Deutsche Bank Research

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Global banking trends after the crisis

The near-term prospects for US and European banks are decidedly grim. The global financial crisis will bring about the most significant changes to their operating framework banks have seen in decades. There will be fundamental re-regulation of the industry, ownership structures are shifting towards heavier state involvement and investor scrutiny is rising strongly. Equity ratios will be substantially higher. As a result, growth and profitability of the banking sector as a whole are likely to decline.

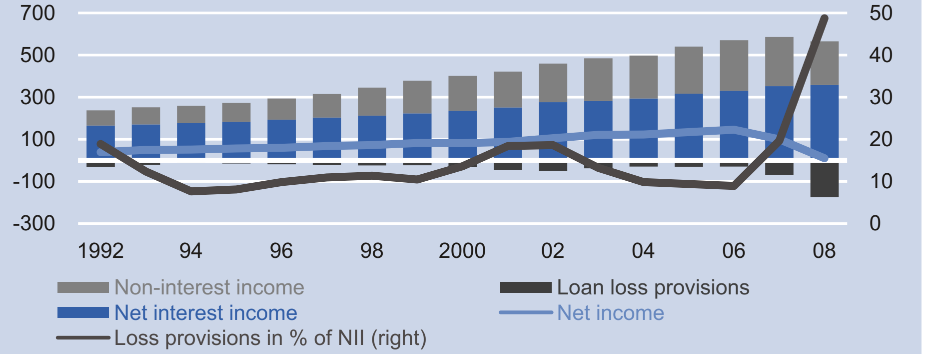
Lean years lie ahead for US banks. Performance improvements during the last 15 years have often been due to strong lending growth and low credit losses. As private households reduce their indebtedness, revenue growth in some European countries but especially the US may remain depressed for several years. With weak loan growth and a return of higher loan losses as well as a fundamentally diminished importance of trading income and modern capital-market activities such as securitisation, banks may be lacking major growth drivers.

Consolidation to continue but with a different focus. While there will still be a considerable number of deals, transaction volumes are likely to decline and restructuring stories rather than strategic M&A may dominate. The probability of domestic deals has increased, while that of cross-border mergers has declined.

Internationalisation of European banks likely to slow. Uncertainty about the future prospects especially of foreign markets and strictly national banking sector stabilisation programmes are triggering a re-orientation towards domestic markets. This is more relevant for European banks that have greatly expanded into other European countries recently, while American banks overall may continue to target the national market rather than going abroad.

P&L developments at US banks

USD bn, provisions in % of net interest income



Sources: FDIC, DB Research

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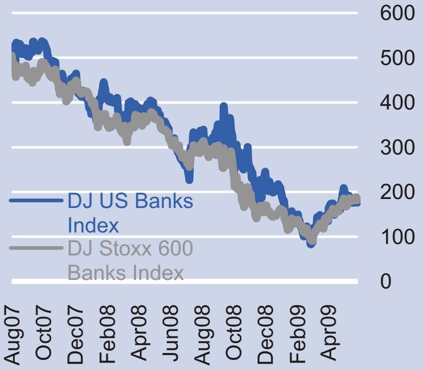
1. Introduction

The ongoing global financial crisis, with its historic dimensions, will have a lasting impact on the world economy, the worldwide distribution of influence and power and, above all, on banks.[1] In this paper, we first provide a brief overview of the consequences of the crisis for US and European banks. This entails taking a look at how much value has been destroyed in the banking industry, which regulatory response is looming, and what issues arise from a sweeping shift in ownership structures as well as in the debate about deleveraging and an increase in capital levels. The second part focuses on the impact the crisis may have on major structural trends that have been shaping the industry for the last 15 years. We will analyse the effects on consolidation, on the structure of revenues and on the geographic composition of banks' business, i.e. on the internationalisation strategies of European banks and on interstate banking in the US.

2. The scale of the challenge

Bank stock indices since onset of the crisis



Source: Bloomberg 1

While financial institutions in the US are at the heart of the problem, European banks face strikingly similar problems which shows just how deeply interconnected national financial systems have become. European banks have been hit nearly as strongly as their American peers by losses from subprime mortgage investments, leveraged loans, failed financial hedges and, increasingly, by a surge in conventional credit losses. All in all, banks on both sides of the Atlantic so far have had to cope with combined writedowns of more than USD 1 tr in this crisis – and the IMF reckons they will even have to take USD 1.3 tr more. Consequently, the market values of US and European banks have fallen to just a fraction of their pre-crisis levels: both the DJ US Banks Index and its European counterpart, the DJ Stoxx 600 Banks Index, have declined by about two thirds since the onset of the crisis on August 9, 2007, already taking into account a recovery since early March (see chart 1). Large banks have been hit nearly as much as smaller ones, with the combined market capitalisation of the top 20 global banks (pre-crisis) tumbling from USD 2.7 tr to USD 1.5 tr over the same period of time – excluding the three large Chinese institutions on the list it would even have fallen from USD 2.2 tr to USD 1.1 tr, a minus of more than 50%.

Fresh capital for banks...

Governments around the globe have had to intervene to prevent a wholesale collapse of the financial system. They have injected more than USD 200 bn in fresh capital into the top 20 banks alone (not to mention the much larger asset and debt guarantees).[2] It is clear that the developed countries' banking sectors to a large extent now depend on massive government support.

... cannot prevent global recession

If the immediate value destruction in the global banking industry seems large, the scale of the challenges ahead is even bigger. GDP looks set to decline by 3.2% worldwide and by as much as 4.3% in the advanced economies in 2009, and in all likelihood the subsequent recovery will be unusually slow and weak. With both private and public investment being constrained due to reduced

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[1] We attempt to summarise the most important changes in a positive rather than a normative way, even though clear distinction is not always possible. We also concentrate on fundamental, structural implications rather than short-term developments, including public programmes to stabilise the financial sector. For a summary of the causes that led to the financial crisis, see e.g. Financial Stability Forum (2008) or OECD (2008).

[2] See also table 3 in chapter 4.

demand and surging deficits, respectively, higher interest rates potentially leading to a crowding-out of private spending, and innovation suffering from tighter regulation not only in the financial sector, the long-term consequences of the crisis appear severe.

3. Key changes in financial regulation

In response to the crisis, governments are seeking to establish new rules that make future financial crises less likely and the financial system more resilient. They have already taken and will take further measures to address obvious weaknesses in the regulatory framework and in the instruments and methods used by bank supervisors. While this is an ongoing process in which neither the scope of reform nor the extent of collaboration between authorities in Europe and America has as yet been defined, the discussion centres on several areas in which significant changes seem likely:

— Banks will be required to hold larger capital buffers (for a more comprehensive discussion of capital levels, see chapter 5).

— As a consequence of market developments and regulatory changes, simple, standardised products will gain at the expense of more complex products which will become less attractive due to, i.a., stricter product approval processes (incl. the possibility of an outright ban), extensive disclosure requirements for issuers and higher capital requirements for investors in such products.

— Securitisation will become less attractive. Investors and regulators demand that banks have “more skin in the game”, i.e. retain some credit risk on their own books, making the whole transaction more expensive. Similarly, investors in securitised risk are set to face higher capital charges.

Overall, this new and additional regulation will result in a renaissance of more traditional business models. Banks will be less able to achieve growth and will, hence, on average also be less profitable than previously.

4. Ownership structures

One of the most striking changes triggered by the crisis is the fact that the state, after years of liberalisation and privatisation, is assuming a greater role in the financial industry again, including that of owner. Yet, to put this into perspective it is important to point out that, in contrast to the US[3], the banking sectors in several European countries have never been fully in private ownership: banking crises in Sweden and Finland in the early 1990s led to the respective governments taking a substantial stake in major banks in both countries. Before the end of that decade Italy adopted a law that transferred majority ownership of the country’s savings banks from local authorities (in the form of public foundations) to private shareholders but left the foundations with still sizeable minority stakes.[4] In Spain, mayors and other representatives of local communities continue to serve on the boards of their *cajas*, though with limited voting power.[5] Not to mention banks in Germany where states and municipalities exert ownership rights over *Landesbanks* and savings banks, which together account for about one-third of total banking assets. Thus, even before the global financial crisis hit

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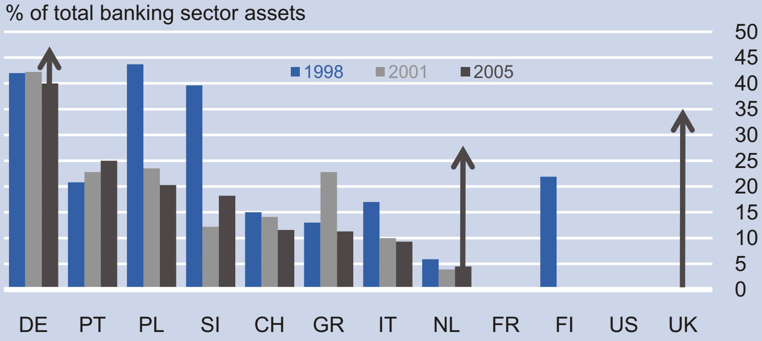
[3] To be sure: there is a significant amount of state intervention in the US banking markets with para-state institutions like the GSEs and the FHLB system having played a major role in the mortgage markets for more than 70 years.

[4] See also Polster (2004).

[5] See e.g. Mai (2004).

European banks, many European banking systems were under considerable direct influence from domestic governments (see chart 2).

Market share of banks that are > 50% government-owned
% of total banking sector assets



Sources: World Bank, DB Research 2

The state as "investor of last resort":

In the current crisis, this clear distinction between Europe and the US has evaporated. With aggregate bank capital levels eroding quickly on both sides of the Atlantic and private lenders becoming increasingly reluctant to put further funds at risk, governments turned out to be the "investor of last resort" for banks (see table 3). While in a first phase banks in the US and Europe often received equity in the form of preferential shares or some sort of silent participation, in the second phase governments usually insisted on obtaining more control over the banks' management in exchange for additional taxpayers' money. The third phase then saw the state in some cases take a stake of more than 50% in some banks or nationalise them completely, often under substantial political pain.

Selected recent capital injections into banks by European governments/the US government

European banks	Country	EUR bn	US banks	USD bn
RBS	UK	23.4	Citigroup	52.1
Lloyds	UK	19.0	Bank of America	49.0
Commerzbank	DE	18.2	JPMorgan	25.0
ING	NL	10.0	Wells Fargo	25.0
BayernLB	DE	10.0	Goldman Sachs	10.0
Dexia	BE	5.6	Morgan Stanley	10.0
KBC	BE	5.5	PNC	7.6
BNP	FR	5.1	US Bancorp	6.6
LBBW	DE	5.0	SunTrust	4.9
UBS	CH	3.9	Capital One	3.6
Total		105.7	Total	193.7

Sources: Bloomberg, US Treasury, DB Research 3

a necessary help but with potential drawbacks

To be clear about that: government involvement was absolutely necessary to prevent the crisis from spiralling out of control. As financial markets ceased to function properly, there was no alternative to the decisive, timely and generally appropriate actions taken. Nevertheless, it is important to consider theoretical drawbacks for European and American banks that could arise from such heavy state involvement, especially if it persisted:

Remuneration

Driven by their – new and existing – shareholders but even more by banks recognising deficiencies in remuneration policies themselves, compensation mechanisms for employees are under comprehensive review at many banks. Simultaneously, regulators have issued principles and guidelines for compensation schemes. As is appropriate, regulators and banks alike recognise that the incentive structure stemming from performance-based remuneration schemes must be analysed in a differentiated manner, depending on how sensitive the function is to the risk situation of an institution. Hence, there is broad agreement that the design of compensation schemes at the board level, for trading activities, risk management and sales activities all result in specific risk structures, which therefore have to be addressed in a differentiated manner. As a general rule, remuneration should be less bonus-oriented the closer the activity is to a control function.

Notwithstanding this need for differentiated approaches, it is a general lesson from the crisis that current compensation schemes in many cases lay too much emphasis on rewarding short-term success and pay too little attention to the compatibility of remuneration schemes with sustainable profitability and the desired risk profile. Specifically, a scheme that disburses cash bonuses immediately after the closing of the accounts for the financial year irrespective of the life cycle of the product sold can lead to banks assuming levels of risk that are higher than in their own long-run interest and thus can also be detrimental to shareholders. Even more importantly, such incentive structures may reduce the stability of the financial system as a whole by increasing the riskiness of individual institutions.

Adjusting banks' compensation schemes is therefore in the interest of both the banks and their supervisors. Indeed, the industry is already heading towards the principles of conduct laid out by the IIF, with several large European banks having announced major changes in their compensation policies: deriving bonus payments from profits made over a period of several years and retaining part of them for some time in an escrow account is a clear improvement over present practices. Such a bonus-malus system can better align the remuneration of staff with a bank's long-term sustainable profitability. In contrast, merely setting absolute limits for payoffs to employees as sometimes demanded currently by the public and some policymakers – though intuitively somewhat reasonable – would not be very helpful; the US experience with capping tax-deductable direct compensation for executives to USD 1 m in 1993 is instructive in this respect: it was quickly circumvented by means of stock options, payment in kind and other non-cash forms of compensation.

— Banks' geographic focus would possibly shift towards a primacy of domestic markets, especially with regard to further consolidation and lending. This could partly reverse the globalisation of finance that had started to flourish just about two decades ago after the demise of communism and the opening of China and India, and reduce many of the benefits of internationally integrated financial markets. As many European banks have greater international exposures than their American peers (see chapter 7, section b), they would clearly be more affected by such a push towards re-nationalisation.

— Competitive distortions may arise between state-owned and privately-owned institutions; these would be reflected, e.g., in funding costs and pricing behaviour.

— Policymakers could be tempted to push banks into acting on the basis of political considerations rather than business objectives. The quality of supervision might suffer (regulatory forbearance vis-à-vis – partially – state-owned banks); a softening of competitive pressure and/or of pressure from owners could lead to inefficiencies being tackled less rigorously than under private ownership.

— Increased government involvement can cause greater risk aversion on the part of banks as state representatives know taxpayers' money is at stake. However, government ownership can also *encourage* risk-taking due to lower funding costs and possibly less shareholder scrutiny. German *Landesbanks* are a notorious example. But even banks that confine themselves to traditional financial instruments and methods to lower their exposure to risk will not automatically achieve their goals, as previous financial crises have demonstrated. Besides, such a shift would probably reduce the incentives for innovation and therefore the quality of service banks can provide to their clients. For instance, derivatives have been blamed for contributing to the crisis and are therefore likely to be subjected to tighter regulation. However, problems in the derivatives market segment should not distract from the fact that derivatives such as foreign exchange swaps have been enormously helpful for many export-oriented companies to insure against large exchange-rate fluctuations. Other forms of derivatives bring comparable benefits. Discouraging banks from developing new, similarly useful tools would not only be detrimental to the banks but also to their clients.

— Public banks tie up large amounts of public funds. While this may be without alternative – and indeed warranted – in times of acute crisis, under normal circumstances it will often mean foregone interest on the government's investment given that state-owned banks tend to be less profitable than their private peers.[6]

Thus, the important question remains for how long governments will (have to) back up the banking sector with public capital. Even though there is particular uncertainty in this respect, some general conclusions can already be drawn:

— As is already evident, those financial institutions that have quickly returned to solid profitability as markets return to normalcy (or, indeed, have remained profitable all along) will seek to pay back government assistance as soon as market conditions allow. This is also in the interest of taxpayers.

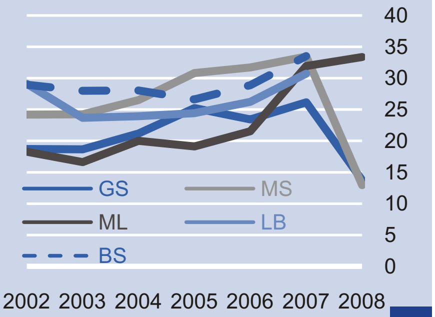
[6] See e.g. La Porta et al. (2002).

Narrow banking?

There have been voices arguing that with all the sweeping changes under way, banks are about to convert – or, indeed should be converted – into "narrow banking institutions". This term describes a conceptual model of finance which is in many ways the exact opposite of the current Western banking system: narrow banks are confined to providing basic banking services (essentially: payment services, simple savings products and traditional loans). Products, pricing and the organisational set-up of banks are under tight control by the government. These institutions would earn stable, but low returns – akin to public utilities (hence, the concept is also known as "utility banking"). Only these narrow banks would be eligible for state support. All other financial institutions – to the extent that they are allowed – would be precluded from receiving any state assistance, no matter how severe their problems.

Is it likely that narrow banking emerges in reality? Probably not. For sure, the concept has been discussed for several decades already. The fact that it has not been realised anywhere points to the shortcomings of the concept: firstly, there is the obvious difficulty of defining the range of products and services allowed. Too broad a range would obviously defeat the purpose of the concept, too narrow a range would deny firms and households access to financial services which meet their diverse and specific needs. Secondly and related to this, it is obvious that in a globalised, sophisticated economy firms have legitimate needs such as the desire to hedge foreign-exchange risk that cannot be met by simple products. Similarly, it would be incompatible with putting old-age provision into the hands of private households, while denying them the means to hedge against the risks involved (e.g. inflation). Thirdly, assuming that in response to these needs for more sophisticated financial services a sizeable banking sector emerges outside of the narrow banking system, it is questionable how credible the commitment of the government would be, not to come to the assistance of that part of the financial system should it fall into a severe crisis which threatened to engulf the rest of the economy, too. Finally, narrow banking systems would most probably be strongly national in nature.

Leverage ratio of US investment banks: up - and down



Sources: Company reports, DB Research

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— Most of the participations which states have taken in banks (and might still take) will probably be privatised at some point in time, reflecting a common understanding that government assistance should be limited to emergency situations. A well-established recovery of both the banking sector as well as the real economy is a precondition for any exit of states from the industry.

— However, it may take longer for the privatisation process to be completed than many within the industry and the political arena currently envisage.[7] Most of all this is due to the banks' shattered reputation as a reliable investment, on the one hand, and the need for enormous amounts of private capital to be raised, on the other. Consequently, privatisation will be a gradual and long-winded process.

— Furthermore, as much international coordination of governments as possible is needed to avoid depressing market prices by a bunching of privatisation candidates, which would overwhelm the absorption capacity of investors. Likewise, the first transactions are crucial for the success of further privatisations, so they should send positive signals to both investors and governments waiting in line to pass the baton back into private hands.

— Ultimately, as in the past, privatisation will be as much a political decision as an economic one. Changes in the political landscape might delay the return of banks to private ownership. Nonetheless, it is always worth remembering that many state-owned banks – not least in Germany – performed even worse than their private peers during the crisis and exposed taxpayers to even higher risks.

5. Capital and leverage

Excessive leverage, i.e. overly large balance sheets relative to shareholders' equity, has been identified by many observers as a main cause of the financial crisis. Indeed, had the ratio between subprime-related losses and banks' capital levels been different, uncertainty and fear about counterparty risk among banks had probably risen less drastically and the evolving crisis would not have played out as dramatically as it did. Granted, too, US investment banks had become more leveraged in the pre-crisis years, thriving in an environment of low capital costs and light regulation (see chart 4). Other banks in turn used low capital requirements for off-balance sheet assets to shift substantial volumes out of their trading books and into SIVs (structured investment vehicles). However, judging from pure data it is hard to find evidence for a general increase in leverage in the US and the largest European banking sectors in a long-term comparison (see chart 5). Maybe even more interestingly, European banks used to be much less well capitalised than their American peers, which stand at the heart of this crisis – which casts doubt over the very proposition that more capital in itself would be enough to prevent a financial crisis.[8]

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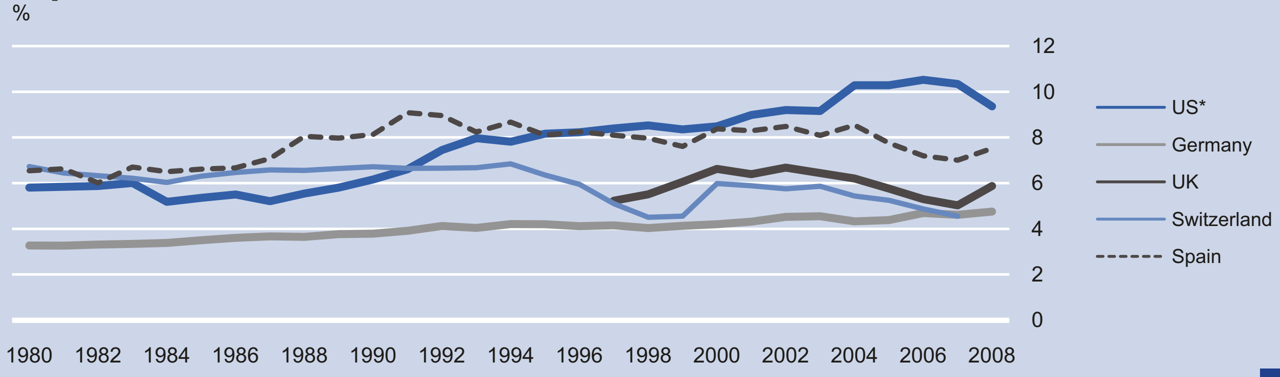
7 In this context it may be noteworthy that even Sweden, which is widely seen as the model banking rescuer, still retains a stake in Nordea dating back to the crisis years of 1992/93.

8 The IMF even found that commercial banks in the US and non-euro area countries in Europe (i.e. mainly Britain and Switzerland) where governments needed to intervene displayed *higher* equity-to-assets ratios before the crisis than those peers that could get along on their own (see IMF (2009)).

Capital & reserves to total assets



* Excludes pure investment banks. Sources: FDIC, Bundesbank, BoE, SNB, Banco de España, DB Research **5**

Pressure on bank capital

In any case, an increase in banks' capital ratios is fully under way already. Banks are struggling to raise equity as capital ratios are under pressure from four sides:

— Writedowns on credit products continue and loan losses are surging.

— Downgrades of securities (and an internal reassessment of the riskiness of other assets) are leading to an increase in risk-weighted assets that have to be backed with equity in order to merely maintain existing capital levels.

— Supervisory authorities as well as equity and debt holders require more capital as a buffer against further potential losses, and asset disposals to shrink balance sheets and reduce leverage.

— Some policymakers have demanded banks to increase lending to avoid exacerbating their clients' troubles in the current downturn. Those calling for an expansion of credit, though, face a conflict of objectives: while extending more loans would be positive for the real economy and possibly help some businesses to survive (and households not to default), it would also require banks to hold even more capital against potential losses, in particular in the current environment of already surging loan loss provisions.

Deleverage, but how much?

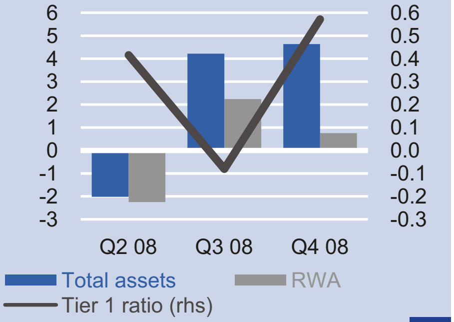
By how much should banks deleverage then? Ultimately, this will depend upon how much leverage bank shareholders are willing to tolerate in future, and what levels of leverage will be profitable in the new business environment (given increased costs of capital). In addition, regulatory reaction will play a role: some regulators are considering measures to control the banks' leverage. The Swiss authorities, for instance, will implement a nominal leverage ratio over the course of the next few years similar to that used in the US.

A leverage ratio?

A leverage ratio can be a valuable monitoring instrument and serve as an indicator for balance sheet risk. Not without reason has it gained a lot of attention among investors in recent months. However, a leverage ratio hardly makes a useful regulatory tool under Pillar 1 of the Basel capital accord as it cannot deliver on one crucial point in particular: it is completely insensitive to risk. Nominal leverage ratios can thus distort incentives, create moral hazard problems, and even increase the level of risk. They also do (almost) nothing to provide more transparency on a bank's true level of risk. Revealingly, the current financial crisis originated in a country where an official leverage cap has been in place for a many years already. Hence, the suitability of such a measure to increase stability in financial systems has to be doubted – it actually might even be counter-productive as hedging an asset would reduce risk but

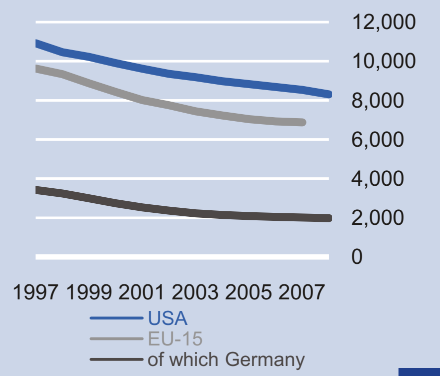
Key risk indicators for the 20 largest European banks

% change qoq, ppt change for Tier 1 ratio



Sources: Company reports, DB Research 6

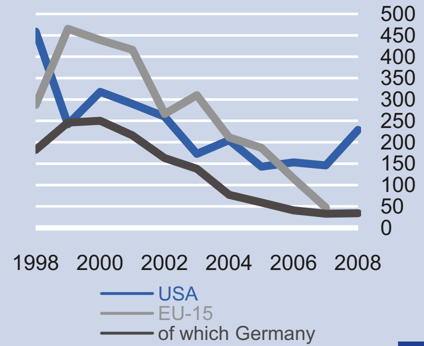
Number of banks



Sources: FDIC, ECB, DB Research 7

Consolidation is slowing

Reduction in number of banks



Sources: FDIC, ECB, DB Research 8

increase nominal balance sheet size.[9] Consequently, at best, a leverage ratio could be useful as an additional parameter to be monitored in the supervisory review process (Pillar 2).

Whether even more countries will introduce a regulatory leverage ratio or whether there will be higher capital requirements within the risk-based Basel II framework – the more reasonable option –, either way balance sheet structures will in the end shift back partly towards what they looked like a few years ago. Banks will have lower risk-weighted assets and higher capital ratios which as such will already make them less profitable. The effect on total assets is not so clear – banks are likely to lend less but also remove fewer assets from their balance sheets by means of securitisation. Indeed: growth rates of risk-weighted assets (RWAs) have recently fallen far below those of total assets for the 20 largest European banks. With growth in RWAs slowing and the help from government capital injections, the Tier 1 ratio has already improved considerably (see chart 6).

6. Consolidation

Having been one of the major structural trends during the pre-crisis decade, it is an important question whether consolidation among Western banks – especially cross-border consolidation – will continue at all and whether it will be in the form known so far. To be able to assess this issue properly, a brief review of past developments in consolidation on both sides of the Atlantic is instructive.

The number of banks has declined at a similar pace in Europe (-29% from 1997 to 2007 in the EU-15) and America (-22%) in the recent past (see charts 7-10). A sign of the different role that banks, in contrast to capital markets, traditionally play for the financial system in both regions, the banking sector's size is, however, much larger in Europe than in the US: while banking assets amounted to more than EUR 41 tr in the EU-27 at the end of 2007, US banks managed only about USD 13 tr, equal to some EUR 8.9 tr at the time. Hence, banks in Europe are usually much larger with an average balance sheet size of EUR 4.9 bn, compared with their US counterparts controlling mean total assets of EUR 1.0 bn only.

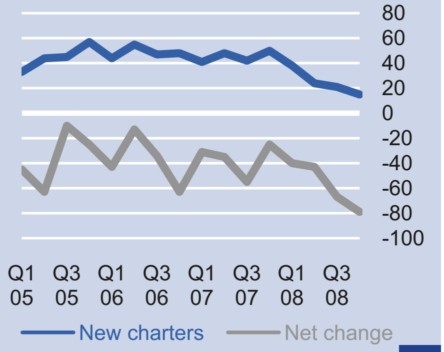
In a longer-term perspective, it is striking that the number of US banks has stayed fairly stable over half a century and even during the Great Depression (granted, interstate mergers were by and large prohibited and intrastate deals offered fairly limited potential).[10] Only after the savings and loan (S&L) crisis of the late 1980s did the number of institutions start to decline dramatically. This corresponds to a sudden but temporary rise in bank failures, yet with 2,250 failures and an overall decrease in the number of banks of more than 9,600 since 1985, bank mergers have had an even bigger impact.

In addition to ongoing consolidation, both the US and European banking markets have become more concentrated over the past decade (see chart 12). In Europe, where consolidation was an important trend already in the 1990s, domestic as well as cross-border M&A has driven the market share of the top five banks by assets (the concentration ratio or CR-5 ratio) above the 50% mark in

[9] It also seems plausible that unilaterally imposing a leverage ratio would do considerable harm to the international competitive position of banks in the respective country.

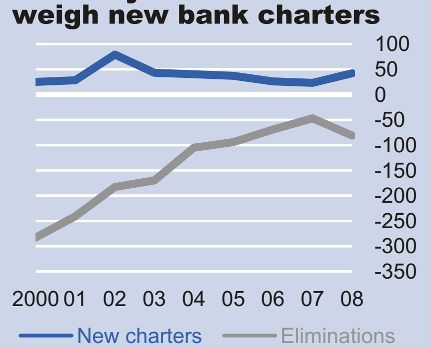
[10] See chart 11 and chapter 7, section b), for an analysis of interstate banking.

US: new bank charters even in the midst of the crisis



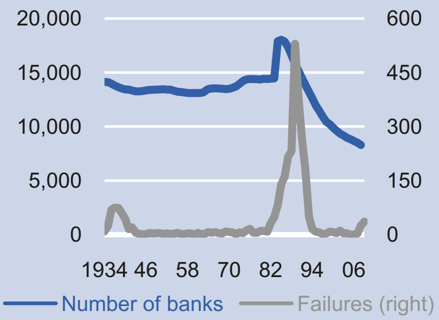
Source: FDIC **9**

Germany: eliminations outweigh new bank charters



Source: Bundesbank **10**

Structural change at US banks



Includes savings banks from 1984 on.
Sources: FDIC, DB Research **11**

19 out of 27 EU markets. In the US, the market has traditionally been more fragmented, but is catching up with European structures – thus, following the recent round of large emergency transactions, the CR-5 ratio also surged to more than 36%. Interestingly, though, this shift did not come primarily from a greater concentration at the state and local level: in three out of the five largest states by deposit volumes, the increase in the CR-5 ratio remained much smaller than the change on the national level, while in the other two the magnitude was just about the same. This suggests that consolidation has in fact been taking place mostly between institutions in different states; i.e. it has been an interstate rather than an intrastate phenomenon.

So what do these observations suggest as to the outlook for consolidation in and after the current crisis? A few conclusions can tentatively be drawn:

— So far, consolidation among banks has not been thwarted by the financial crisis even though volumes have declined considerably (not least due to lower valuations and difficulties to obtain finance) and transactions often required some sort of government support.[11] Furthermore, the most common rationale for M&A deals has changed, probably for the next few years: rescue acquisitions and bargain hunting on the part of the relatively strong have replaced strategic mergers as the dominant motivation for bank mergers. Only in a few years time, when the first banks have re-emerged invigorated, while others are still struggling, can a return to more traditional M&A patterns be expected. In addition, the market exit of maybe several hundred failing banking institutions in the US (and fewer in Europe) should also drive consolidation in the next couple of years. Indeed, after the slowdown in consolidation in recent years, the net (negative) change in the number of US banks rose again in 2008, probably indicating the new rule rather than the exception (see chart 8 above).

— As regards the kind of M&A that should prevail, the focus is likely to turn towards domestic deals (indeed, such a trend is visible already, but much more relevant for European than for American banks). The reasons are by and large those outlined above:

  — National governments – which usually tend to favour domestic consolidation over foreign banks purchasing national banks – have widely increased their influence on the banking sector.

  — There may be a re-nationalisation as a consequence of new ownership structures, regulation, and general market sentiment – making cross-border activities relatively less attractive for banks.

  — Uncertainty about the current state and future course of foreign markets has risen and valuing foreign-based compared to domestic banks has become even more complex (e.g. due to less information about market conditions, client demand and behaviour, or regulatory cost).

— In the US, with its banking sector at the core of the trouble, the "middle class" of medium-size banks will likely feel the pressure for change (i.e. for mergers among equals) most urgently in the next few years: while these banks cannot reap the benefits of economies of scale like larger competitors, often lack the critical

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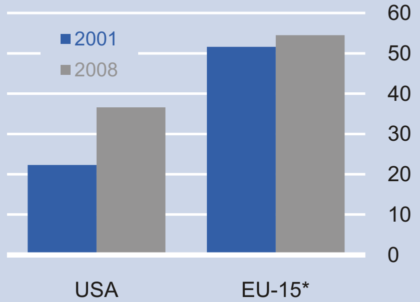
[11] For the development of financial sector M&A transactions in 2008 see e.g. PricewaterhouseCoopers (2009).

CR-5 ratio

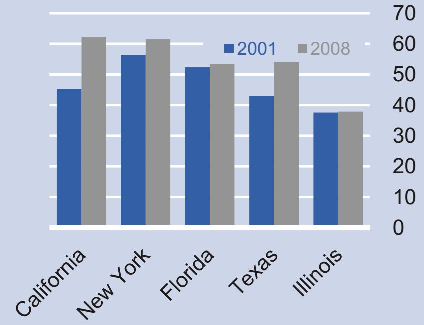
Market share of the 5 largest banks in % of total assets



* As of 2007, unweighted average.

Sources: Federal Reserve, ECB, DB Research

% of deposits, five largest US states by deposit volume



As of mid-year, but incl. JPMorgan-WaMu and Wells Fargo-Wachovia transactions for 2008.

Sources: FDIC, DB Research

12

mass for capital market business and at least in part also the advantages of diversification, they cannot build on the strengths of small, local and specialised banks either which remain more flexible and have intimate knowledge of local market conditions.

7. Revenues

The core question for all Western banks, however, will be the following: where will future growth come from? This involves two dimensions – the likely development of different business segments and the outlook for different geographic markets. On both scores, growth prospects look decidedly dimmed for the near future, for US banks more for the former, for Europeans more for the latter.

a) Business segments

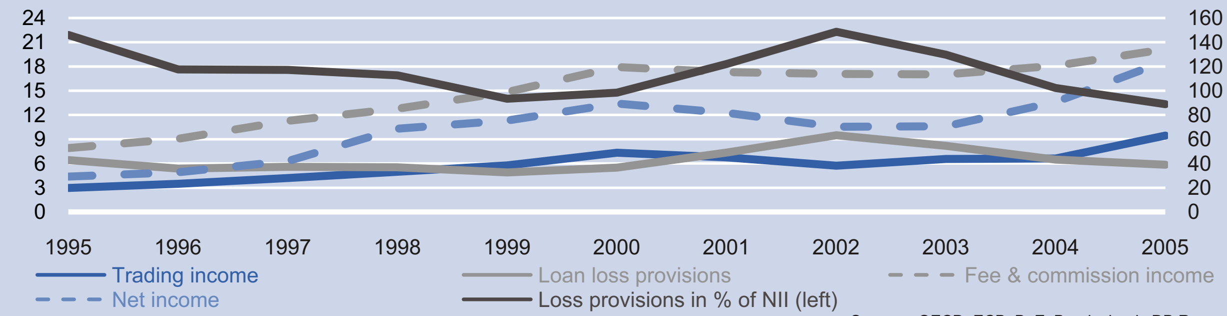
Again, when analysing which business areas are likely to be drivers of or a drag on banks' revenues, a look back is revealing. In particular, determining 1) what made the banking industry so profitable up until 2007 and 2) how banks performed during the last crises can provide useful insights.

Europe

As for European banks, their success since the mid-1990s relied to a large extent on two factors – a favourable development of fee and commission income and a low level of loan loss provisions. Fees and commissions[12] increased by more than 150% or EUR 82 bn in the seven most important banking markets in Europe[13] from 1995 to 2005[14], while net income even quadrupled, rising by EUR 95 bn (see chart 13 and chart 14). On the other hand, apart from a surge in the last years of the boom (2004-07), the impact of trading income – often cited as the main factor behind higher bank profits – remained limited due to its much smaller scale: even though tripling, trading income went up by not more than EUR 43 bn from 1995 to 2005. Net interest income, finally, rose at a slower pace and its share in total revenues fell in most countries (see chart 15). In absolute terms, though, it played a major role in banks' surging profitability – due to loan loss provisions remaining at rather low levels. From 1995 to 2005, provisions in fact even decreased by EUR 4 bn, which resulted in loss provisions shrinking as a share of net interest income to 13%, from 22%. At the bottom line, net interest income less provisions thus expanded by an impressive EUR 101 bn – the largest absolute rise in any source of income.

P&L developments in the top 7 European countries

EUR bn, provisions in % of net interest income



Sources: OECD, ECB, BoE, Bundesbank, DB Research

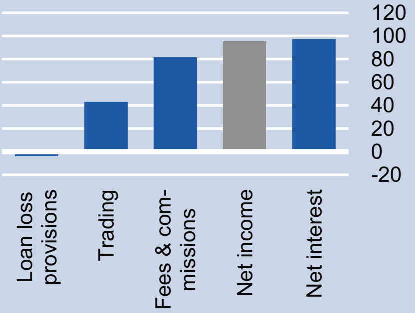
13

[12] Includes fees received in connection with payment services, securities issuance and trading, portfolio management, and custody as well as foreign exchange-related services.

[13] Germany, the UK, France, Italy, Spain, the Netherlands and Switzerland.

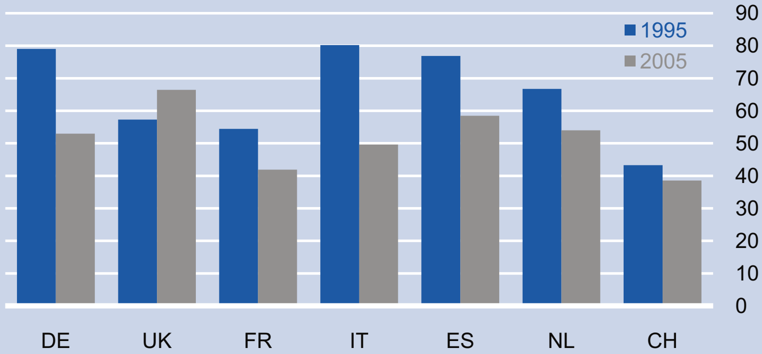
[14] Unfortunately, newer country data is not available on such a disaggregated level.

P&L contribution 1995-2005, top 7 European countries
EUR bn



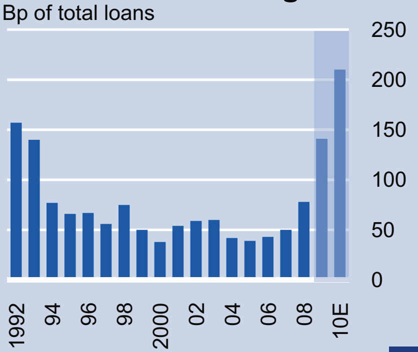
Sources: OECD, ECB, BoE, Bundesbank, DB Research **14**

Net interest income in % of total revenues



Sources: OECD, ECB, DB Research **15**

European banks' credit losses hit record high
Bp of total loans



Source: Deutsche Bank **16**

Over the last two decades, two major crises have hit European banks (not counting the current one): one as a result of the recession in 1992/93, the other as a result of the bursting of the "New Economy" bubble in 2002/03. In the former case, loss provisions rose more sharply and actual credit losses were also substantially higher, with writedowns on loans reaching 1.57% of the total loan book (see chart 16). While European banks overall remained profitable throughout both these crises, this was in part due to positive contributions from non-interest business, especially trading income and fees and commissions.

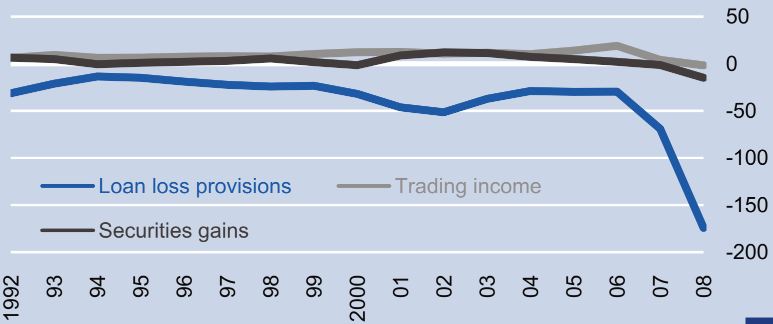
USA

In the US, in turn, loan loss provisions traditionally are of even higher relevance for the earnings profile than in Europe.[15] In absolute terms, they are also of much greater importance for the profit & loss statement than most other components, e.g. non-interest revenues such as trading income (see chart 17):

— Provisions are larger in scale, averaging USD 31 bn even during the rather calm years 1992-2007, compared with trading income of only USD 10 bn and securities gains of USD 4 bn,

— but they are also volatile to a similar extent: the range between the lowest and peak loss provisions reached 180% of the average for this period of time; that for trading income 154% and for securities gains 320%.

P&L contribution at US banks
USD bn



Source: FDIC **17**

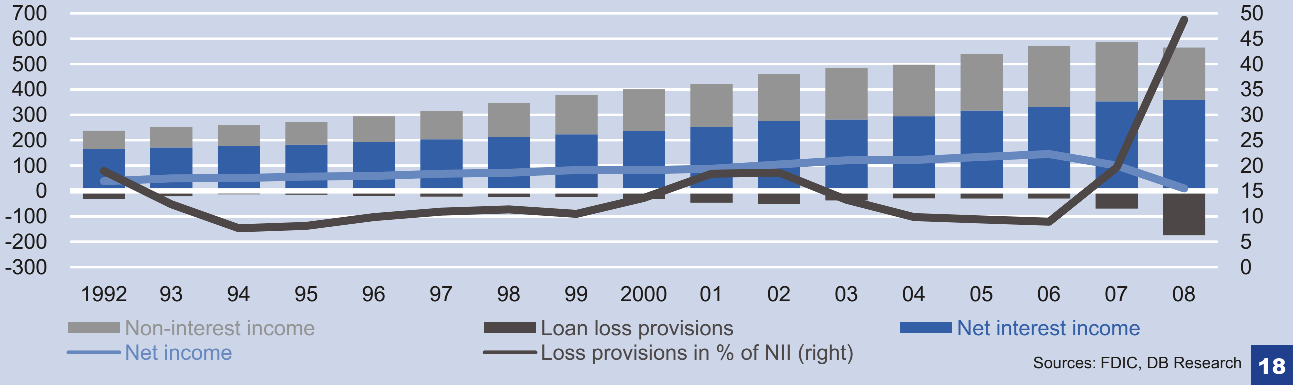
[15] This section concentrates on institutions insured by the FDIC, i.e. all commercial and savings banks but not pure investment banks.

Credit losses: crucial in good times...

The benign environment of low credit losses (and rising net interest income) thus was the major driver in net income for more than a decade. From 1992 to 2006, loss provisions virtually stagnated at relatively low levels of about USD 30 bn, while net interest income doubled over the same period, rising by USD 165 bn (see chart 18). This pushed down the ratio of provisions to net interest income from 19% to 9% and more than anything else enabled US banks to improve their net income by USD 107 bn – which represents almost a quadrupling within just 14 years.[16]

P&L developments at US banks

USD bn, provisions in % of net interest income

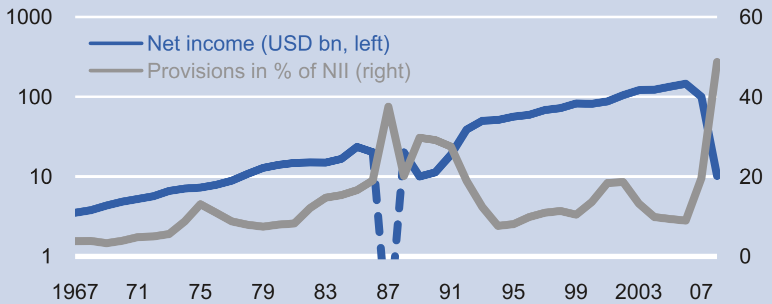


Sources: FDIC, DB Research **18**

... and bad times as well

Consequently, with loan losses accelerating dramatically since the second half of 2007, net profits also started to tumble (see chart 19).[17] During the last recession in 2001/02, higher loss provisions had a less significant effect on net income due to high gains from securities investments and particularly the slump in interest expenses following rate cuts by the Fed – which helped in the current crisis, too, but could not compensate for the magnitude of the jump in credit loss provisions. Provisioning levels now already exceed those of the S&L crisis in the late 1980s when loss provisions reached 1.8% of total loans (2008: 2.3%) and 38% (49%) of net interest income.

US banks' loan loss provisions and net income



Sources: FDIC, DB Research **19**

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[16] It did not matter much that the share of net interest income in total revenues still declined from 70% to 58% over the same period.

[17] In fact, the official data even understates the true extent of the decline: full-year results do not take into account both the losses banks had incurred before failing, nor losses banks had suffered before they were acquired by another institution (purchase accounting effect). Consequently, the sum of the quarterly net income figures does not equal stated full-year net income either. According to the FDIC, the US banking industry would indeed have reported an overall net loss for 2008 if the results had been adjusted for these factors (see FDIC (2009)).

Outlook: Lean years ahead

What do these findings then predict for revenue and profit developments of banks on both sides of the Atlantic in the next few years? Our conclusions are the following:

Limited potential from trading...

The boom in trading income that helped to push net income especially in the latest part of the up-cycle has turned to bust, inducing banks to sharply cut back the resources devoted to proprietary trading. While trading income consists of more than prop(rietary) trading and also includes, e.g., gains and losses on hedges, this nonetheless limits the potential for a large positive contribution of trading income to overall revenues even when markets return to normal conditions. In addition, the fundamental shift in ownership structures – towards much greater influence of public shareholders – will probably do its bit to lower the banks' inclination to assume risks in capital market activities. Finally, banking supervisory authorities are also keen to see financial institutions reduce their risk exposure particularly in trading segments, given the obvious risks to financial stability.

... and fee income under pressure as well

Fees and commissions as well are likely to remain under pressure due to lower assets under management, a lower number of transactions and lower margins on those products clients may demand most. Client confidence in banks has suffered substantially during the crisis, not only due to a lack of stability of the sector as a whole (and of individual institutions, too), but also due to the meagre performance of many financial investments. This has prompted clients to shift assets towards the most liquid and safe asset classes and to products that are rather simple, standardised and by and large "commodities" – thus facing strong competitive pressure and exhibiting relatively low margins. In addition, with lower nominal economic growth in future (see remarks on interest income below), overall revenue growth may be reduced in non-credit-related business areas, too (think of payment services where transaction volumes have a close correlation with overall GDP growth).

... with differences between both sides of the Atlantic

While this is true of European as well as US banks, significant differences between the two banking sectors remain: a significant proportion of non-interest income of European banks is derived from fees and commissions for transaction and asset management services as most banks operate as universal banks, providing a wide range of services. In the US, on the other hand, banks, brokers, and asset management firms are often separate institutions. Hence, asset management fees and brokerage commissions tend to account for a lower share of American banks' income – nothwithstanding moves of some banks into the asset management business, for instance, due to its stable revenue streams. At the same time, other fees – e.g. from the usage of cards, ATMs, checks and bank overdrafts as well as from servicing – play a more significant role in the US where many commercial banks focus almost entirely on retail banking activities (see chart 20).[18] New regulatory measures are set to make the card business less profitable in future, though.

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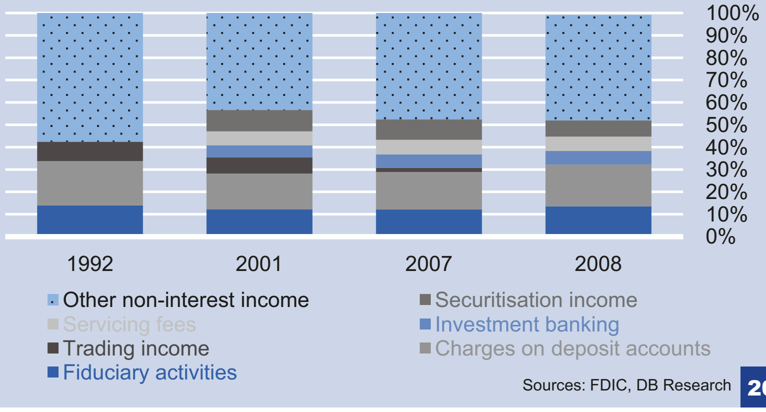
[18] Other non-interest income includes, among other things: interchange fees from the use of bank and credit cards, income from the use of ATMs, from the sale of cheques, and increases in the cash surrender value of bank-owned life insurances ("BOLI"). Securitisation income, servicing fees, and investment banking revenues are reported from 2001 only.

Composition of non-interest income at US banks



Sources: FDIC, DB Research 20

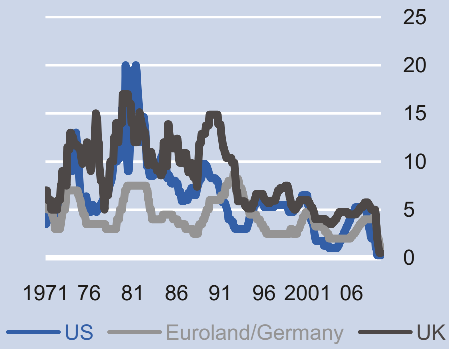
This has serious implications for the expected development of revenues over the next few years: while European banks traditionally suffer from less benign conditions on capital markets – with lower valuations hurting assets under management and clients shying away from trading and investing – US banks' income from fees and commissions tends to be much more robust in a downturn.

Net interest income, finally, has been boosted for a long time – almost 30 years – by a structural decline in interest rates (see chart 21), driven by lower pressure from inflation. Falling interest rates tend to be beneficial for banks as the pass-through of interest rate changes differs on the asset and liability side of the balance sheet as a result of differences in the levels of competition in the respective market segments.[19] In addition, lower cost of finance helped both households and enterprises to increase spending and investment and enabled them to take on more debt. Especially in a number of European countries (e.g. the UK, Spain, and Ireland) as well as in the US, banks' interest revenues were pushed up during the last one-and-a-half decades by an exceptional lending boom – due to a benign macroeconomic environment and partly because of particularly low real interest rates following the introduction of the euro.

Both trends of strong lending growth and declining interest rates are now likely to have come to an end for quite a while: lending growth has already shrunk drastically or even turned negative, especially in those countries that exhibited the highest growth rates prior to the crisis. As debt levels of households will have to decrease to get more in line again with disposable income, households will have to save more and spend less for quite some time (see chart 22 and table 23, with the US as an example).[20]

Main official interest rates

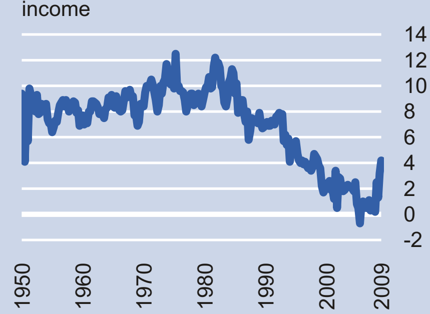
%



Sources: Federal Reserve, Bundesbank, ECB, BoE 21

US saving rate jumps - after 30 years of decline

Personal saving in % of disposable income



Source: BEA 22

[19] This is, however, no contradiction to the general rule that lower interest levels imply lower (absolute) margins.

[20] We take the level of household debt of the year 2000 as our "sustainability" benchmark, as this was the last year before indebtedness finally accelerated strongly. The figures for disposable income are assumed to be identical to GDP growth rates, with an inflation forecast of 2.2% – slightly above the Fed's new inflation target – from 2011 on. Loan volume estimates take into account that loan growth averaged 5% over the last 20 years, while it also fell three years in a row during the early-1990s recession, including a one-year drop in outstanding loans of 5%.

Seven lean years for US banks? Time necessary to bring US household debt back to sustainable levels

% p.a. unless otherwise stated	Level of household debt (% of disposable income)		Loan volume expected		(Nominal) disposable income expected		Years to reach sustainable debt level
	Current	"Sustain-able"	in 2009/10	from 2011	in 2009/10	from 2011	
Baseline scenario			-6.0		-0.3		6.9
Worst case	123	91	-9.0	2.0	-2.5	4.8	6.2
Best case			-3.0		1.8		7.7

Sources: Federal Reserve, BEA, DB Research 23

Lean years ahead...

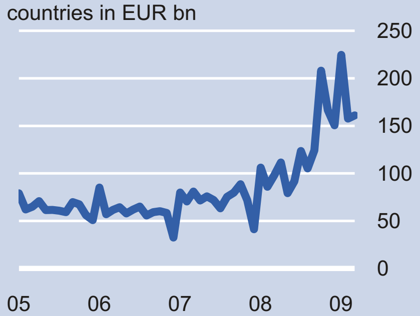
Even though this is only a rough and theoretical calculation, it shows the dimension of the adjustment that would be required to reduce fundamental imbalances to a broadly sustainable level. It may seem hard to imagine that lending volume will indeed perform so poorly, but in any case its growth should remain depressed for several years. Given that credit growth has been central to the strong performance of US banks in the past 15 years, the effect of its disappearance on growth and profitability of the banking sector can hardly be overstated.

... and no help from declining interest rates

The other major factor that helped banks to strengthen interest income, the long-term decline in interest rates, has also come to an end due to the low levels reached already. A structural reversal could occur in the years to come but this is debatable. Governments around the world are incurring huge fiscal deficits to stabilise banking systems and cushion the recession. As most developed countries not even achieved balanced budgets in benign times, the delay of structural reforms will be felt sorely in the next few years: IMF projections e.g. for the US foresee a surge in the level of government debt to GDP from 63% in 2007 to 90% in 2010, in the UK from 44% to 69% and in Germany from 65% to 80%. Government bond issuance has already picked up strongly since autumn 2008, especially for short maturities (see chart 24). Additional bonds under government guarantees are issued by financial institutions. The surge in government debt is only one but an important harbinger for a potential return of higher interest rate levels once market conditions normalise.

Short-term government debt securities

Gross monthly issuance by euro area countries in EUR bn

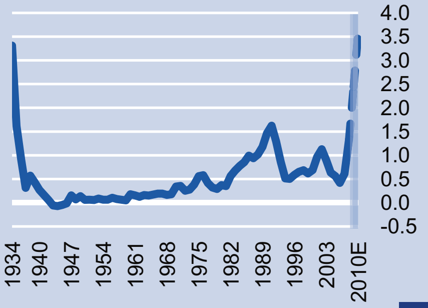


Source: ECB 24

Finally, a third factor that drove banks' profits to new heights, low credit losses, has also reversed its course already and is set to turn into a major burden for banks' profitability. If bad debt charges in Europe in the current crisis exceeded the levels reached in the early 1990s – which is not an unlikely scenario, as chart 16 above shows – and reached more than 2% of total loans, this would virtually wipe out the entire net interest income of one year. But whereas other sources of income helped European banks to remain profitable in both the 1992/93 and the 2002/03 downturns, in the current crisis there is little hope that they can balance the strong negative effect from loan losses: since trading has turned out to be a drag on rather than a driver of revenues, asset management fees are under pressure as well and banks had reduced their equity stakes in non-financial companies during the benign pre-crisis years, a significant

Loan losses in the US set to reach Depression levels

Commercial banks' net charge-offs in % of total loans



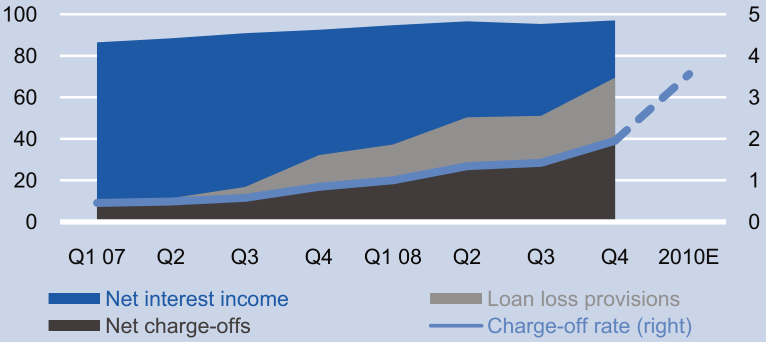
Sources: FDIC, Fed St. Louis, Deutsche Bank 25

stabilisation of net income from these segments seems at least ambitious.

In the US, credit losses have already risen close to the level experienced during the S&L crisis – i.e. they are now higher than virtually at any time since the Great Depression (see chart 25). Loan losses might even climb above the heights seen in the 1930s as a few structural factors ceteris paribus imply higher losses than at that time, among them e.g. the greater share of relatively risky consumer loans in the total loan portfolio.[21] If credit writedowns were to surge from today's 2% to more than 3.5% of all loans, banks' net interest income could be erased almost completely (see chart 26), similarly to the situation in Europe. As loan growth may well remain depressed for a longer period of time and interest expenses can hardly be pushed down much further by the Fed lowering interest rates, no significant pick-up in net interest income is in sight either. On a side note: government pressure in both the US and Europe to expand lending might even push credit risk exposures further beyond what a bank's prudent risk assessment would allow in the current severe downturn.

Quarterly P&L developments at US banks

USD bn; charge-off rate, annualised, in %



Sources: FDIC, Deutsche Bank, DB Research 26

No brave new world

Hence, in any case, the best of all worlds for US and European banks – structurally declining interest rates, rapid lending growth and low credit losses – seems to be out of reach for several years to come. While net interest income (notwithstanding the rise in provisions) might still turn out to be the best-performing segment for banks, given the rather modest prospects for trading income and the income from fees and commissions, there may well be no real growth driver for banks for some time at all.

b) Interregional and international banking

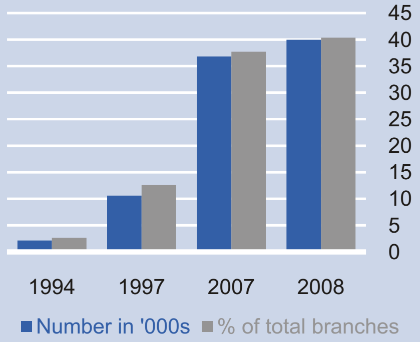
Could new geographic markets offer some relief? And would US and European banks indeed be able to take advantage of opportunities in other markets than their home markets? Again, taking a look at the banks' present positions might teach us some useful lessons.

USA

The chapter on consolidation provided a few insights into whether domestic consolidation in the US has taken place at a regional (i.e. state) level. Though this might explain part of the strong rise in concentration levels in the national market, the more important reason for the shift has probably been an exceptional move towards

[21] See e.g. Deutsche Bank (2009a) and Deutsche Bank (2009b).

Interstate branches of US banks



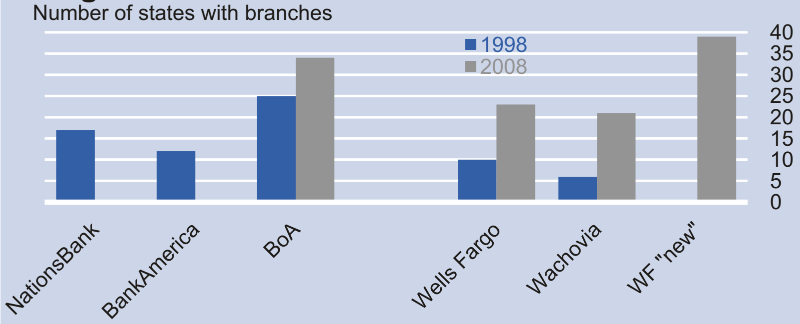
Sources: FDIC, DB Research 27

interstate branching. The passage and subsequent implementation of the Riegle-Neal Act of 1994 reshaped America's banking landscape like few other legal measures before. By allowing banks to operate branches in different states for essentially the first time in almost 70 years, Riegle-Neal led to a surge in bank mergers across states and to the emergence of a few institutions that can nowadays, after a process that took nearly one-and-a-half decades, justifiably be called "national". Up from virtually no multi-state branch networks just 15 years ago, the share of branches that belong to an institution located in another state has meanwhile leaped to more than 40% (see chart 27).

Arguably the two most prominent examples (but far from being the only ones) for the formation of large banking groups that cover sizeable parts of the country have been the rise of Bank of America and of Wells Fargo. Both today are the product of, on the one hand, a major merger between institutions with little geographic overlap and of small-step expansion into new states on the other hand. In the case of Bank of America (BoA), the merger came first and already almost doubled the geographic reach of the combined bank, which was then followed by BoA entering eleven new states over the next decade, while pulling out of just two (see chart 28). NationsBank (which had acquired BankAmerica in 1998 and renamed itself into Bank of America afterwards) overall increased its reach from 17 to 34 states within ten years. Wells Fargo took a similar path, however, in different order: this bank initially concentrated on small-scale expansion before it took advantage of the troubles the financial crisis spelled for Wachovia and bought this equal-size competitor in late 2008. All in all, Wells Fargo thereby has almost quadrupled its presence from 10 to 39 states over the last decade.

Interstate banking at Bank of America and Wells Fargo

Number of states with branches



Includes recent acquisitions (BoA: Merrill Lynch; WF: Century Bancshares, Texas); excludes offices in Washington, DC.

Sources: FDIC, DB Research 28

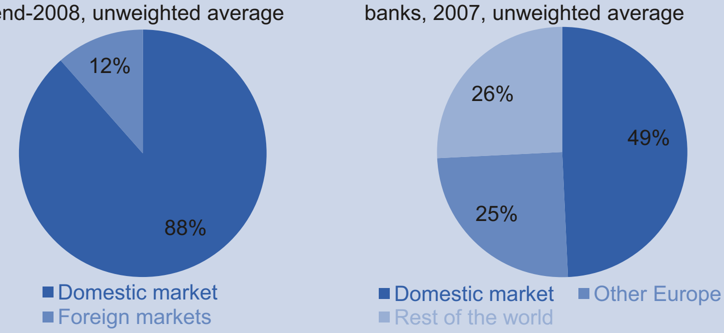
Interstate vs international

Building national financial institutions, US banks could, however, engage less in internationalisation. In contrast to European banks, they still remain overwhelmingly domestic institutions, with just 12% of the total assets of the 20 largest US banks invested abroad (see chart 29).

Geographic distribution of US and European banks' business

Assets of the 20 largest US banks, end-2008, unweighted average

Revenues of the 20 largest European banks, 2007, unweighted average



Sources: Federal Reserve, company reports, DB Research

29

Europe

In Europe, a breakdown by assets between the business in the banks' home market and in foreign countries is not available, yet with regard to revenues, the top 20 European banks already generate more than half of their total income internationally. For these banks, particularly the importance of European markets besides the home market has risen markedly over the last few years.[22] While extrapolating from the leading banks to the entire sector requires caution, it is nonetheless clear that a sharp distinction remains between mostly regionally or nationally-oriented banks in the US and their peers in Europe that have often become truly "European" or indeed global in recent times.

Outlook: Re-nationalisation on the horizon

So, what does the current financial crisis entail for the interregional/international footprint of American and European banks? The chapter on ownership already outlined the overall direction the geographic focus of banks is likely to take as a consequence of the current turmoil (and of government measures to calm markets): domestic markets may – at least temporarily – become more important again, reflecting

- the location of core clients
- better market knowledge (including knowledge about potential takeover targets)
- a more stable client base (due to long-standing client relationships, established brands, trust in a domestic financial institution)
- a close relationship with policymakers (politicians, regulators and supervisors)
- domestic rescue programmes (which are often conditioned on banks increasing the availability of finance in their home markets)

Domestic markets should gain in importance also as a funding source because of

- long-term relationships with investors
- a well-established deposit business (often with a high market share)
- the government as a potential anchor (e.g. via state-guaranteed bonds)

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[22] See also Schildbach and Hendel (2008).

A re-orientation towards the domestic market...

Considering the differences between banks on both sides of the Atlantic, these changes may affect European banks much more than their US counterparts. Especially European banks are likely to focus on their existing core markets in the short run and withdraw from marginal participations abroad. At the same time, US as well as European banks will probably gain market share at home as competitors pull out of the market and clients flock to those – often national – institutions they perceive as most stable and trustworthy (there is evidence of this happening already). Hence, the progress made with financial market integration in recent years, particularly in Europe, could be partly reversed.

... but long-term advantages of internationalisation remain

In the longer term, expansion into foreign markets might resume again based on the fundamental advantages of internationalisation:

— Diversification has proven beneficial even in the current synchronous global downturn, with specialised banks (no matter whether in terms of their geographic coverage or their business model) displaying even greater vulnerability to negative developments in their immediate environment.

— The long-term rationale for internationalisation remains intact: banks can balance earnings between large (but slowly growing) and relatively stable Western markets and relatively volatile but fast-growing (even though still small) emerging markets. And they can trade long-term prospects in rather young societies for a transfer of know-how from ageing countries.

— Last but not least: as long as bank valuations remain depressed, this may offer probably unique opportunities to build long-term strategic potential and prepare the ground for future growth, especially abroad.

... as long as regulation does not overshoot

Though there are good reasons for internationalisation to return once markets have stabilised, this obviously presupposes careful and prudent re-regulation which does not make foreign operations (too) unattractive.[23] In addition, the actual development will also depend to a large extent on how long it will take for governments to withdraw from today's heavy involvement in the sector, be it direct equity stakes or rather informal influence.

Good reasons for US banks to stay at home

In the end, most US banks will probably remain national institutions, while European banks might halt their internationalisation process for the time being. There are a few fundamental reasons why American banks seem even less likely than their European peers to become attracted by foreign markets in the foreseeable future:

— The US is by far the largest national market in the world, so there is less need for US banks to go abroad.

— Entering foreign markets can also be more complicated for American banks since those markets are farther away than in Europe, historical links are less common, and, possibly most importantly, because there are far fewer banks in America than in Europe that already have sizeable foreign operations.

— The vast majority of US banks are tiny, locally-oriented institutions which still have plenty of room for consolidation in their direct environment. For example, 92% of all banks in the US have total assets below USD 1 bn and the 10 largest banks run

[23] A case in point are the provisions for the Swiss leverage ratio that is to be implemented over the next few years and distinctly discriminates against foreign activities by largely exempting domestic business from the calculations.

only 27% of all branches – even accounting for the recent wave of major bank mergers.

Conclusion

No doubt, the banking sector is undergoing significant changes as a result of the financial crisis. It will become a less “fashionable” and even more heavily regulated industry with greater state involvement, increased investor scrutiny and substantially higher capital levels. This will lead to lower growth, lower profits and lower volatility for banks than during the past few decades – a trend that is exacerbated by the expected lack of major growth drivers, at least for some time. Especially US banks might well face the proverbial lean years due to low loan growth, higher credit losses and weaker revenues from capital-market activities. And while consolidation should continue, albeit with a very different focus, the topic of the day may be re-nationalisation and a re-orientation towards domestic markets rather than financial globalisation and market integration.

Besides, one should not underestimate another, more general effect: the vast destruction of confidence in banks and of their reputation. This may not have painful consequences in the short run as the demand for banking services is relatively inelastic. In the longer run, however, banks could feel strong negative repercussions. These might e.g. include a fundamental aversion to banks’ interests on the part of policymakers as well as difficulties to recruit talented staff due to the lower incentives banks can offer and because of lower overall prestige of jobs in finance. It will therefore be one of the greatest challenges for banks – apart from adjusting to a profoundly changed business environment – to repair their public reputation as soon as possible and regain the trust of clients, policymakers and the general public.

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