo S.p.A., UniCredit S.p.A. (which has taken over several banks, including Capitalia), and Banca Monte dei Paschi di Siena SpA.

The cooperative banks hold only about 7% of the banking system's deposits, but account for well over half of all the banks in Italy. This subindustry focuses mainly on business development activities with farmers, craftspeople, retailers, and small firms. The group also must follow specific banking laws and is obligated to grant 50% of all loans to its members.

Although consolidation has made progress, the barriers to consolidation between different categories of bank have not remained as much in force as in Germany. Thus, the share of Italy's top five banks (as measured by total system assets) at year-end 2007 was only 33.1%, according to the ECB, the third lowest concentration level in the EU (after Germany and Luxembourg).

A major change took place in Italy's banking industry during the 1990s with the passage of the Amato-Carli Law, which authorized the privatization of state-owned banks and provided for their transformation into joint-stock companies. The law also eliminated the distinction between retail banking and specialized lending institutions, encouraging institutions to offer a full array of banking products and services.

Foundational ownership is another important feature of Italy's banking industry. Foundations are charitable institutions whose board members are elected to represent local institutions. Municipalities, provinces, and regions have wide representation on the boards of foundations, but the Ciampi Law, enacted in 1998, prevents foundations from owning controlling stakes in banks. Foundations had to sell majority ownership positions by 2006. Despite the foundation ownership structure, banks act as for-profit institutions, with the predominance of joint-stock companies reinforcing the banks' emphasis on profitability and boosting shareholder value.

Italian banks suffered in the 1990s from a large overhang of bad loans. Regional differences were considerable, with bad loans generally much higher in the south. Banks have become more aggressive in taking bad loans off their balance sheets, including by use of securitization but also by outright sale.

The 1993 Banking Law centralized regulation of the banking industry within the Bank of Italy. The Italian central bank is responsible for issuing rules regarding capital adequacy and limitations on risk, and reviews all mergers and acquisitions involving domestic financial institutions. Changes to the law in 2005 limited the central bank governor's term to seven years from a lifetime appointment, and diluted the position's power over mergers and acquisitions.

Spain: dynamism faces challenges from housing market decline

The Spanish banking sector increased assets by 97% in the four years through 2007, reaching €2.9 trillion at the end of 2007. This was a much faster pace than the growth of most of the rest of Europe (around 60% in the UK and France, around 50% in Benelux, and less than 20% in Germany), although Ireland had

growth of over 100% over the same period. This period of rapid growth, in Spain as in Ireland, now faces challenges from a declining housing market.

As in many other European countries, Spain has three main categories of credit institution: joint stock commercial banks, savings banks, and credit cooperatives.

Two banks dominate the commercial banking segment, Banco Santander S.A. and Banco Bilbao Vizcaya Argentaria S.A. (BBVA). However, the lifting of regional restrictions in 1988 allowed the big savings banks to become more equal competitors. The subsector now controls approximately 40% of the total industry assets. Caja de Ahorros y Pensiones de Barcelona (La Caixa Group) and Caja de Ahorros y Monte de Piedad de Madrid (Caja de Madrid) are the third- and fourth-largest financial institutions, respectively.

The share of Spain's five largest credit institutions (as measured by total assets) was 41.0% at the end of 2007, according to the ECB, about in line with the EU-weighted average. Because they are still private-sector foundations, the savings banks are not publicly traded and are protected from takeovers. Law also regulates how the savings banks handle their profits: the banks must plough 50% of their earnings into reserves and use the rest for social purposes. The savings banks have no state guarantees and must compete fully with other financial institutions. Consolidation has driven these institutions' expansion. Although they are largely protected from takeovers, the savings banks can merge within their industry and within their region. In addition, no restrictions bar them from acquiring commercial banks. This has given rise to a raft of cross-sector and cross-regional mergers.

The credit cooperatives have also consolidated, their number falling from 147 in 1981 to 81 at the end of 2008. Credit cooperatives are much smaller than the banks and savings banks, controlling only about 4% of the total assets, but they play an important role in serving the rural population.

There are more credit institution branches in Spain than in any other EU country: more than 45,000 at the end of 2007, according to the ECB, versus just under 40,000 each in France and Germany and 33,000 in Italy. However, the average branch is relatively small, with employment in the credit sector in Spain 60% lower than in Germany and 40% lower than in France. The Spanish banking system's efficiency ratios have been relatively good.

Finally, Spanish banks have benefited from growth abroad. While Banco Santander and BBVA have sought to acquire rival European banks, most of their international growth has centred on Latin America, where a common culture and language have made the region a natural target for acquisitions. Banco Santander is the largest bank in Latin America, with a market share of more than 10%, followed closely by BBVA.

Banco de España, Spain's central bank, supervises all financial institutions. Regional governments also exert control over local savings banks and credit cooperatives. Despite the serious negative impact of a sharp decline in the housing market and construction activity after a period of extremely rapid price growth, the Spanish central bank has won praise for some initiatives. It has offset some of the pro-cyclicality of banking capital regulations by mandating counter-cyclical generic provisions. It has also refused to sanction certain types of securitization for capital relief purposes, shielding Spanish banks to some extent from exposure to the shadow banking system and its unwinding.

INDUSTRY TRENDS

There have been several common themes in European banking over the past several decades. The last major politically motivated nationalization was in France in the early 1980s. Subsequently, privatization has been the norm. At the same time, the mutual and co-operative credit institutions that had emerged from the nineteenth century and provided a valuable service to their customers were managed increasingly in the same manner as joint stock commercial banks, and increasingly those managers, sometimes supported by depositors, wanted to demutualise.

The trend towards shareholder-oriented banking accompanied a more general move towards shareholder value from the 1980s and 1990s. Banking systems have a number of different constituencies—employees, depositors, major corporate borrowers, governments. Many European banks were run more for the benefit of some of these constituencies than for the sake of profit or efficiency. The shareholder value movement had the advantage of a clear focus that cut through some of the inefficient crony relationships.

UK banks were among the first to move towards shareholder value in the 1990s. This led for a time to a retreat from some international business and from wholesale business and a focus on the domestic retail business, which at that time was highly profitable. The attractions of selling more products per customer, without the costs of acquiring new customers, were obvious, so that every bank, whether efficient or not, has wanted to increase cross-selling. Since about 2000, wholesale activities, both in terms of funding and products, became more important as retail banking margins declined through commoditization.

Without a customer-focused rationale for the products, cross-selling can easily become mis-selling. Shareholder value creation is still consistent with a customer focus as long as the objective is to build long-term brand value. Mis-selling hurts shareholder value when customers and regulators eventually catch up. Shareholder value is therefore still compatible with servicing the needs of constituents including customers in their roles as depositors or borrowers, and the wider needs that governments wish to see fulfilled in the economy such as maintenance of payments networks and the provision of finance to investment and to keep trade moving, in our view.

However, the danger of capture by another constituency—namely, employees—reappeared as banks expanded their wholesale market activities. In the past, managements had been afraid to tackle the interests of inefficient branch based employees. More recently, managements had become more dependent on the profits, real or illusory, created by traders and trading.

The current crisis is likely to see a period of experimentation to find the right mix to suit the various constituencies. Nationalizations that have resulted from rescues may take some time to be re-privatised. Even where the government has a majority shareholding, joint stock banks ought in theory to be run for the benefit of all shareholders. Some managements who are likely to be in this position have assumed that this will be the case. In practice, however, the legal theory may find it hard to withstand political and public pressures.

BANKING CONSOLIDATION STILL HAS SOME RATIONALE

A large part of the rationale for consolidation in the 1990s was that the development of information and communications technology made it possible to centralize many processes. These were taken out of branches into regional centres, and then at a second stage regional centres were consolidated into national centres, with a few back-ups. Having achieved this consolidation process for one branch network, it was possible to scale up and run another branch network through the same central system. This provided a rationale for domestic branch banking mergers.

For retail banking, depending on payment systems that remained largely national, the nation-state provided the natural perimeter for this consolidation activity. Although some other activities such as consumer lending or asset management were not subject to the same constraints, the benefits of consolidation were less marked in cross-border deals.

The euro as a common currency in non-physical terms came into being from the beginning of 1999, but that did not immediately facilitate common cross-border payments systems even with the Eurozone. However, the EU has progressively been developing rules to create a common market in cash payments, securities, and all financial instruments. The technical benefits of cross-border integration have therefore been enhanced, and already there have been sizeable cross-border banking mergers within the Eurozone.

At the same time, however, while the EU has tried to maintain common rules for depositor protection and to prevent unfair competition, the focus of national governments is to protect their own national depositors,

and this becomes more complicated when dealing with banks that are not necessarily headquartered in the same state as the government. The debate about where responsibility should lie between home and host government has been given added force by the failure of Icelandic banks, which, as members of the European Economic Area, could operate in the EEA but were not backed by a government that could immediately meet its obligations to depositors in host states.

BANKS MOVE EASTWARD

Western Europe has undoubtedly become more integrated, and the expansion of the EU has made possible expansion of this integration to the east. Ten countries—Estonia, Latvia, Lithuania, Poland, Hungary, the Czech Republic, Slovakia, Slovenia, Cyprus, and Malta—joined the existing 15 members of the EU in May 2004. Bulgaria and Romania, the most recent additions, joined in 2007.

Growth potential but also risks in Central and Eastern Europe

Many of Western Europe's largest financial institutions made an aggressive push into Central and Eastern Europe in order to diversify their revenues and build up a larger customer base. Financial services are generally a lower proportion of value added in the Eastern European economies than in the west. The normal pattern has been for financial services to increase as a proportion of GDP as real GDP per capita rises, giving the apparent possibility of more rapid growth.

Growth across Central and Eastern Europe was generally robust, despite some pauses, after the transition from state socialism in the early 1990s. More recently, however, the global economic slowdown has led to recessions ranging from severe to extreme.

Over the past 10 years, western European banks have aggressively moved into the region, becoming some of the largest financial institutions in Central and Eastern Europe. The merger between UniCredit and HVB Group has created the biggest regional lender by far in terms of assets, with Belgium's KBC Bank NV and Austria's Erste Bank following at second and third. Nordic region banks have also expanded in the neighbouring Baltic states.

The expansion of western European banks into Central and Eastern Europe has meant that a large part of the banking system is now controlled by foreign banks. Not only these banks, but also their home country economies, such as Sweden or Austria, have thereby become exposed to risks arising from Baltic, and Central or Eastern European economies. Part of the risk arose as new-to-banking customers in these countries were attracted by low interest rates on loans denominated in Swiss francs, euros, or Japanese yen, and took on large commitments that then proved difficult to service, especially if the local currency subsequently weakened. This parallels the problems suffered by countries such as Argentina in the past.

Further afield

In addition to Central and Eastern Europe, western European banks have expanded their operations into other countries around the Mediterranean, including Turkey and North Africa. The arguments for growth and increased penetration of banking services in these countries is similar to that in Central and Eastern Europe, although without the near-term prospect of EU membership. In addition, Spanish banks have been the main investors in Latin America, although some other western European banks (for example, HSBC) also have a presence there.

The growth of Asian economies, in particular India and China, has led European banks to try to increase their contacts, although restrictions on acquiring stakes or even opening branches have prevented a large-scale rush. The Asian operations of ABN AMRO were part of the attraction of that acquisition, although we think that in changed conditions Royal Bank of Scotland is likely to sell them. HSBC and Standard Chartered have both continued to fill in parts of their networks in Asia. The Middle East was another area of economic and banking growth until recently, with many firms expanding in Dubai, but again likely to experience a bust following the boom, in our view.

MUSIC SLOWS DOWN IN WHOLESALE BANKING

The universal banking model of western European commercial banks allowed them to combine retail bank deposit taking with investment banking advisory, trading, and underwriting business. Banks have cut capacity because of a shortage of revenue opportunities in some areas in the near term.

Nevertheless, there are still areas where competition remains intense, and the Europe's large and complex financial institutions (*e.g.*, Deutsche Bank, Credit Suisse, HSBC, Barclays, and BNP Paribas) are likely to remain near the top of the global and regional league tables, in our view. Some have gained market share as competitors have weakened. UBS and Royal Bank of Scotland each have new managements that are intent on sharpening focus, but we expect them both to retain substantial international presences. Société Générale, Calyon, and ING Groep N.V. often feature just behind the leaders in league table rankings.

Still ranking in advisory

Global announced M&A declined substantially in 2008 to well under US$3 trillion, from US$4 trillion in 2007. Despite some deals, aggregate activity in the first half of 2009 remained well below peak levels. The US houses that are now also banks have continued to dominate the highest echelons of the global advisory league table, generally taking the top five places; they are also strong in the European advisory league tables. Nevertheless, several of the European houses have remained in the top 10 in 2008 and into 2009, including UBS, Deutsche Bank, and Credit Suisse. Barclays, which in 2008 bought the North American investment banking and capital markets business of troubled US firm Lehman Brothers, is also now more prominent in M&A. BNP Paribas is one of the more regular other participants in the league tables.

Underwriting—more debt than equity

European banks consolidated their grip on international bond underwriting in the first half of 2009, with Barclays Capital, Deutsche Bank, and HSBC repeating their top five positions from 2007 and 2008. BNP Paribas and Royal Bank of Scotland also rank in the top 10 (according to Bloomberg league tables).

In global equity, by contrast, the top four or five positions in 2008 and the first half of 2009 went to US houses, with UBS, Credit Suisse, Deutsche Bank, and Barclays Capital (following its Lehman acquisition) in the top 10, but not quite at the summit.

Syndicated loans and leveraged lending

While some investment banks had made inroads into the syndicated loan business, the European syndicated loan league table continued to be dominated by commercial banks, with RBS, BNP, and Barclays consistently near the top.

Royal Bank of Scotland, BNP, Barclays, and Deutsche Bank were all in the top five for the European leveraged loan mandated arranger table in both 2007 and 2008, according to Bloomberg. They retained ranking in a market that shrank notably in the first half of 2009. In the US leveraged loan business, European banks such as Credit Suisse and Deutsche Bank have traditionally had a presence although not necessarily in the top five. Again, this market shrank considerably in the first half of 2009.

UNIFICATION OF EUROPEAN FINANCIAL MARKETS

The EU's moves to create a unified marketplace for financial services are continuing to have an important impact on the development of the industry, although this should take many years to work through. Under a unified banking market, a bank authorized to operate in any EU member state could provide the same services, under common rules, anywhere in the region. The proposition that a single market would spur economic growth is plausible. The strains that affected markets in 2008, however, led to questioning of whether the host country could always be protected if the home country of a bank was not able to provide protection to customers in the host country. Both the complexity of banking regulation and the EU legislative process, and individual countries' desires to protect their own banking industries and depositors, mean that the institutional integration may still take time to achieve, in our view.

Although the EU legislators have agreed on most of the 42 market-unification measures laid out in the union's 1999 Financial Services Action Plan (FSAP), member countries have yet to put many of the rules into effect by transposing them into national law. Other rules have taken effect only recently. Technical details specifying how still other parts of the FSAP will function remain unfinished.

Wholesale markets

Wholesale financial markets within the EU are far more integrated than retail markets. The combination of the launch of the single European currency, a unified monetary policy, and the development of two pan-European payment systems has allowed the European Union to develop a more unified short-term money market. Initially, there was some convergence of short-term rates (including those that have not adopted the euro). Many of the countries in Central and Eastern Europe in line to adopt the euro had also seen lending rates begin to converge with and track those in the Eurozone. However, the financial crisis has led to widening differentials between government bond spreads even with the common currency zone. There have even been anecdotal reports of a preference for euro bank notes issued by countries such as Germany as opposed to those issued by some of the southern Eurozone countries.

Common electronic platforms allow trading of government bonds across Europe, and many transactions can be cleared through centralized systems. Some bonds are available only in national securities repositories, however, making it difficult to use them as collateral in cross-border repurchase transactions (a form of secured lending in which a bank buys bonds from another bank, on the condition that the second bank buy them back on a specified date).

Retail markets

Substantial national barriers remain in retail financial services. Products authorized for sale in one country may not be authorized in others, national regulators may drag their feet in approving products to be sold by banks based in other countries, the cost of complying with local regulations can be high, and member countries' tax systems still may discriminate against foreign products. Recent steps toward creating a true single market include the following:

◆ **Clearinghouse systems.** The Euro Banking Association (EBA), a 190-bank trade group, established the EBA Clearing Co. in 2000 to operate electronic platforms that can handle large amounts of retail transactions and allow banks to enter data only once from the start of a transaction through completion. Entering data only once reduces both labour costs and the risk of errors. The EBA operates the EURO1 large-value payment system, the STEP1 low-value payment system, and the STEP2 mass-payment system.

◆ **Money transfer charges.** An EC regulation, implemented in July 2003, required banks to charge the same amount for money transfers of less than €12,500 (US$15,900) within the EU as for domestic transfers. Since January 2006, banks have had to charge the same amount for payments of up to €50,000.

◆ **A single payment system.** The Single European Payments Area (SEPA) was launched on January 28, 2008. SEPA builds on a 2005 EU directive, known as the New Legal Framework, that makes it much easier from a legal standpoint to establish a single payments area. The SEPA project allows direct debits across European borders and eliminates the patchwork of national payment areas employed in the EU, while cutting settlement times for domestic and cross-border money transfers.

SEPA applies to payments in euros, but not just in the countries that have adopted the euro as their currency. It will also extend to euro payments between other EU countries, and in addition to the neighbouring countries of Iceland, Liechtenstein, Norway, and Switzerland.

The initial product was for credit transfers, and the objective is to include direct debit payments by November 2009. Usage of SEPA for eligible transfers in 2008 has been reported to be modest, and it remains to be seen if the theoretical advantages can be translated into practical use.

HOW THE INDUSTRY OPERATES

Even within a given country, banks differ widely in the mix of services they offer and the emphasis they place upon each, but the basic business model is the same. In this section, we discuss how that model works, before moving on to highlight some of the differences between European banks and their counterparts elsewhere.

BANKING BASICS

Banks perform many of the same functions everywhere in the world, serving as intermediaries between people who want to save and invest capital, and those who need money to buy homes or expand their businesses. They provide similar services to the same types of customers and make money in similar ways. Interest rates are crucial to banks in every country.

Services and customers

Banks provide a wide range of services to individuals, small businesses, and major corporations.

Wholesale business

Wholesale services, aimed at clients ranging from middle-market companies to the world's biggest businesses, include lending, capital raising, financial markets operations, and transaction services.

The structure and terms of wholesale loans tend to vary much more than in the retail and small-business banking sector, and because each loan is larger, banks tend to devote more attention to each deal. They also sometimes share the risks and returns from a large or especially risky loan with other players, inviting other banks to take part in loan syndications, arrangements in which two or more banks enter into direct contractual relationships with a borrower, sharing the loan.

In addition to lending, commercial banks often help companies raise capital from the broader financial markets either through debt issuance or through stock offerings. In Europe where the universal banking system has tended to prevail, the split that created a separate category of underwriting investment banks in the US has not applied.

Wholesale banks' financial markets operations focus on helping companies buy or sell foreign exchange, securities (both debt and equities), options, and other derivatives. In addition to performing simple transactions on behalf of clients, they help companies manage their exposure to foreign currency and interest-rate risk. Banks also help their clients structure and arrange securitizations.

While private banking is often seen as separate from wholesale banking, the largest banks operating in capital market are usually the same as the largest managers of assets for high net worth individuals.

Transaction services include cash management (collections, payments, and liquidity management), clearing and execution, custody services (holding equity or debt certificates on behalf of a client), and trade services (providing trade finance and letters of credit).

Retail business

Although credit cards, insurance, mutual funds, financial planning, and asset management are critical markets for banks, their core retail business is lending and taking deposits. Home mortgages account for the largest segment of retail lending, but banks offer a variety of other loans.

◆ **Loans**. Loans may be of two basic varieties: term and revolving. With a term loan, a borrower receives credit over a long period, often between two and 10 years, to finance major purchases such as a car or boat. With a revolving loan, a bank agrees to make loans up to a specified amount. As that loan is paid off, the borrower is allowed to take out additional loans in the amount paid off. In addition to receiving interest payments on these loans, banks charge a fee for keeping the funds available. Credit cards provide one type of revolving loan.

Loans may also be either secured or unsecured. With a secured loan, the borrower pledges other assets as collateral. Unsecured loans, such as credit-card debt, are not guaranteed with collateral.

◆ **Deposits**. Deposits come in three basic varieties: demand deposits, savings accounts, and time deposits. Demand deposits, or checking accounts, may or may not offer interest, but they are "demandable," or payable on demand. The bank must provide cash in exchange for the depositor's check, assuming the depositor's account contains enough funds.

In practice, savings accounts are also demandable since most banks waive the requirement that 30 days' notice be given prior to a withdrawal. Time deposits, or certificates of deposit (CDs), differ from savings accounts in that they come with a specific maturity, ranging from a few months to a few years. They also carry significant penalties for early withdrawal.

SOURCES OF BANK FUNDING

Banks fund their operations in a variety of ways, including taking customer deposits, tapping the debt markets or getting loans from other financial institutions, and securitizing assets.

The role of deposits

Banks have traditionally relied on building up their deposit bases in order to fund their lending. Funding via deposits involves liquidity risk because in most cases, depositors can withdraw their money at will, while banks generally cannot demand repayment of a loan until it comes due. The spread between the lower-than-market interest rates banks offer on deposits, and the market-level rates charged on loans, compensates banks for taking this risk.

Some banks have found it more difficult to raise funds from deposits in recent years because of competition from other liquid financial products, such as money market accounts, that offer higher interest rates than can be earned on traditional bank deposits.

Managed liabilities

When a bank's s deposit base is insufficient to cover its lending activities, the bank may tap other sources of financing, such as other banks. The capital acquired from these sources usually reflects market interest rates and is referred to as "managed liabilities." These funds can be increased or reduced at will in order to provide liquidity for the banks and make up any funding shortfalls. Examples of managed liabilities can include foreign currency borrowings and large negotiable time deposits, usually over $100,000.

Since these sources of funds carry higher interest rates than traditional deposits, they are more costly for banks. As such, banks may earn a much smaller spread between their funding costs and the rates they charge on their loans.

Securitization: had been a growing source of funds

Securitization had become increasingly popular as a means of financing bank operations. Through a securitization, a bank typically pools various financial assets such as mortgages or credit card receivables, structures them as asset-backed securities, and sells them in the public securities market. This generates liquidity for banks to fund their lending operations.

Increasingly, securitization was seen as transforming the banking business model from one of "lend and hold" to an "originate-to-distribute" model, where the bank originates the loan and then unloads the risk on other financial institutions such as hedge funds. Securitizations leave net income substantially unchanged because they replace interest income, as well as credit losses and other expenses, with loan servicing fees, while reducing the banks' on–balance sheet assets.

As loan receivables are securitized, the banks' on–balance sheet funding needs are reduced by the value of loans securitized. Banks often continue to service the accounts, for which they receive a fee. An example would be the retention of the mortgage servicing rights of a securitized mortgage portfolio. Funds received

from securitizations sold in the public market are typically invested in money-market instruments and other securities, which are available as a source of capital to fund loan growth.

During the revolving period of a securitization, which can range from 24 to 108 months, no principal payments are made to security holders. The revolving period allows the securitization issuer to resolve the mismatch in the timing of the payments promised to security holders and the timing of the payments on the assets backing the securitization. Payments received on the accounts backing the securitization are used to pay interest to holders and to purchase new loans receivables generated by the accounts so that the principal dollar amount remains unchanged. Once the revolving period ends, principal payments are allocated for distribution to holders of the securitized assets.

As a result of the securitization process, mortgages and other bank loans are being indirectly funded by investors worldwide. This was perceived as reducing the overall risks to the bank that originated the loan by moving some of the risk that borrowers will default into the hands of institutional investors. Also, securitizations allow financial institutions to manage their exposure to a single borrower, industry, or loan type, further reducing their credit risk. Although this theory appeared to work for many years, protecting the banking industry during the downturn in the aftermath of the dot-com bubble, the spread of risk was possibly less than was first thought as it turned out that the ultimate places were parts of the shadow banking system that drew down liquidity from the banks in a crisis.

In addition to giving the appearance of increasing liquidity and spreading risk, securitizations in theory help banks and other financial institutions to reduce their interest-rate sensitivity somewhat. Managing the residual interest rate convexity risk, however, gives rise to market risk.

Interest spread and other sources of income

How profitable the banking business is depends in part on the net interest spread—the difference between the average rate a bank receives for its interest-earning assets (loans and holdings of debt securities) and the rate it pays for deposits and borrowed funds. Other factors include a bank's costs and the degree to which it has developed other sources of income.

These other sources of income may include a broad range of fees charged to customers, capital gains on securities held for trading, and interest from debt securities. The last was traditionally government bonds, but increasingly in recent years, this category has included other kinds of securities that are held as a way of receiving a return on assets while keeping them in a supposedly liquid form in order to pay depositors or meet loan demand.

Role of interest rates

Net interest income traditionally accounted for the majority of bank revenues, so it is not surprising that changes in interest rates have been seen as critical to the industry. On a simplistic approach, reductions in interest rates can create demand for loans, while increases can reduce borrowing, or slow its growth. Rate reductions also encourage borrowers to repay their debts early in order to refinance at lower rates, however, forcing lenders to find new ways to invest their money.

Equally important, changes in rates could affect interest spreads. If a bank has borrowed $1 million for five years at a fixed rate of 5%, and loaned that money for five years at 6%, it will collect $10,000 per year (the difference between its annual borrowing cost of $50,000 and the customer's cost of $60,000) no matter what happens to interest rates. However, if a bank has borrowed $1 million at 5% for three years, while lending the same amount at 6% per year for five years, the annual return on investment would shrink if interest rates rose during the final two years.

Rather than addressing this risk by matching assets (loans) to liabilities (deposits and borrowings) on a one-to-one basis, banks match assets and liabilities with a similar duration. Duration is a measure of a bond's length. While a bond may mature at a set time, say 30 years, its cash flows may be received at different points over its life. Duration is the weighted-average time until fixed cash flows such as interest payments are received or the instrument reprices (changes interest rate).

If more assets than liabilities are due to be repaid or repriced, the bank stands to benefit if rates go up. The bank would lose if more liabilities than assets were due to reprice as rates rose.

This view is the traditional interpretation of interest-rate risk for banks, but ignores changes in the value of instruments in future periods. Thus, this view is a good measure of interest-rate risk only if interest-rate exposures in the current period are the mirror image of those faced in the future and if any shift in the yield curve happens in parallel, meaning the entire yield curve moves up by the same amount. The risks posed by interest rates are more difficult to capture if the yield curve flattens or steepens.

Banks may use futures, swaps, and options to hedge their interest-rate exposure. Lending and borrowing at variable rates also allows banks to avoid interest-rate risk. The huge expansion of global interest rate derivatives since the 1980s, from US$1 trillion to approaching US$500 trillion in 2008, has transformed the nature of interest margins, although accounting protocols still stuck in an earlier, simpler environment, make it difficult to narrate the risks and exposures.

Cash flow derivatives give banks the capacity to fix interest margins within fairly narrow ranges in a wide variety of interest rate scenarios. What banks cannot fix is the fair value of their exposure to interest rate movements, either through changes in the shape of the yield curve, changes in relative credit default spreads, or changes in volatility affecting derivatives. Sensitivity to interest rate movements therefore comes either through changes in the fair value of assets and liabilities on the balance sheet, or through trading profits where these fair values are marked to market through the income statement.

CAPITAL ADEQUACY REQUIREMENTS

An updated version of the 1988 Basel Capital Accord, known as Basel II, took effect in the EU through the Capital Markets Directive at the start of 2007. The new accord builds on Basel I, which was an initial attempt to ensure that banks were maintaining sufficient levels of capital for the risks they were underwriting. Basel II introduces new ways for banks to measure risk, which could alter the industry's competitive landscape. In practice, for larger banks applying more advanced methods, implementation only began at the beginning of 2008, with full disclosure of the impact not due until 2009. Meanwhile, even as the new system was being implemented, doubts about the pro-cyclicality of requirements under the system intensified.

Basel I

Basel I recommended that regulators require internationally active banks to maintain capital of 8% of their risk-adjusted assets. It set up two categories of capital: Tier 1, which includes shareholders' equity and retained earnings; and Tier 2, which includes other external and internal capital sources. Tier 1 capital must account for at least half of a bank's capital.

To adjust banks' securities and loan portfolios—their assets—according to the level of risk, Basel I called for bankers to group the assets into four categories. Assets in the first and least risky category, such as US Treasury bonds, have no capital requirement, while claims on other banks have a 20% requirement, residential mortgages have a 50% requirement, and loans to other companies and individuals have a 100% requirement. In other words, $1 million worth of loans to banks counts as $200,000 in assets for the purpose of calculating capital adequacy; the same amount of loans to individuals or nonbank companies counts as $1 million.

Regulators in more than 100 countries adopted the agreement. It succeeded in bolstering the overall level of capital and preventing banks from lending more money than their capital bases could handle. Bankers have complained, however, that the one-size-fits-all treatment for private-sector loans fails to account for variations in the credit quality of commercial borrowers. They argue that it has reduced the quality of banks' on-the-books loan portfolios by failing to require banks to increase their capital if high-yielding, risky loans make up a large part of their assets. Low-yielding, less risky assets may be moved off the balance sheet to leave capital for riskier assets.

Basel II

In June 1999, the Basel Committee proposed revising the system to enable banks with less risky portfolios to reduce their capital levels and require more aggressive lenders to increase them. The Basel II rules, which were initially released in 2004, maintain the 8% minimum capital requirement but lay out new ways to calculate risk-adjusted assets (the denominator in the ratio of regulatory capital to assets).

Instead of requiring all banks to use the same formula in calculating risk-adjusted assets, the plan offers three approaches to making the calculation. It also includes provisions to include operational risk in risk-weighted assets and lays out techniques for assessing the risk involved in securitizations, which the current accord does not cover.

Banks may choose among the standardized approach, which is similar to the current system, and two internal ratings-based (IRB) approaches. Banks using IRB systems (the foundation and advanced approaches) plug their own internal assumptions about the key factors that determine risk levels (items such as the probability of default on a loan and the amount of money that would be lost if the borrower defaulted) into formulas laid out by regulators to determine capital requirements.

The advanced IRB approach allows banks to use more of their own assessments of the risk determinants; the foundation IRB system relies more on inputs laid out by regulators. Banks that wish to use the advanced IRB approach must show that they have sophisticated risk-management systems in place. The requirements for the foundation IRB and standardized approaches are less stringent.

The Basel Committee set capital requirements for banks using the IRB approaches at a minimum of 90% of requirements under Basel I in the first year of implementation. The requirement falls to 80% of Basel I levels in the second year, with the transition dropping off at the beginning of the third year (effectively from the beginning of 2010).

Basel II also calls for more rigorous review by regulators of banks' internal capital allocation processes, and allows regulators to require banks to hold more capital than called for under the 8% standard, if necessary. The revised system also imposes public disclosure requirements, allowing market forces to put pressure on banks to maintain adequate capital levels. In addition to adoption of the capital requirements, the EU has given more powers to a bank's home supervisor that will allow it to overrule the authorities overseeing the bank in another EU member state in certain situations.

Benefiting big banks no longer so popular

Large banks with sophisticated risk-management systems were seen as bigger beneficiaries from Basel II as they would be able to apply the more capital economizing foundation and advanced IRB systems than smaller banks. Adopting the more complex approaches could have reduced their minimum capital requirements, giving them an advantage relative to smaller banks using the standardized approach. Small banks might have to choose whether to invest in more advanced systems, or hold more capital relative to assets than their rivals, making it more difficult to lend on competitive terms.

The financial crisis has led to considerable disquiet among the public, politicians and regulators about the rescue from public resources of large banks. Regulators wish to reverse some of the pro-cyclical elements of the capital requirements. They also wish to increase capital requirements for trading book positions, particularly where trading books might be less liquid. And they do not wish to have banks that are too big, or too interconnected, to fail.

THE EUROPEAN BANKING INDUSTRY

Despite the common points outlined above, the way the industry operates differs significantly by region. The European Monetary Union's central bank operates under different constraints than those faced by national banks.

The European Central Bank

The importance of interest rates in determining the fair value of banks' assets and liabilities means central banks, which control short-term interest rates, are critical to the banking industry. Like their counterparts elsewhere, central banks in Europe aim to promote economic growth while keeping inflation in check by controlling interest rates and the supply of money.

Europe's banking system differs in that the ECB sets monetary policy for the countries that have adopted the euro as their common currency (which numbered 15 at the end of 2008, with an additional member making 16 from the beginning of 2009). Economic conditions within those countries vary considerably. Despite the disparity in growth rates, the ECB has to set a single interest-rate policy for the whole Eurozone. Raising rates to contain inflation in faster-growing economies increases the risk of dampening economic growth in the slower-growing economies.

Europe's economic history, particularly Germany's experience with hyperinflation in the 1920s, has also influenced the way the ECB operates. While the US Federal Reserve Act sets out maintaining maximum employment, stable prices, and "moderate long-term interest rates" as the goals of monetary policy, the ECB's single goal has been to maintain price stability by avoiding both inflation and deflation. Some observers argue that the focus on inflation has, at times, kept the ECB from lowering rates enough to allow strong economic growth in Europe.

The ECB softened its stance somewhat in May 2003. The bank had aimed to limit inflation to less than 2% annually over the medium term, but changed the policy to one of keeping the inflation rate below but close to 2%. Setting a target that acknowledges the value of maintaining limited inflation positioned the bank to pursue a looser monetary policy.

Government ownership

European banks historically have had a higher degree of state support than those in the US. This complicated the competitive landscape by forcing banks to compete against rivals that enjoy below-market borrowing costs as a result of government backing. EU competition rules governing state bailouts have been sensitive to this issue, and have tried to create a level playing field to avoid state supported banks taking an undue market share.

The legacy issue of state guarantees for the German Landesbanken was largely resolved by an agreement to remove new guarantees from July 2005, although with some run down for existing guaranteed issues. National governments and the EU competition authorities are still working out the terms on which they can support systemically important banks and protect depositors, and keep their economies functioning.

Universal banking and bancassurance

Another hallmark of the European banking system is the tendency for banks to offer a range of financial products and not just simple banking services. While the degree to which banks do this varies widely, Continental European banks tend to be set up as universal banks, offering banking, fund management, investment banking, and insurance services.

German banks are the best-known example of this banking structure, with Deutsche Bank and Dresdner Bank offering a host of intermediation services to a wide range of clients. As a result, German banks tend to be well diversified. In some instances, their securities and capital markets operations had become their most profitable businesses prior to the losses suffered from the second half of 2007 onwards.

In other countries, such as France and Italy, banks have aggressively moved into the insurance market, setting up bancassurance arrangements. This system has allowed them to tap into another revenue stream and cross-sell a number of financial products and services to their banking clients. This helps to diversify financial institutions' revenue sources, maximizes profit per customer by selling banking products to insurance customers (and vice versa), and spreads the cost of distribution systems (such as branch networks or online sales sites) across a broader revenue base.

The bancassurance model has worked best for banks operating in Southern European countries and in the Benelux region because the high density of bank branches allows for banks to more easily cross-sell insurance products. Examples of highly integrated businesses include Belgium's KBC Bank & Insurance Group, the Netherlands-based ING Groep, and Fortis, jointly based in Belgium and the Netherlands before its split-up and part nationalization.

Higher costs

Continental European banks have tended to have higher cost bases than their counterparts in the US or the UK. Part of this might have arisen from business mix, since banks with more non–balance sheet driven business tend to have a higher input of labour costs.

Labour legislation has been used sometimes as an excuse by management for failure to control costs, although with determination managements even in countries such as Germany could achieve greater productivity and efficiency. Banks in many parts of Europe have controlled expenses by outsourcing and offshoring, transferring jobs to areas that had lower wage costs but quite educated workforces, such as Central Europe or India.

French bank managements have tended to point to the age profile of their workforce as a problem that in due course would lead to an opportunity. A large proportion of workers at French banks were hired when banks were expanding in the 1960s and early 1970s. Those workers have accrued benefits as they have aged, making them more expensive to employ, until they begin to retire.

The IFRS accounting standard

The EU adopted a new set of accounting standards in 2005 designed to improve uniformity across the region and make accounting more transparent. Publicly traded EU companies were required to prepare their 2005 consolidated financial statements under a common set of rules, the International Financial Reporting Standards (IFRS). The EU chose to shift to IFRS from national accounting standards in order to encourage investment across national borders within the union by making all EU-based companies' financial statements directly comparable.

The adoption of "fair value" accounting is one of the key differences between IFRS and older standards. Under this accounting standard, assets and liabilities are to be shown on a balance sheet at market prices, or at a close approximation of market prices, instead of at historical cost. Additionally, under fair value accounting, revaluations of assets and liabilities must be reported on the income statement, which can lead to large swings in profits from one period to the next, depending on the fluctuations in value of these assets and liabilities.

IFRS allows for a combination of the two accounting standards—fair value and historic cost—but there is still debate on how to use this combination coherently. While fair value makes perfect sense for valuing financial assets that can be traded on liquid markets, such as equities or mortgages, there is concern about the appropriateness and usefulness of using fair value accounting for assets and liabilities that do not trade on liquid markets.

Non-exchange traded derivatives and certain types of structured finance with embedded derivatives can be examples of financial instruments with no observed or comparable prices from which to estimate a fair value. Using a model to value such assets is sometimes called marking to myth. Traditionally, banks and other institutions had used cost to value their derivatives, which meant they were carried at zero cost on the balance sheet, reflecting an even greater myth than the reviled models.

Although some banks argued that it would be difficult to explain the earnings volatility arising from use of fair values to investors and analysts, in practice most have begun to get used to it. In extreme cases, the argument was that losses linked to changes in derivatives valuations could undermine shareholders' equity so badly that a bank would be in danger of falling below minimum capital requirements. This approach appeared to be based on the assumption that if management ignored changes in fair values, the markets would do so as well, which did not turn out to be the case.

While there are some differences between IFRS and US GAAP in fair value accounting and treatment of derivatives, there has been considerable convergence between the two systems, which should allow comparable accounting. To the dismay of the IASB, the body that runs IFRS, the European Commission threatened to use some of its powers to excise more of the IFRS fair value rules. To avoid such a change making the rules nonsensical, the IASB in October 2008 announced a compromise whereby with certain limitations, hard to value, illiquid non-derivative financial instruments could be re-classified from held for trading, where fair value changes would go through the income statement, to available for sale or loans and receivables.

KEY INDUSTRY RATIOS AND STATISTICS

Changes in interest rates, growth or contraction in GDP, and credit quality among both commercial and retail borrowers have important implications for banks.

◆ **Interest rates.** Interest rates are the among the key macroeconomic indicators affecting the fair values of banks' assets and liabilities, so bankers worldwide focus closely on central bank policy and its impact on interest rates. Bank analysts watch both short-term and long-term rates, as well as the relationship between them, which can be graphed as the "yield curve."

Within the European monetary system, short-term rates are generally represented by the minimum bid rate for the ECB's refinancing operations—the equivalent of the Fed funds rate in the US. Central banks lower short-term rates in order to stimulate economic growth by reducing borrowing costs. They tend to raise rates when strong economic growth increases the risks that both wages and prices will rise and generate inflationary pressures.

Short-term interest rates worldwide moved precipitously lower in 2001, 2002, and 2003, but began to rise again in 2004, 2005, and 2006. Central banks throughout Europe raised rates in order to control inflation over the long- term, as commodity prices rise and stronger economic growth leads to higher consumer prices.

The ECB continued with its scheduled rise of 0.25% to 4.25% for its refinancing rate in July 2008, when it still perceived a risk of inflation. In October 2008, however, it reversed direction, cutting rates by 50 basis points twice in that month, a further 50 basis points in November, and an unprecedented 75 basis points in December, bringing the refi rate down to 2.50% by year-end 2008. In the opening months of 2009, the ECB cut its refi rate a further 1.50% (two steps of 50 basis points and two steps of 25 basis points) to a low of 1.00% from May. While this was not as sharp a cut as at some other central banks, the ECB has provided the banking system with considerable liquidity, so that effective overnight rates in euros since late 2008 have been generally some 50 basis points below the refi rate, whereas prior to that the overnight rate typically tracked the refi rate.

The Bank of England, the UK's central bank, raised rates in 2006 and early 2007, bringing the benchmark interest rate to 5.75% as of July 2007 from 4.5% a year earlier. It began cutting rates at the end of 2007, initially in two steps of 25 basis points in December 2007 and April 2008, then by 50 basis points in October, 150 basis points in November, and a further 100 basis points in December 2008, bringing the rate down to match its lowest-ever level of 2.00%. In each of the first three months of 2009, the Bank of England's Monetary Policy Committee cut its repo rate by 50 basis points, bringing the rate to a further all-time low of 0.50% in March 2009. Having reached what it considered to be the limits of interest rate policy, the Bank of England's Monetary Policy Committee from March 2009 onwards began to use its Asset Purchase Facility to increase money supply by direct purchases of government bonds and some private sector paper.

◆ **Gross domestic product (GDP).** While there is not a one-to-one correlation between bank profits and growth in GDP—the market value of all goods and services produced in a given economy during a set

period—commercial banks tend to do better when GDP is rising than when it is contracting. Companies are more likely to borrow to fund expansion, and they tend to hire workers as their businesses grow. This reduces unemployment, making consumers more confident and likely to borrow as well. Banks benefit because demand for loans from both businesses and consumers increases, and because a healthier economy makes it easier for borrowers to service their debts. Banks often also perform better when an economy is operating close to its productive capacity than when there is a large gap between potential and actual output.

Although measuring this output gap is subject to uncertainty about measuring potential output, there does seem to be empirical evidence that bank stocks perform relatively better when the output gap is narrow, although readers should note that past performance is not a valid indicator of future results. Since a narrow output gap would be associated with lower unemployment and higher asset prices, this is understandable.

◆ **Corporate default rates**. Another indicator that may shed light on the performance of the banking industry is corporate default rates. Corporate default rates and the outlook for such events measure credit trends in the broader economy. When default rates are high, banks are likely to increase their provisions for bad debts, which can undermine profitability. Banks that have lent to these risky companies are more likely to have higher bad debt provisions.

Default rates across Europe were low in 2005 and 2006, and at the non-financial corporate level remained low in 2007. Corporate bankruptcies increased sharply in 2008, a trend that is likely to continue well into 2009 and possibly beyond.

◆ **Personal insolvencies**. The rate of personal insolvencies also helps determine banks' financial performance, specifically in the area of consumer lending. As with corporate default rates, in periods of economic weakness, personal insolvencies are likely to rise, which can force banks to increase provisions for bad debt. This in turn reduces profitability and raises the risks to banks with a large consumer lending business.

In the UK, the European economy with the highest absolute and relative levels of household debt, a sharp increase in volumes of personal debt led to a surge in delinquencies on unsecured consumer debt in the period to 2005, despite generally benign economic conditions and low levels of unemployment. The numbers stabilized in 2006–2007, but a weakening of the economy and of house prices is expected to lead to a sharp increase in losses, although the very low interest rates have had some mitigating effect.

HOW TO ANALYZE A BANK

Evaluating any business from the perspective of an equity owner can be boiled down to estimating the net present value of future cash flows. For most non-bank businesses, cash can be defined as claims on banks and equivalent financial institutions.

Banks differ from most other businesses in that a large part of their business consists of financial claims and liabilities, and defining where on the spectrum of liquidity is the boundary between cash and non-cash is not intuitively obvious.

One of the precepts of financial theory since 1958 has been the Modigliani-Miller theorem that the value of an enterprise is independent of how it is financed. At first sight, this does not necessarily apply to a bank, since the cost of finance of a bank is crucial to its value. The efficient markets financial theory orthodoxy of the past half century has been challenged in recent times, but on certain narrow assumptions it still claims some respectability. On those narrow assumptions, it might still be possible to use a Modigliani-Miller perspective to compare the return on gross assets of a bank with the weighted total cost of capital including equity, deposits and other funds (a line pursued by Miller himself in an essay included in 'Merton Miller on Derivatives' published in 1991).

The leverage of banks (in Europe and globally) increased substantially in recent decades. There was a particularly strong rise in the ratio of gross assets to net equity over the period 2000–2007. Because the regulatory focus was more on risk-weighted assets, which were declining relative to gross unweighted assets, this did not show up so much in regulatory capital ratios.

Higher leverage allowed return on equity to be maintained or increased. When gross return on assets declined, or went negative, high leverage led to substantial problems. Regulators and others are now calling for reduced leverage over time.

If the Modigliani-Miller theorem is correct, this should not affect valuation, some regulators argue. We would not pretend to resolve this question. Our view would be that:

- Any general theory of financial behaviour of firms should apply to banks as well as to other firms;
- Nevertheless, despite the risk of self-contraction, we believe that the value of banks is not indifferent to financing costs and leverage.

BALANCE SHEET AS PRIMARY FOCUS FOR BANK ANALYSIS

The balance sheet should be the initial focus of any analysis and valuation of a bank, in our view. Employees, physical branch infrastructure, IT systems, and networks are all crucial components of a bank.

But for the customers, serving whom must be the main rationale of the business, the bank is essentially a provider and custodian of financial assets and financial liabilities. A large part of the interaction between a bank and its customers shows up on the balance sheet as loans to customers and deposits and other accounts from customers. Much traditional bank analysis focused on ratios of financial income and expense to these customer accounts.

The balance sheet will also show financial asset and liability relationships with other banks, wholesale market counterparties, holdings of securities, securities liabilities, and the fair value of derivatives positions. For the 29 large European banks followed by Standard & Poor's Equity Research, customer loans were 36% of total assets at the end of 2008. However, there was a polarization between the 10 large complex financial institutions, where customer loans were only 24% of total assets, and the more retail focused group, where customer loans were 59% of total assets. The retail focused group accounted for well over half of the customer loans, but only a third of total assets and a fifth of non-customer assets.

Beyond the balance sheet

The financial asset and liability relationship between a bank and its customers and counterparties goes beyond the balance sheet. A bank providing lending facilities to customers through overdrafts, credit cards or other arrangements will not show the undrawn amounts on the balance sheet, but will have a contingent commitment. Because it is recognized that drawings are more likely as default approaches, exposure at default has to take account of this off–balance sheet commitment.

Securitization led to the creation of off–balance sheet vehicles. Some were excluded from regulatory capital, but stayed on the balance sheet under accounting rules. Others were, in theory, separate from the bank, but in practice the bank had a commitment to provide liquidity.

Assets under management for customers can create other relationships. For some banks, assets under management for customers can be of a similar order of magnitude to customer deposits. Usually (but not always) assets under management are not on the bank balance sheet. But even if the assets belonging to customers are off–balance sheet, there can still be some responsibility for the bank. Banks that ran money market funds that were intended to preserve capital value have in some circumstances felt obliged to purchase assets from the funds that had fallen in value, taking the loss onto their own account to preserve customer goodwill.

The boundary between financial assets and liabilities that appear on a balance sheet and those that do not is not hard and fast. It can depend on accounting convention. The way that derivatives or instruments such as

sale and repurchase agreements (repos and reverse repos) are accounted for can create big differences in the size of the balance sheet. Financial assets and liabilities related to wholesale and capital market activities can be more volatile than those related to customer loans and customer deposits.

Balance sheet versus non–balance sheet income

Much analysis of banks and the ratios commonly used in evaluating banks have been based on the assumption that the main activity of banks is taking customer deposits and making customer loans. This activity generates interest income, sometimes referred to as balance sheet–driven revenue.

Under International Financial Reporting Standards, the accounting standard adopted by most European banks, interest income is recognized on interest-bearing financial instruments classified as held to maturity, available for sale or other loans and receivables, using the effective interest method, which includes all related cash flows, including some formerly treated as commissions.

Non-interest income includes fees and commissions and trading income on assets held for trading or marked to market through profit or loss. While non-interest income is sometimes referred to as non–balance sheet driven income, it frequently relates to buying and selling financial assets and incurring financial liabilities that are on the balance sheet, or to arranging for customers to have other financial assets or liabilities that are off–balance sheet.

Many of the ratios used to measure and compare the performance of banks are affected by business mix more than by absolute performance. It is important to consider the impact of differences in mix between banks or over time in looking at such ratios. Additionally, while a bank is represented much more by its balance sheet than some other types of firm, it is always important to think through what changes in the balance sheet represent in intention and underlying action of the firm.

PROFITABILITY MEASURES

◆ **Yield on interest earning assets.** Interest accrued as being received in a period is best measured against average interest earning assets for the period. European banks reporting under IFRS do not have such precise requirements to report balance sheet averages as banks reporting under US GAAP, so comparable numbers are not always available, but for those European banks with supplementary US reporting, and for others, average balances are usually available.

The level of yield will be affected by the level of general interest rates, but also by business mix. A bank with a high proportion of unsecured consumer credit or loans to lower credit quality businesses in its asset mix ought to charge higher spreads than a bank that is more oriented to prime mortgages or investment grade corporate lending. Where a bank operates in several different jurisdictions, with different prevailing interest rates, the currency mix of lending will also have an impact on average yield.

The influence of the general level of interest rates is usually measured by interbank rates in the relevant currency. The difference between the average yield on interest earning assets and the wholesale rate (commonly using a three-month tenor) is described as the asset spread.

◆ **Cost of interest-bearing liabilities.** Interest expense accrued in a period is best measured against average interest bearing liabilities for the period. Interest-bearing liabilities may include deposits from retail investors, wholesale funds including interbank and central bank deposits, and securities liabilities.

The marginal cost of funds is generally assumed to be interbank rate, so the liability spread can be measured against interbank, again conventionally of three month tenor. Current accounts sometimes pay no interest, or may pay interest, and can therefore switch between interest-bearing liabilities and non-interest bearing liabilities.

When interest rates are low, the liability spread can decline. An important service provided by banks to the economy is money transmission, and the remuneration for this service is often the implicit spread between cost of deposits and the wholesale interest benchmark.

◆ **Net interest spread.** The net interest spread is the difference between the yield on interest earning assets and the cost of interest bearing liabilities. It is also equivalent to the sum of the asset spread and the liability spread. The liability spread tends to decline as interest rates go lower, while the asset spread tends to widen as interest rates go lower, with the net interest spread remaining more stable than either.

◆ **Net interest margin.** The yield on interest earning assets and the cost of interest bearing liabilities use different denominators. The net interest margin is net interest income (interest income less interest expense) divided by average interest earning assets.

The difference between the net interest margin and the net interest spread is sometimes referred to as the endowment effect, and comes from non-interest bearing funds including non-interest paying accounts, shareholders' equity, and other net free funds. Total net free funds is the difference between average interest earning assets and interest bearing liabilities.

The endowment effect can be represented as the ratio of total net free funds to average interest earning assets, multiplied by the average cost of interest bearing liabilities. So if total net free funds are 10% of interest earning assets (interest bearing liabilities are 90% of interest earning assets) and the average cost of interest bearing liabilities is 4%, the endowment effect is 0.4% (10% x 4%). If the average yield on interest earning assets is 5%, the spread is 1%, and the net interest margin is 1.4%. As with the liability margin, the endowment effect contribution and the value of free funds will be lower when interest rates are lower.

◆ **Mismatch income.** Interest income is often seen as more stable than non-interest income. Nevertheless, banks are in the business of providing a service to clients with different temporal liquidity requirements, and they can deliberately mismatch the maturity of their assets and liabilities to make profits. It is important to view statements of maturity mismatch, and also to consider to what extent net interest income arises from balance sheet management, or asset liability management, mismatches that may not be sustainable. Banks increasingly report the potential impact on interest income of a movement across the entire yield curve. Vulnerabilities tend to arise more from non-uniform movements in the yield curve.

◆ **Credit impairment charges.** Under International Financial Reporting Standards, loans and receivables are evaluated at each financial reporting period for evidence of impairment on an individual or collective basis. If there is evidence of impairment, the future expected cash flows are re-evaluated at the original effective interest rate, and any difference in carrying value is charged to the income statement. The size of the charge may reflect business mix, as certain types of business have different expected levels of default and loss given default, which are likely to be reflected in pricing.

Some credit exposures may be included in trading book or marked to market through profit or loss. As market values may sometimes move ahead of the objective evidence required for the loan impairment test, impairments on such assets will tend to be reflected earlier in the income statement, and will be treated as negative revenues rather than as impairment charges.

Under Pillar 3 of Basel II, banks are required to make additional disclosures of the assumptions going into their credit risk calculations, and major European banks started to publish these disclosures in respect of the 2008 accounting year.

◆ **Non-interest income.** Non-interest income includes commissions and fees, trading income and other items including insurance business.

Several European banks underwrite insurance business, both life and non-life (property-casualty), so that insurance premiums and investment returns on policyholder funds are included in gross income. Investment returns in particular can be volatile, but are generally offset by changes in liabilities to policyholders. There

is no general convention for treatment of these items, but in our view the practice, followed by some banks, of netting off claims incurred by policyholders and other net changes in liabilities to policyholders is consistent with the reporting treatment of net interest income, and other items of banking income. Trading income or mark to market through profit or loss can be volatile, and in some instances can result in total revenues being negative.

◆ **Non-interest expenses and the efficiency ratio.** Non-interest expenses represent all expenses incurred in operations, including such items as personnel compensation, occupancy costs, IT and other administrative costs, including depreciation of the bank's own capitalized assets.

The efficiency, or cost-income, ratio is the ratio of non-interest expense to net revenues. For comparability of this ratio, we believe that net revenues are best measured net of insurance claims where applicable. Depreciation charges relating to assets leased to customers should also be taken out of operating expenses and netted against revenues for comparability.

Expense ratios can vary because of business mix as well as because of relative efficiency. Business lines with greater personal service requirements—advisory, asset management—and lower balance sheet requirements would tend to have higher cost income ratios. Businesses that rely mainly on the balance sheet—retained mortgage lending, for example—would have a fairly low ratio of expense to revenues. Moreover, perceptions of economic capital requirement and regulatory capital requirements for market and operational risk could shift, pushing up the capital cost and potentially reducing the personnel compensation for some activities.

◆ **Return on assets (ROA).** A comprehensive measure of bank profitability is ROA—a bank's net income divided by its average total assets during a given period.

Despite the usual caveats about mix, a high ROA is almost always a positive sign for a bank, in our view, as long as it is not obtained from short-term mismatching of costs or credit exposures, or at the expense of longer-term customer service and satisfaction. Banks with low ROA tend to try to offset this with higher leverage. The banking system as a whole has moved to higher leverage. Faced now with regulatory demands to reduce leverage, the banks may try to rebuild ROA, although this is likely to be difficult in the medium term.

◆ **Return on equity (ROE).** Another measure of profitability, usually considered in conjunction with ROA, is return on equity. A bank's ROE is calculated by dividing net income by average shareholders' equity.

ROE represents ROA multiplied by leverage, so higher leverage can lead to higher ROE (if ROA is positive). Regulators and markets now seem likely to require higher regulatory capital, ideas of economic capital adequacy are also shifting, and leverage is likely to decline, in our opinion.

Banks were previously aiming for ROEs of 15%–25%—maybe two or three times cost of equity. The market appeared to be increasingly sceptical of whether these ROEs were sustainable. We expect now lower leverage and lower ROEs, and how market valuations of banks react will be an interesting test of whether the Modigliani-Miller theorem is applicable to banks.

MEASURES OF FINANCIAL CONDITION

◆ **Impairment allowances.** Under International Financial Reporting Standards, banks set up allowances for impairment on loans on an individual or collective basis where there is objective evidence of impairment.

The allowance will write down the loan to expected future cash flows discounted at the original effective interest rate. Expected future cash flows will take account of loss given default, and so will depend to some extent on the level of collateralization, which will be affected by loan mix. Over time, the additional disclosures provided by Pillar 3 of Basel II should provide some indication of how accurate forecasts of expected default rates and loss given default tend to be.

◆ **Net charge-offs.** Under bank accounting, impairment allowances are set up some time in advance of final recognition of loss and write-off or charge-off. Charge-off is likely to be more final, and accurate, than initial provision, and can be netted off against any subsequent recoveries. The time difference between provision and charge-off can vary with type of lending (unsecured consumer credit defaults with low recovery expectations are likely to be written off fairly rapidly). In principle, the charge-off ratio is closer to cash flow, and can act as a check on the provision accrual, but while offering some chances for further mathematical analysis, we doubt that this mathematical analysis offers a large amount of extra insight.

◆ **Nonperforming loans.** Because under International Financial Reporting Standards, expected cash future cash flows from impaired loans have to be written down to net present value discounted at the original effective interest rate, there is no precise equivalent of nonperforming loans under IFRS. Many European banks have US reporting requirements, and in addition to showing total impaired loans also reveal categories of credit risk loans and potential problem loans.

◆ **Capital levels.** Most banks in Europe are subject to the implementation of Basel II under the EU Capital Requirements Directive. There are still national differences, but some attempt to reduce national discretion.

Basel II introduced various refinements to the calculation of Risk-Weighted Assets that form the denominator of the capital requirement, adding in operational risk, but tending to reduce the amount required for credit risk, while leaving market risk relatively lightly weighted. Under Basel II, as under Basel I, the minimum requirement was to have total capital of 8%, of which at least half had to be Tier 1 capital, principally equity.

Although Basel II began to be phased into operation only in 2007–2008 in Europe, it had, in our view, affected behaviour for several years before, leading to an assumption that residential mortgages in particular could be operated with very low economic capital and therefore very high leverage, which led to a competitive reduction in mortgage spreads.

Over time, banks invented new types of instruments, including innovative Tier 1 instruments, that were unlikely to be permanent. Meanwhile, regulators are moving towards core Tier 1 capital (effectively common equity less goodwill and intangibles and excluding revaluation gains or losses) as the main measure of capital adequacy. There remain some differences among national regulators as to what is defined as core, although there is a move towards clarification. Stress tests on banks in Europe by most supervisors have not been fully published, but the trend has been towards ensuring that banks have at least a 4% core Tier 1 ratio after expected stress.

◆ **Debt leverage.** The financial markets crisis since 2007 has led to a general appreciation that capital buffers beyond pure common equity may protect depositors in a liquidation, but have little benefit on a continuing basis. With a lower value placed on subordinated debt, many banks have been able to buy in their subordinated debt at a discount, crediting the difference to Tier 1 capital.

◆ **Liquidity.** The internationally agreed minimum capital standards under Basel I and Basel II did not address liquidity, although national banking regulators continued to have their own liquidity standards and the topic remained on the agenda of the Basel Committee of Banking Supervisors. At national and collective European levels, supervisors are now formulating requirements for higher liquidity following the funding problems experienced by many European banks since 2007.

◆ **Derivatives.** Derivatives are financial instruments, designed to transfer risk between parties, with values derived from the level of an underlying instrument, index, or interest rate level, which can include equity or debt securities, currencies, interest rates, commodities, and even things as abstract as whether or not a company defaults on its debt. Some derivative contracts are traded on exchanges; other derivative contracts can be directly negotiated between parties, and still others can be arranged through a third party.

Banks generally use derivatives to hedge a variety of risks, including interest rate changes. As a result of such hedging, many banks have become less interest rate–sensitive.

One type of derivative commonly used by banks is an interest rate swap. A bank that receives a fixed interest rate for a particular asset may want to protect against future rate changes, since a majority of a bank's funding is derived from floating rate sources. As a result, the bank will want to convert this fixed interest rate into a floating rate. The bank will find a party that may prefer to receive a fixed rate instead of a floating rate over time and enter into a swap agreement. The counter party may be an investor holding a floating-rate debt instrument. Such an investor may decide to convert the current floating rate into a fixed rate, thus locking in future interest payments related to that investment. As a result, the bank would receive payments that change as interest rates change from the counter party and make payments to the counter party at the agreed upon fixed rate. Of course, only the net difference between the payments would change hands between the parties.

Derivatives pose inherent risks if they are not used for hedging purposes, as there is the chance that the bet will not go in the direction that one hopes. Most derivatives contain counter-party credit risk, in which a counter party may fail to fulfil an obligation specified by the derivative contract terms.

Credit exposure is assessed by the cost to replace a contract at current market rates. Many banks try to limit counter-party credit risk in one or more ways. They can deal with derivatives dealers that are national market makers with strong credit ratings in their derivatives activities. They can subject counter parties to credit reviews and approvals similar to those used in making loans and other extensions of credit. Finally, they can require counter parties to provide cash collateral when their unsecured loss positions exceed certain negotiated limits. ■

GLOSSARY

Automated clearinghouse (ACH)—An automated clearinghouse is a service that enables the management and settlement of electronic transactions within a given country.

Bank base rate—The rate of interest used as the basis for the interest charged by banks on much of their variable-rate lending.

Basis point—One-hundredth of one percent (0.01%); the unit generally used to measure movements in interest rates or investment returns.

Capital—For commercial banks, capital is the sum of equity capital and certain other items. Under certain conditions, regulators allow some categories of subordinated debt to be included as capital.

Commercial paper—Short-term promissory notes issued by companies and sold to investors, mainly other companies. Commercial paper provides corporations with a way to borrow among themselves, bypassing the banking network.

Core deposits—The total of a bank's demand deposits (checking accounts), consumer time deposits (savings certificates and regular passbook savings accounts), and NOW accounts.

Correspondent bank—A bank in another country used to process instructions on behalf of a bank that does not have a local presence.

Cross-border outstandings—Loans, acceptances, and deposits made to a foreign country in a currency other than that country's local currency.

Discount rate—Interest rate at which an eligible depository institution may borrow funds, typically for a short period, directly from a central bank.

Duration—A measure of a fixed-income security's length. Duration is the weighted-average time until fixed cash flows such as interest payments are received, or the instrument reprices.

Earning assets—Interest-bearing financial instruments, comprising commercial, real estate, and consumer loans; investment and trading account securities; money-market investments; lease finance receivables; and time deposits in foreign banks.

EFTPOS (Electronic funds transfer at point of sale)— Technical term for an automatic debit system at a retail shop.

Euribor—A daily fixing rate for euro interest rates, taken from 57 European banks at 11 a.m. Central European Time.

Euro LIBOR—A daily fixing rate for euro interest rates, taken from 16 major European banks at 11 a.m. London time.

Eurozone—The 16 countries that have adopted the euro as their currency. The 11 initial members from 1999 were Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal, and Finland. Greece joined in 2001, Slovenia in 2007, Cyprus and Malta in 2008, and Slovakia in 2009.

Float—The portion of gross checking account (demand deposit) balances that is in the process of being collected.

Gap—The difference between a financial institution's liabilities and its assets as both items mature over time. If more liabilities than assets mature or are repriced, the bank is liability sensitive (has a negative gap). If more assets mature than liabilities, the bank is asset sensitive (has a positive gap). In a period of falling interest rates, a bank with a negative gap will see net interest margins widen; conversely, a bank with a positive gap will benefit during a period of rising rates.

Hedging—A strategy used to offset financial risk. A bank looking to minimize its exposure to interest-rate or currency risk, for example, would buy or sell futures or options contracts. A perfect hedge is one that eliminates the possibility of future gain or loss.

Interbank agency agreements—Agreements between banks allowing one bank's customers to use counter services at another bank's branches.

Interest-rate sensitivity—The degree to which an asset is subject to fluctuations in interest rates; typically used with respect to interest-earning assets or interest-bearing liabilities whose interest rates are adjustable within a short period (less than one year), according to maturity or contractual terms. Rate adjustments usually reflect changes in prevailing short-term money rates.

Landesbanken—German regional banks, established by public authorities, that lend primarily to large corporate customers.

LIBOR—London Interbank Offer Rate. Based on the rate that a panel of banks say they could borrow from each other at various maturities and for various currencies. Used as a benchmark for a large volume of contracts globally.

Margin—Net interest income divided by average earning assets.

Mezzanine—A leveraged buyout or restructuring financed through subordinated debt such as preferred stock or convertible debt.

Negotiable certificates of deposit—Marketable receipts for funds deposited in a bank at interest for a specified period, usually between 30 and 90 days; sold in denominations of $100,000 or more.

Negotiable order of withdrawal (NOW) accounts— Interest-bearing checking accounts written on time deposits. Technically, 30 to 90 days' notice is required before these funds can be withdrawn. In practice, prior notice is not needed, and the negotiable order of withdrawal works like a check.

Net charge-offs—The collective amount of loans that are no longer likely to be collected and are written off, minus recoveries of payments previously charged off.

Net interest income—Total interest revenues minus total interest expenses.

Net interest spread—The difference between the average rate a bank receives from its earning assets and the average rate it pays for deposits and borrowed funds; a measure of the profitability of a bank's lending business.

Nonaccrual (cash-basis) loans—Loans or other assets whose income is recognized when cash is actually collected. In some situations, cash receipts from these assets are credited directly to principal. This method of accounting differs from the standard practice of accruing rights to that income, where banks reasonably expect to continue accruing principal and interest payments.

Nonperforming assets—A bank's total nonaccrual loans, renegotiated-rate loans, and other real estate owned, from which principal and interest payments aren't being received according to original agreements.

Other real estate owned (OREO)—Foreclosed properties; real estate acquired due to a borrower's failure to meet loan obligations.

Payment-in-kind (PIK) securities—Bonds or preferred stock that pay interest or dividends in the form of additional bonds or preferred stock.

Prime rate—The base rate that banks use in pricing commercial loans to their best and most creditworthy customers.

Renegotiated-rate loan—A loan for which the interest rate or repayment terms have been revised due to credit deterioration.

Reserve for loan losses—A reserve fund composed of accumulated earnings that a bank sets aside to protect its loan portfolio from potential losses on loans.

Risk-based capital—A regulatory measurement of a bank's capital adequacy. Guidelines set forth how capital is measured and how assets, including off–balance sheet items, are adjusted to reflect the level of credit risk they entail.

Second-lien—Under a second-lien loan, creditors have a secondary claim on the assets securing the loan.

Sparkassen—German savings banks.

SWIFT—Society for Worldwide Interbank Financial Telecommunications. A bank-owned cooperative that supports the communication of financial data and processing needs in the international banking community.

TARGET—Trans-European Real Time Gross Settlement Express Transfer system, used for same-day transfers of euro-denominated funds between 15 countries in Europe.

Tier 1 capital—Common equity, less goodwill and other intangible assets and less unrealized gains, plus noncumulative perpetual preferred stock.

Trading account securities—Bank bond inventories. These securities, held primarily with the expectation that they will generate capital gains, are valued on bank balance sheets at cost or at market value, whichever is lower.

INDUSTRY REFERENCES

PERIODICALS

American Banker
http://www.americanbanker.com
This daily publication covering the banking industry focuses mainly on the United States, but also deals with international issues.

The Banker
http://thebanker.com
Monthly publication offering detailed reports on banking in both developed and developing markets.

TRADE ASSOCIATIONS

Association of German Banks
http://www.german-banks.com
Trade association for German banks.

British Bankers' Association
http://www.bba.org.uk
Trade group for the UK banking industry.

European Banking Federation
http://www.fbe.be
Trade group representing national banking lobby organizations in Europe.

GOVERNMENT AGENCIES

Banca d'Italia
http://www.bancaditalia.it
Italian bank regulator; provides statistics on the Italian banking industry.

Banco de España
http://www.bde.es
Spanish central bank and bank regulator.

Bank of England
http://www.bankofengland.gov.uk
UK central bank.

Banque de France
http://www.banque-france.fr
French central bank; provides statistics on the domestic banking industry.

Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin)
http://www.bafin.de
Regulator for the German financial services industry.

European Central Bank
http://www.ecb.int
Central bank for the Eurozone countries.

International Monetary Fund
http://www.imf.org
Publishes detailed, periodic reviews of stability of financial systems in countries worldwide.

ONLINE RESOURCES

Bank for International Settlements
http://www.bis.org
Publishes statistics on international capital flows; also responsible for the Basel Committee on Banking Supervision, which sets capital adequacy standards for internationally active banks.

COMPARATIVE COMPANY ANALYSIS - BANKING: EUROPE

Operating Revenues

Company	Country	Yr. End	Million $ 2008	2007	2006	2005	2004	2003	1998	Growth Rate (%) 10-Yr.	5-Yr.	1-Yr.	Index Basis (1998 = 100) 2008	2007	2006	2005	2004
BANKS																	
BARCLAYS PLC	United Kingdom	DEC	47,614.3	NA	43,015.9	34,087.9	27,027.3	21,380.1	12,448.7	14.4	17.4	NA	382	NA	346	274	217
BANCO SANTANDER SA	Spain	DEC	43,914.4	36,249.3	39,616.6	41,063.3	19,064.0	18,102.2	8,375.7	18.0	19.4	21.1	524	433	473	490	228
BCO BILBAO VIZCAYA ARGENTRIA	Spain	DEC	26,391.4	24,146.3	25,431.9	17,686.9	14,628.7	13,397.8	7,978.5	12.7	14.5	9.3	331	303	319	222	183
BNP PARIBAS	France	DEC	41,265.7	18,877.9	64,966.8	55,796.4	40,707.6	33,038.0	9,104.2	16.3	4.5	118.6	453	207	714	613	447
COMMERZBANK	Germany	DEC	3,661.6	4,803.8	11,480.8	9,176.6	8,464.9	7,264.2	7,006.4	(6.3)	(12.8)	(23.8)	52	69	164	131	121
CREDIT AGRICOLE SA	France	DEC	8,167.3	10,461.4	68,191.8	59,371.7	46,416.3	35,351.1	15,131.3	(6.0)	(25.4)	(21.9)	54	69	451	392	307
CREDIT SUISSE GROUP	Switzerland	DEC	6,303.5	30,956.7	30,812.0	47,579.6	42,333.0	47,569.4	37,316.3	(16.3)	(33.3)	(79.6)	17	83	83	128	113
DEUTSCHE BANK AG	Germany	DEC	19,009.4	41,698.9	35,307.8	30,953.3	30,053.7	23,972.2	22,825.4	(1.8)	(4.5)	(54.4)	83	183	155	136	132
FORTIS	Belgium	DEC	654.4	12,436.3	39,534.9	37,572.6	32,466.6	33,522.8	23,700.2	(30.2)	(54.5)	(94.7)	3	52	167	159	137
HBOS PLC	United Kingdom	DEC	8,477.0	27,751.7	44,176.7	45,032.1	21,567.6	15,961.9	5,371.6	4.7	(11.9)	(69.5)	158	517	822	838	402
HSBC HLDGS PLC	United Kingdom	DEC	72,736.0	80,476.0	74,814.0	61,311.0	52,659.0	42,412.0	21,590.0	12.9	11.4	(9.6)	337	373	347	284	244
INTESA SANPAOLO SPA	Italy	DEC	18,657.9	20,902.2	14,292.7	14,539.0	12,908.8	11,752.4	6,833.9	10.6	9.7	(10.7)	273	306	209	213	189
LLOYDS BANKING GROUP PLC	United Kingdom	DEC	17,543.0	12,910.2	37,567.5	42,675.8	18,465.9	18,685.7	12,511.7	3.4	(1.3)	35.9	140	103	300	341	148
ROYAL BANK OF SCOTLAND GROUP	United Kingdom	DEC	(23,156.0)	52,743.7	53,776.4	49,235.0	43,987.2	32,687.3	6,307.0	NM	NM	NM	(367)	836	853	781	697
SOCIETE GENERALE GROUP	France	DEC	23,750.3	16,101.2	22,385.3	42,475.7	31,272.6	25,523.7	11,507.8	7.5	(1.4)	47.5	206	140	195	369	272
UBS AG	Switzerland	DEC	842.8	26,743.2	40,987.2	42,876.7	34,796.9	27,043.4	16,801.8	(25.9)	(50.0)	(96.8)	5	159	244	255	207
UNICREDITO ITALIANO SPA	Italy	DEC	36,106.3	35,023.0	28,215.1	15,018.1	13,739.6	12,661.5	6,882.3	18.0	23.3	3.1	525	509	410	218	200

Source: Standard & Poor's Compustat® Global Data. # Of the following calendar year. ** Not calculated; data for base year or end year not available. A - Includes excise taxes. B - Includes other (nonoperating) income.

Net Income

Company	Yr. End	Million $ 2008	2007	2006	2005	2004	2003	1998	Growth Rate (%) 10-Yr.	5-Yr.	1-Yr.	Index Basis (1998 = 100) 2008	2007	2006	2005	2004
BANKS																
BARCLAYS PLC	DEC	9,080.9	8,839.6	8,422.2	6,271.7	5,987.3	4,486.3	2,212.6	15.2	15.1	2.7	410	400	381	283	271
BANCO SANTANDER SA	DEC	13,072.2	11,325.7	9,539.3	7,740.5	3,900.4	2,953.7	953.1	29.9	34.6	15.4	1,372	1,188	1,001	812	409
BCO BILBAO VIZCAYA ARGENTRIA	DEC	7,382.0	8,396.0	5,947.6	4,736.9	3,484.8	2,519.9	1,097.0	21.0	24.0	(12.1)	673	765	542	432	318
BNP PARIBAS	DEC	4,442.4	10,720.4	9,177.6	7,282.6	5,805.8	4,256.2	1,241.0	13.6	0.9	(58.6)	358	864	740	587	468
COMMERZBANK	DEC	4.4	2,627.3	2,005.6	1,449.8	488.8	(2,625.5)	992.7	(41.8)	NM	(99.8)	0	265	202	146	49
CREDIT AGRICOLE SA	DEC	1,464.6	5,548.0	6,182.5	4,842.2	2,740.0	1,161.1	2,092.7	(3.5)	4.8	(73.6)	70	265	295	231	131
CREDIT SUISSE GROUP	DEC	(7,119.4)	6,472.1	6,609.7	4,711.8	4,619.6	3,719.2	2,120.4	NM	NM	NM	(336)	305	312	222	218
DEUTSCHE BANK AG	DEC	(5,639.4)	8,872.9	7,517.4	4,391.7	3,074.5	1,373.8	1,921.7	NM	NM	NM	(293)	462	391	229	160
FORTIS	DEC	(897.0)	4,085.6	5,464.1	4,904.4	4,176.5	2,486.7	1,765.2	NM	NM	NM	(51)	231	310	278	237
HBOS PLC	DEC	(13,891.8)	8,095.2	7,138.0	5,876.9	5,600.8	4,008.9	1,940.8	NM	NM	NM	(716)	417	368	303	289
HSBC HLDGS PLC	DEC	5,728.0	19,133.0	15,789.0	15,081.0	11,840.0	8,774.0	4,318.0	2.9	(8.2)	(70.1)	133	443	366	349	274
INTESA SANPAOLO SPA	DEC	2,230.8	4,472.1	3,213.7	3,764.5	2,343.2	1,373.8	651.6	13.1	10.2	(50.1)	342	686	493	578	360
LLOYDS BANKING GROUP PLC	DEC	1,517.2	6,582.2	5,164.6	4,536.0	4,435.5	5,320.1	3,513.7	(8.1)	(22.2)	(77.0)	43	187	147	129	126
ROYAL BANK OF SCOTLAND GROUP	DEC	(50,965.5)	15,379.8	11,779.4	10,008.9	8,266.5	6,603.5	1,149.3	NM	NM	NM	(4,435)	1,338	1,025	871	719
SOCIETE GENERALE GROUP	DEC	2,955.7	1,297.9	6,556.7	5,532.8	3,886.7	2,820.1	1,195.6	9.5	0.9	127.7	247	109	548	463	325
UBS AG	DEC	(19,482.7)	(3,990.8)	9,171.9	7,911.2	6,516.9	4,750.4	2,094.2	NM	NM	NM	(930)	(191)	438	378	311
UNICREDITO ITALIANO SPA	DEC	5,899.4	8,170.0	6,770.9	3,073.8	2,649.8	2,218.7	225.3	38.6	21.6	(27.8)	2,619	3,627	3,006	1,365	1,176

Note: # Of the following calendar year. ** Not calculated; data for base year or end year not available.

Company	Yr. End	Net Interest Income (Mil., $)					Return on Assets (%)					Return on Equity (%)				
		2008	2007	2006	2005	2004	2008	2007	2006	2005	2004	2008	2007	2006	2005	2004
BANKS																
BARCLAYS PLC	DEC	21,246.1	19,232.3	16,846.3	14,732.3	12,566.5	0.3	0.4	0.5	0.5	0.7	18.3	20.8	24.5	19.8	19.1
BANCO SANTANDER SA	DEC	27,534.8	20,962.7	15,682.9	13,059.3	10,287.0	0.9	0.9	0.9	0.9	0.6	16.2	16.2	18.0	15.6	9.4
BCO BILBAO VIZCAYA ARGENTRIA	DEC	17,841.8	13,388.9	10,039.1	8,970.0	8,249.1	1.0	1.3	1.2	1.1	0.9	19.6	24.7	24.9	19.9	13.9
BNP PARIBAS	DEC	19,849.0	13,305.3	11,458.2	9,623.4	7,610.4	0.2	0.5	0.5	0.5	0.5	5.7	16.3	17.2	16.9	15.2
COMMERZBANK	DEC	6,954.1	5,509.6	4,700.6	3,602.7	3,442.7	0.0	0.3	0.3	0.3	0.1	0.0	12.8	11.9	10.2	3.9
CREDIT AGRICOLE SA	DEC	17,812.4	10,838.3	12,969.0	11,607.0	3,672.8	0.1	0.3	0.4	0.4	0.3	2.5	10.5	15.0	13.8	8.6
CREDIT SUISSE GROUP	DEC	7,905.7	7,050.1	5,240.8	9,316.8	9,640.4	NM	0.6	0.6	0.5	0.5	NM	17.5	19.5	14.8	16.4
DEUTSCHE BANK AG	DEC	18,312.4	12,128.0	8,689.1	7,468.0	6,445.1	NM	0.4	0.6	0.4	0.3	NM	18.2	19.1	12.5	8.7
FORTIS	DEC	3,407.2	11,788.1	5,393.8	5,018.9	5,038.4	NM	0.4	0.6	0.6	0.6	NM	10.8	22.1	23.4	24.3
HBOS PLC	DEC	15,136.6	14,617.3	13,634.8	12,425.2	12,890.7	NM	0.6	0.7	0.7	0.7	NM	19.1	20.1	18.5	18.5
HSBC HLDGS PLC	DEC	42,835.0	38,119.0	37,089.0	31,334.0	31,024.0	0.2	0.9	0.9	1.1	1.0	5.1	16.1	15.7	16.8	14.7
INTESA SANPAOLO SPA	DEC	19,349.1	15,155.5	7,594.0	7,234.0	6,685.1	0.3	0.7	0.9	1.0	0.6	3.1	9.1	15.1	17.7	11.8
LLOYDS BANKING GROUP PLC	DEC	14,297.5	12,205.8	10,202.1	10,318.3	9,014.0	0.2	1.0	0.9	0.8	0.9	8.0	28.6	26.3	24.7	24.4
ROYAL BANK OF SCOTLAND GROUP	DEC	34,595.1	25,352.2	19,523.6	18,045.6	17,014.8	NM	0.5	0.8	0.8	0.8	NM	16.2	16.4	16.1	14.0
SOCIETE GENERALE GROUP	DEC	12,372.9	3,977.3	4,276.1	5,857.7	7,932.6	0.2	0.1	0.6	0.6	0.5	6.6	3.3	19.8	20.9	16.1
UBS AG	DEC	5,745.0	4,451.2	5,204.9	7,657.2	9,555.0	NM	NM	0.5	0.5	0.5	NM	NM	24.7	24.6	21.9
UNICREDITO ITALIANO SPA	DEC	28,983.6	20,586.7	16,299.0	6,909.2	6,326.9	0.4	0.6	0.7	0.5	0.8	7.3	12.1	14.7	10.2	15.2

Note: # Of the following calendar year.

Company	Yr. End	Total Assets Million $					Total Loans Million $					Total Deposits Million $				
		2008	2007	2006	2005	2004	2008	2007	2006	2005	2004	2008	2007	2006	2005	2004
BANKS																
BARCLAYS PLC	DEC	2,957,521.8	2,443,551.9	1,951,110.2	1,586,843.3	1,002,358.6	777,504.5	726,230.2	552,573.8	461,613.7	489,470.8	664,019.8	802,037.7	502,570.1	409,748.7	417,996.8
BANCO SANTANDER SA	DEC	1,463,510.8	1,334,745.2	1,099,435.7	954,569.0	781,816.2	950,866.0	901,244.0	650,214.9	472,935.3	421,309.9	710,064.5	506,471.6	414,496.3	344,174.0	399,260.3
BCO BILBAO VIZCAYA ARGENTRIA	DEC	756,621.8	734,257.2	543,098.5	462,933.7	422,666.3	477,518.8	453,585.1	308,317.4	228,345.2	210,285.5	401,429.9	397,981.2	253,639.2	215,469.5	181,918.3
BNP PARIBAS	DEC	2,893,959.5	2,477,409.5	1,899,047.7	1,484,257.7	1,230,934.1	759,851.0	755,441.1	516,929.5	355,345.3	317,628.5	754,371.4	665,015.0	393,763.4	291,988.7	322,988.8
COMMERZBANK	DEC	871,716.4	901,327.8	802,076.1	524,838.5	577,300.0	463,217.4	494,406.1	276,150.7	165,306.2	114,324.4	237,315.6	232,742.5	186,186.3	121,335.8	142,754.6
CREDIT AGRICOLE SA	DEC	2,305,099.6	2,067,692.3	1,662,979.7	1,252,270.2	1,107,756.1	487,241.3	489,085.6	298,468.4	200,528.5	443,665.2	683,792.9	728,672.1	446,516.7	366,314.9	395,226.2
CREDIT SUISSE GROUP	DEC	1,103,551.7	1,202,013.5	1,028,751.9	1,016,157.1	958,573.0	244,182.6	254,866.5	161,358.3	144,797.1	150,483.5	334,897.6	425,854.9	318,119.9	276,406.8	263,372.3
DEUTSCHE BANK AG	DEC	3,070,858.3	2,953,890.7	1,484,899.4	1,170,532.7	1,141,433.9	403,302.5	325,814.9	216,745.8	175,464.1	180,802.1	551,523.1	669,548.9	538,966.4	449,245.3	447,662.7
FORTIS	DEC	129,489.5	1,273,724.3	1,022,115.4	860,054.4	775,362.2	11,567.2	477,121.5	321,048.5	242,665.6	265,683.9	3,752.1	439,498.1	341,823.6	305,638.8	290,470.0
HBOS PLC	DEC	992,477.9	1,327,824.2	1,156,879.8	928,516.5	850,287.2	612,493.9	867,466.6	737,563.7	590,146.4	551,992.4	533,536.1	566,876.7	414,688.8	344,967.4	375,328.9
HSBC HLDGS PLC	DEC	2,527,465.0	2,354,266.0	1,860,758.0	1,501,970.0	1,276,778.0	933,824.0	986,780.0	868,133.0	740,002.0	669,831.0	1,252,029.0	1,228,321.0	896,834.0	739,419.0	693,751.0
INTESA SANPAOLO SPA	DEC	886,966.0	837,622.5	384,704.2	322,711.4	373,107.2	529,454.0	483,126.2	247,685.0	195,591.2	206,673.8	315,401.1	340,761.6	161,819.7	135,993.4	157,300.0
LLOYDS BANKING GROUP PLC	DEC	628,148.9	703,476.2	672,558.5	531,754.6	537,270.6	368,103.4	432,351.6	368,548.9	300,326.3	296,125.4	389,911.2	419,365.0	272,747.9	262,948.6	234,346.8
ROYAL BANK OF SCOTLAND GROUP	DEC	3,459,818.5	3,783,741.5	1,705,740.4	1,333,578.6	1,120,198.3	1,218,464.8	1,840,245.8	913,896.1	716,251.7	663,265.9	1,182,176.1	1,538,276.1	752,075.9	588,599.6	547,290.5
SOCIETE GENERALE GROUP	DEC	1,575,573.4	1,566,990.5	1,261,565.2	1,000,946.2	816,723.6	527,619.1	466,949.9	360,829.4	279,334.4	267,936.7	508,722.0	511,028.4	473,369.9	243,782.9	237,154.5
UBS AG	DEC	1,900,085.3	2,007,577.5	1,962,978.9	1,563,447.6	1,526,333.2	298,677.9	300,335.5	255,985.5	204,869.5	204,463.5	447,676.0	567,042.1	467,349.0	342,651.7	330,893.1
UNICREDITO ITALIANO SPA	DEC	1,457,905.7	1,493,881.8	1,085,474.7	928,487.6	361,228.0	625,389.0	692,836.8	553,434.8	499,835.4	184,249.9	646,578.9	611,921.2	471,138.9	316,561.2	178,029.3

Note: # Of the following calendar year.

		Equity/ Assets (%)					Loans/Deposits (%)					Loan Loss Reserves as % of Assets				
Company	**Yr. End**	**2008**	**2007**	**2006**	**2005**	**2004**	**2008**	**2007**	**2006**	**2005**	**2004**	**2008**	**2007**	**2006**	**2005**	**2004**
BANKS																
BARCLAYS PLC	DEC	1.8	1.9	2.0	1.9	3.3	117.1	90.5	109.9	112.7	117.1	0.3	0.3	0.3	0.4	0.5
BANCO SANTANDER SA	DEC	5.5	6.0	5.4	4.9	6.7	133.9	177.9	156.9	137.4	105.5	1.2	1.0	1.0	0.9	1.2
BCO BILBAO VIZCAYA ARGENTRIA	DEC	4.7	5.4	5.2	4.2	6.7	119.0	114.0	121.6	106.0	115.6	1.4	1.4	1.4	1.3	1.4
BNP PARIBAS	DEC	2.6	2.8	3.1	3.0	3.3	100.7	113.6	131.3	121.7	98.3	0.7	0.7	NA	NA	1.1
COMMERZBANK	DEC	3.1	2.5	2.3	2.9	2.3	195.2	212.4	148.3	136.2	80.1	1.0	1.0	1.2	1.2	1.2
CREDIT AGRICOLE SA	DEC	2.5	2.9	2.8	2.9	3.1	71.3	67.1	66.8	54.7	112.3	0.6	0.6	0.6	0.7	0.7
CREDIT SUISSE GROUP	DEC	2.8	3.2	3.5	3.1	3.3	72.9	59.8	50.7	52.4	57.1	0.1	0.1	0.1	0.2	0.3
DEUTSCHE BANK AG	DEC	1.4	1.8	2.9	3.0	3.1	73.1	48.7	40.2	39.1	40.4	0.1	0.1	0.2	0.2	0.3
FORTIS	DEC	7.3	3.8	2.7	2.6	2.5	308.3	108.6	93.9	79.4	91.5	0.0	0.2	0.3	0.3	0.4
HBOS PLC	DEC	1.7	3.2	3.5	3.2	3.9	114.8	153.0	177.9	171.1	147.1	1.6	0.5	0.5	0.5	0.3
HSBC HLDGS PLC	DEC	3.7	5.4	5.8	6.2	6.8	74.6	80.3	96.8	100.1	96.6	0.9	0.8	0.6	0.8	1.0
INTESA SANPAOLO SPA	DEC	7.7	9.0	6.1	5.9	5.5	167.9	141.8	153.1	143.8	131.4	0.0	0.0	NA	NA	0.0
LLOYDS BANKING GROUP PLC	DEC	2.2	3.4	3.2	3.3	3.6	94.4	103.1	135.1	114.2	126.4	0.9	0.7	0.6	0.7	0.6
ROYAL BANK OF SCOTLAND GROUP	DEC	2.5	2.8	4.6	4.6	5.5	103.1	119.6	121.5	121.7	121.2	0.5	0.3	0.4	0.4	0.7
SOCIETE GENERALE GROUP	DEC	3.2	2.5	3.0	2.8	3.1	103.7	91.4	76.2	114.6	113.0	0.8	0.7	0.8	0.8	1.0
UBS AG	DEC	1.6	1.6	2.1	2.2	2.0	66.7	53.0	54.8	59.8	61.8	0.1	0.0	0.1	0.1	0.1
UNICREDITO ITALIANO SPA	DEC	5.3	5.6	4.7	4.5	5.1	96.7	113.2	117.5	157.9	103.5	0.0	0.0	0.0	NA	0.0

Note: # Of the following calendar year.

Company	Yr. End	Price - Earnings Ratio (High-Low) 2008	2007	2006	2005	2004	Dividend Payout Ratio (%) 2008	2007	2006	2005	2004	Dividend Yield (High-Low, %) 2008	2007	2006	2005	2004
BANKS																
BARCLAYS PLC	DEC	8 - 2	10 - 7	10 - 8	11 - 10	11 - 9	67	51	43	53	48	37.86 - 8.43	7.13 - 4.83	5.38 - 4.21	5.50 - 4.77	5.46 - 4.24
BANCO SANTANDER SA	DEC	11 - 4	12 - 9	12 - 9	10 - 9	19 - 15	55	42	37	35	63	14.42 - 4.95	4.46 - 3.60	4.21 - 3.15	3.87 - 3.46	4.14 - 3.27
BCO BILBAO VIZCAYA ARGENTRIA	DEC	11 - 5	11 - 10	14 - 11	12 - 11	16 - 12	57	41	42	42	48	12.56 - 5.14	4.25 - 3.79	3.86 - 2.94	3.90 - 3.41	3.99 - 3.00
BNP PARIBAS	DEC	23 - 9	10 - 9	11 - 8	9 - 7	10 - 8	116	36	33	29	38	13.08 - 5.03	4.19 - 3.62	4.04 - 3.13	3.87 - 3.19	4.66 - 3.76
COMMERZBANK	DEC	NM - NM	12 - 9	13 - 10	13 - 9	24 - 19	NM	34	28	19	0	26.60 - 5.42	3.94 - 2.80	2.79 - 2.21	2.09 - 1.42	0.00 - 0.00
CREDIT AGRICOLE SA	DEC	43 - 13	12 - 9	10 - 8	9 - 8	16 - 12	469	46	29	14	84	35.38 - 10.82	5.04 - 3.75	3.69 - 2.90	1.85 - 1.49	6.80 - 5.36
CREDIT SUISSE GROUP	DEC	NM - NM	12 - 9	11 - 8	11 - 8	9 - 7	NM	35	26	26	10	11.44 - 4.68	4.02 - 2.96	3.24 - 2.51	3.18 - 2.44	1.36 - 1.02
DEUTSCHE BANK AG	DEC	NM - NM	9 - 7	8 - 7	11 - 9	14 - 11	NM	41	28	33	41	34.39 - 7.21	5.98 - 4.76	4.26 - 3.31	3.75 - 2.98	3.77 - 2.84
FORTIS	DEC	NM - NM	20 - 13	10 - 8	8 - 7	8 - 6	NM	93	37	51	34	126.62 - 3.58	7.25 - 4.60	4.89 - 3.84	7.31 - 6.43	5.45 - 4.13
HBOS PLC	DEC	NA - NA	NA - NA	NA - NA	NA - NA	NA - NA	NA	NA	NA	NA	NA	73.36 - 5.97	6.72 - 4.49	4.58 - 3.71	4.91 - 4.48	5.28 - 4.39
HSBC HLDGS PLC	DEC	36 - 20	12 - 10	13 - 12	12 - 12	16 - 13	224	60	62	57	66	11.48 - 6.27	5.93 - 5.20	5.19 - 4.65	4.97 - 4.67	4.97 - 4.23
INTESA SANPAOLO SPA	DEC	39 - 14	20 - 18	13 - 10	8 - 8	12 - 8	314	131	51	23	16	21.71 - 8.08	7.40 - 6.71	5.06 - 3.86	3.02 - 2.77	1.87 - 1.30
LLOYDS BANKING GROUP PLC	DEC	33 - 7	10 - 8	12 - 9	12 - 10	11 - 9	309	65	75	89	89	43.38 - 9.45	8.16 - 6.67	7.89 - 6.43	9.17 - 7.69	9.61 - 8.30
ROYAL BANK OF SCOTLAND GROUP	DEC	NM - NM	9 - 5	13 - 11	14 - 11	16 - 13	NM	46	57	53	53	69.99 - 7.46	8.57 - 5.33	5.11 - 4.27	4.69 - 3.80	4.00 - 3.36
SOCIETE GENERALE GROUP	DEC	20 - 7	65 - 46	11 - 8	9 - 7	11 - 9	26	236	38	31	50	3.99 - 1.35	5.10 - 3.61	4.63 - 3.46	4.31 - 3.46	5.77 - 4.59
UBS AG	DEC	NM - NM	NM - NM	12 - 10	12 - 10	13 - 10	NM	NM	32	31	31	0.00 - 0.00	4.24 - 2.92	3.05 - 2.54	3.24 - 2.66	3.10 - 2.47
UNICREDITO ITALIANO SPA	DEC	16 - 5	16 - 12	13 - 10	21 - 16	13 - 11	91	53	43	87	49	19.89 - 5.67	4.32 - 3.38	4.18 - 3.28	5.28 - 4.22	4.48 - 3.68

Note: # Of the following calendar year.

Company	Yr. End	Earnings per Share ($)					Tangible Book Value per Share ($)					Share Price (High-Low, $)									
		2008	2007	2006	2005	2004	2008	2007	2006	2005	2004	2008		2007		2006		2005		2004	
BANKS																					
BARCLAYS PLC	DEC	1.11	1.38	1.29	0.97	0.93	NA	NA	3.74	2.71	3.90	8.79 -	1.96	14.49 -	9.82	13.27 -	10.37	10.78 -	9.33	10.50 -	8.16
BANCO SANTANDER SA	DEC	1.69	1.69	1.42	1.15	0.58	NA	NA	5.48	4.14	4.58	18.97 -	6.51	19.64 -	15.84	16.64 -	12.42	11.83 -	10.58	11.17 -	8.82
BCO BILBAO VIZCAYA ARGENTRIA	DEC	1.97	2.21	1.65	1.37	1.01	NA	NA	6.74	4.93	6.49	21.94 -	8.98	23.92 -	21.35	23.50 -	17.90	17.07 -	14.94	16.36 -	12.29
BNP PARIBAS	DEC	4.48	11.67	9.96	8.64	6.89	NA	NA	48.97	41.01	36.59	103.57 -	39.84	115.76 -	99.89	106.09 -	82.16	78.58 -	64.80	69.53 -	56.04
COMMERZBANK	DEC	0.01	4.00	3.06	2.21	0.82	NA	NA	29.00	24.52	25.40	33.77 -	6.88	48.25 -	34.34	38.52 -	30.50	29.68 -	20.19	19.97 -	15.42
CREDIT AGRICOLE SA	DEC	0.66	3.09	3.79	2.99	1.72	NA	NA	14.18	11.69	9.60	28.66 -	8.76	38.26 -	28.44	37.62 -	29.54	27.79 -	22.42	27.01 -	21.29
CREDIT SUISSE GROUP	DEC	(6.16)	6.34	6.22	4.70	4.16	NA	NA	24.74	19.74	16.65	51.19 -	20.92	74.92 -	55.11	65.42 -	50.70	50.42 -	38.70	39.25 -	29.60
DEUTSCHE BANK AG	DEC	(10.02)	17.71	15.08	8.69	5.94	NA	NA	64.51	50.62	48.48	114.14 -	23.95	151.37 -	120.59	127.39 -	98.98	96.39 -	76.69	85.62 -	64.49
FORTIS	DEC	(0.36)	1.86	3.54	3.20	2.69	NA	NA	15.70	13.09	12.56	25.65 -	0.72	37.52 -	23.81	33.90 -	26.59	25.48 -	22.42	22.41 -	16.98
HBOS PLC	DEC	NA	NA	NA	NA	NA	2.71	10.09	9.01	6.66	7.45	11.70 -	0.95	21.10 -	14.11	19.82 -	16.06	15.29 -	13.94	14.11 -	11.75
HSBC HLDGS PLC	DEC	0.41	1.40	1.19	1.16	0.92	4.89	6.63	5.35	4.55	4.46	14.51 -	7.92	16.13 -	14.15	15.82 -	14.16	14.27 -	13.41	14.44 -	12.29
INTESA SANPAOLO SPA	DEC	0.19	0.39	0.53	0.58	0.37	NA	NA	3.67	3.03	3.35	7.32 -	2.72	7.65 -	6.94	6.98 -	5.34	4.90 -	4.50	4.52 -	3.14
LLOYDS BANKING GROUP PLC	DEC	0.25	1.14	0.89	0.78	0.76	NA	2.59	1.99	2.31	2.50	8.14 -	1.77	11.09 -	9.07	10.33 -	8.42	9.02 -	7.56	8.16 -	7.04
ROYAL BANK OF SCOTLAND GROUP	DEC	(1.32)	1.28	0.75	0.66	0.56	1.46	1.04	3.69	2.42	2.41	5.77 -	0.61	11.07 -	6.89	10.05 -	8.40	9.24 -	7.49	8.84 -	7.44
SOCIETE GENERALE GROUP	DEC	5.30	2.78	13.96	12.59	8.29	NA	NA	NA	49.26	47.32	103.89 -	35.06	181.71 -	128.66	152.87 -	113.98	112.27 -	90.04	90.98 -	72.33
UBS AG	DEC	(6.79)	(1.85)	4.20	3.57	2.83	NA	NA	13.10	10.57	8.73	32.56 -	9.49	55.34 -	38.08	52.26 -	43.48	41.95 -	34.40	36.17 -	28.75
UNICREDITO ITALIANO SPA	DEC	0.37	0.52	0.55	0.25	0.35	NA	NA	NA	2.27	2.24	6.03 -	1.72	8.12 -	6.36	7.24 -	5.68	5.21 -	4.16	4.72 -	3.88

Note: # Of the following calendar year. C-This amount includes intangible assets that cannot be identified.