



Poised for a comeback: Bank deposits

Why banks should bank on savings accounts after all

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Deposits are the most important source of funding for European banks, providing roughly 60% of the total. At the same time, private-sector deposits tend to be less volatile than other funding instruments. In some cases there are considerable differences between individual countries in respect of the breakdown of deposit volume by investor group, maturity and geographic origin.

The growth of deposits is mainly driven by an increase in nominal gross domestic product. This pushes up disposable income, boosting the volume of deposits as a result. Interest rate levels tend to cause portfolio shifting between sight deposits and time deposits, but do not influence the volume of deposits as a whole.

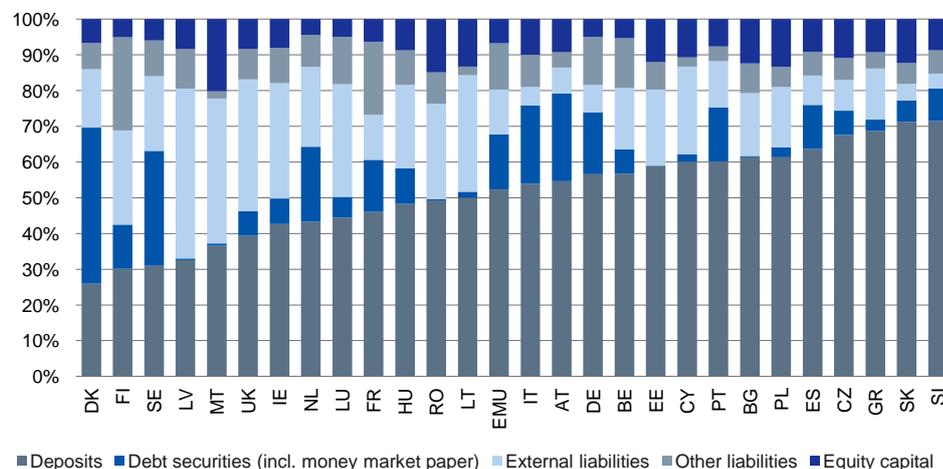
The importance of deposits is set to increase in the medium term because of new regulatory requirements and higher levels of risk aversion at banks. However, both factors will play a role in driving up banks' funding costs.

An increase in the volume of deposits could enable some moderate growth in the banking industry over the next few years – despite the probability of a downswing in capital market funding. However, this would require that households hold a larger share of their savings in the form of deposits and invest a smaller proportion in insurance policies. For EU households, deposits worth roughly EUR 8 tr account for a good 30% of their total financial wealth.

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Balance sheet of European banks: Liabilities side

Percentage shares, Q2 2011



External: for euro members – creditor domiciled outside the euro area; for non-euro members – all non-residents

Sources: ECB, DB Research



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Stable funding is vital for banks and the financial system. This warrants analysis of the significance of a reliable, low-cost way for banks to refinance their operations: deposits. Deposits play an important role for both consumers and financial services providers: in Europe, deposits account for approximately 60% of bank funding. The chief providers of deposits – households – hold roughly 30% of their financial wealth in this form. As a funding instrument deposits have the advantage of being stable and hardly exposed to the ups and downs of the capital markets. Consideration needs to be given to the following key questions:

1. What significance do deposits have for banks and the economy?
2. Which factors are the determinants of deposit growth?
3. Are deposits really that stable, and do different deposit categories vary in stability?
4. To what extent can deposits potentially plug possible funding gaps at banks?

It is important to find the answers to these questions since the significance of deposits for banks is likely to increase in future. Given new liquidity requirements (Basel III/CRD IV) banks must be prepared to face stiffer competition for deposits. The rising demand for safe investment options slightly relieves the competitive pressure, but does not eliminate it altogether.

This report gives an overview of the development and significance of deposits in Europe and assesses the prospective changes for banks and the economy on a medium-term horizon.

Significance of deposits for banks

For a commercial bank, deposits are (apart from equity capital) the oldest, most stable and, by volume, most significant source of funding. In the traditional model of the bank as an intermediary between savers and borrowers, deposits are the counterparts of the loans.

The bank provides savers with the opportunity to earn interest on surplus funds and make an investment that is nevertheless readily available for withdrawal and also in safe hands, while granting longer-term loans on fixed terms and conditions to persons or companies that do not have enough funds of their own for investment or consumption purposes.

From the bank's perspective, there are basically three distinct criteria by which deposits can be differentiated (see chart 1):

1. **The group of investors who are the source of the deposits.** These include not only other banks, financial institutions and the government, but in the narrower sense mainly the private sector, that is households and businesses. Private-sector deposits are usually considered less mobile than the others and thus particularly reliable – even though bank regulation had its origin in efforts to prevent typical bank runs (i.e. when masses of clients panic and suddenly try to withdraw their savings). For this reason, this analysis shall focus on corporate and household deposits as well as on the extent to which such stable funding channels are going to gain in significance in future.
2. **The maturity of deposits.** Generally, deposits tend to be short-term funds that could quickly be withdrawn from an account again. As a rule, however, in practice they prove to be the most stable form of bank funding – apart from equity capital. Usually, banks distinguish between a) sight (overnight) deposits, b) time deposits available for a certain duration before maturity and c) savings deposits redeemable at agreed notice.



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3. **The geographic origin of the deposits.** Deposits may be paid in by residents or non-residents, although in Europe in some cases a distinction is also made whether depositors come from the euro area or not.

This report will examine all three of these aspects besides focusing on differences between countries and changes over time.

Different deposit types by category

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Sight deposit:

Deposit redeemable (overnight) without notice and with no minimum holding period.

Deposit with fixed maturity:

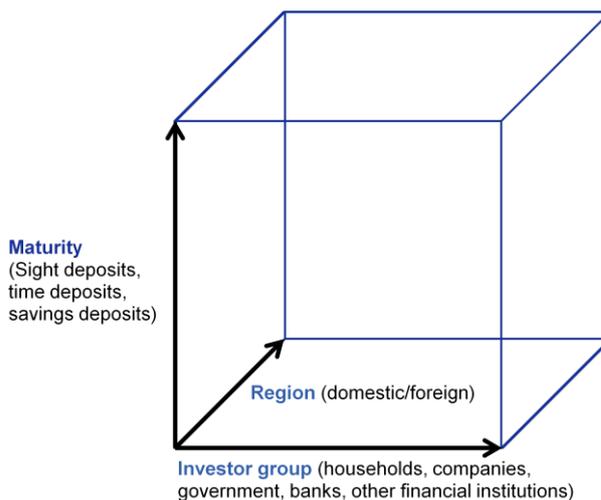
Savings deposit with agreed maturity. Depending on the contractual agreement, early redemption may trigger a penalty fee.

Deposit redeemable at agreed notice:

Savings deposit for which the saver must observe a fixed notice period, for example three months, before the deposit may be withdrawn. In some cases it is possible to withdraw a certain amount in a given period without having to pay any penalty; otherwise, normally a penalty fee is charged.

Classification of deposits

1



Source: DB Research

The differences between individual economies already start with the fundamental importance of deposits as a source of funding for the banking system. Banking markets dominated by traditional commercial banks have a correspondingly large share of deposits in total liabilities, whereas more market-based banking systems rely to a greater extent on the capital markets for their funding needs. The first category includes, for example, most of the southern and eastern European banking markets, while the banks from the UK or France – some of which are also leaders in investment banking – with their generally more mature capital markets tend to fall into the second camp.

On balance, as can be seen in chart 3, there is substantial variation in the breakdown of the liabilities side of bank balance sheets in the individual countries of Europe.

Note first of all that the ECB statistics are based on non-consolidated bank balance sheets, i.e. they focus on legally independent units, without grouping foreign subsidiaries, for instance, under their parent companies. Furthermore, the statistics largely reflect liabilities vis-à-vis domestic creditors – for EMU countries vis-à-vis the euro area as a whole – aggregating all debt with non-residents as “external liabilities”. Naturally, the latter also contain deposits, and to a very large degree, in fact: for the euro area as a whole over 82% of total external liabilities consist of deposits belonging to non-euro-area residents. However, there are no such statistics for individual countries.

Regardless of these aspects, the broad range of differing funding structures in the European banking markets is obvious in any case. While euro-area deposits do not account for even one-third of total liabilities in Finland, they make up over 70% of the total at Slovenian banks. Danish, Swedish and also Italian banks, by contrast, finance themselves to a considerable degree by issuing debt securities – in Italy’s case via so-called retail bonds in particular, which banks place with retail investors for tax reasons instead of taking conventional deposits.

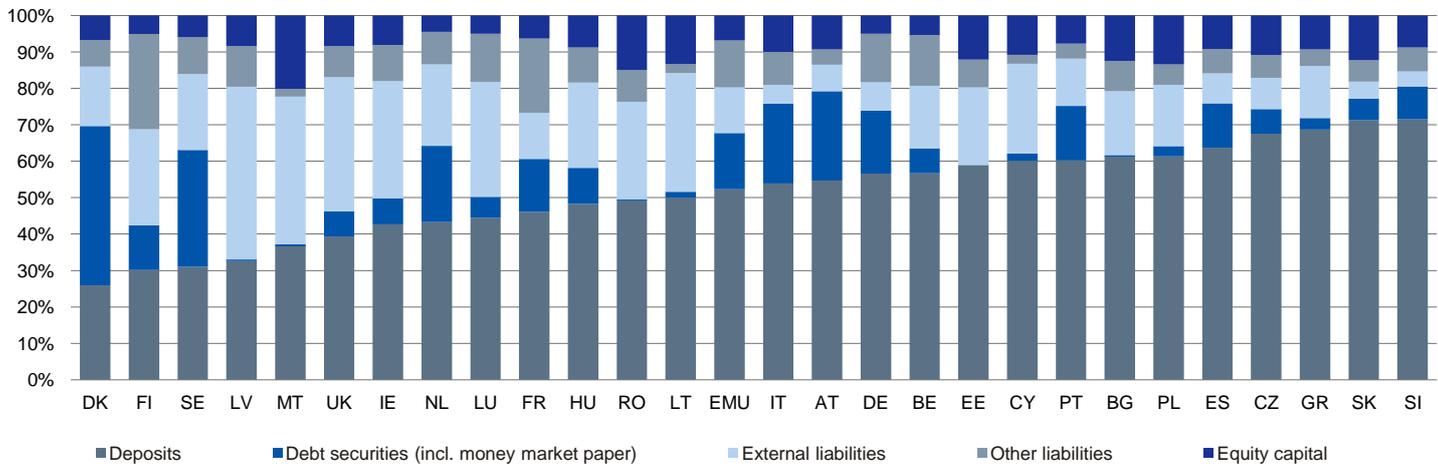


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Balance sheet of European banks: Liabilities side

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Percentage shares, Q2 2011



External: for euro members – creditor domiciled outside the euro area; for non-euro members – all non-residents

Sources: ECB, DB Research

In Germany, the share of funds taken up abroad is less than 8%, whereas the figure in the UK, at 37%, is the highest among all the major EU countries – a reflection of London's strong international standing and size as a financial centre.

Finally, the ratio of equity capital to total assets is in the double-digit percentage range in no less than ten countries (mainly in smaller and Central and Eastern European economies), but in others at or even below 5%.

Deposits from residents (or from the euro area as a whole) account in most cases for a share of between 40% and 60%. If non-residents' deposits are also factored in, all the deposits in the overwhelming majority of the EU countries may cover over 50% of the banks' total funding requirements.

For EMU as a whole, it is possible – as discussed above – for the external liabilities to be broken down further into deposits and other external liabilities (including interest-bearing securities). While the latter item accounts for a share of only around 2% of total liabilities, deposits taken up outside the euro area account for nearly 10%. They thus represent the third most important funding source for banks – besides domestic deposits and debt securities placed in the euro area.

Over the past ten years the fundamental breakdown of bank liabilities did not change materially. Nevertheless, several shifts in weighting are worth mentioning (see chart 4):

1. Deposits from residents, i.e. from the euro area itself, had slightly decreased in importance ahead of the financial crisis, which has only halted this decline without reversing it (at least to date).
2. By contrast, creditors from outside EMU did not start to withdraw deposits from European banks until the onset of the crisis. Overall, the deposit share in total assets today is 6 percentage points shy of the reading in 2000 – though still at 61%.
3. For the sake of completeness we should mention that the nominal equity ratio has increased significantly over the past three years, from 5.6% to 6.7%, after remaining largely constant for many years hitherto.



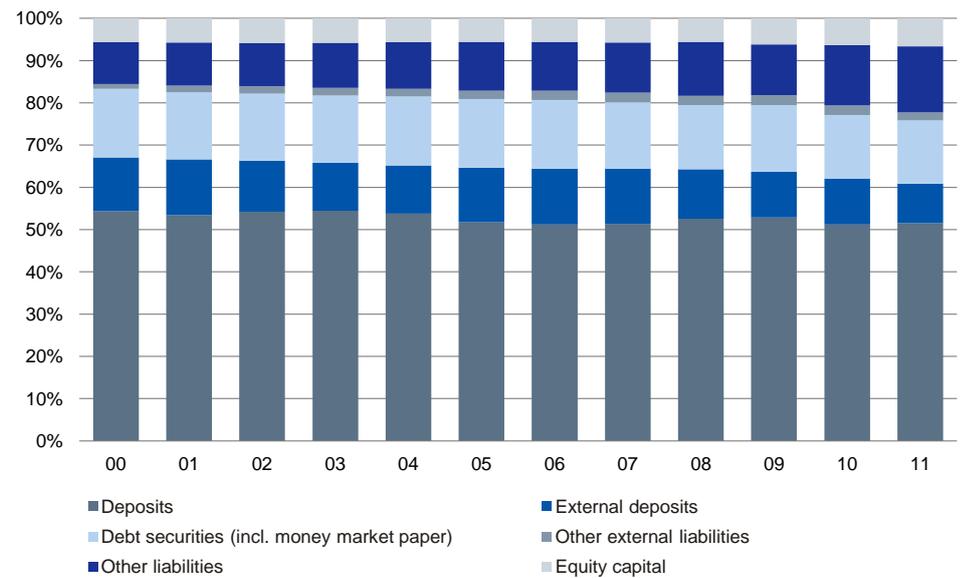
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- The biggest increase, however, was booked by “other liabilities” (vis-à-vis euro-area counterparts), whose share in the balance sheet total rose from 10% ten years ago to 16% now. This was probably mainly due to the growing role played by derivatives, not least in the trading activities of investment banks, as well as amendments to reporting regulations, such as on the introduction of the International Financial Reporting Standards (IFRS).

Balance sheet of euro-area banks: Liabilities side

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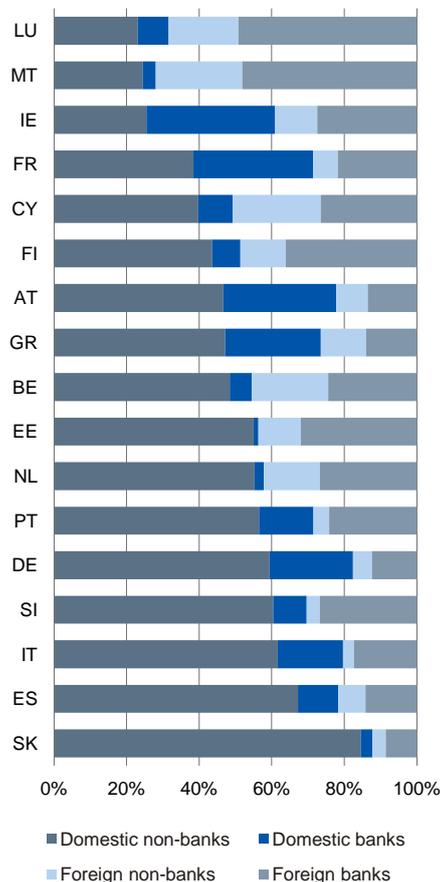
Percentage shares



Bank deposits by sector

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% of total deposits, Q2 2011



Sources: ECB, DB Research

External: creditor domiciled outside the euro area

Sources: ECB, DB Research

So who are the creditors who have lent money to the banks in the form of deposits? For the countries of the euro area one can differentiate between internal and external creditors (in this case external includes the other euro member states) and between banks and non-banks. It emerges that the actual share of the home market is usually 60-80% of total deposit volume, with deposits of non-banks (that is particularly households, companies and the government) playing a dominant part (see chart 5). In most countries, non-bank deposits of residents and non-residents combined account for around 60% or more of total deposits. These are traditionally considered to be relatively stable and reliable ways for banks to fund their activities. Interbank deposits, by contrast, are used not so much for savings purposes as for a (short-term) source of liquidity as well as for settling payment transactions, and may therefore be subject to greater fluctuations. Regardless of this fundamental distinction there are several national peculiarities such as the network systems of Germany's savings banks/Landesbanks and cooperative banks; in this case the regional retail banks permanently park surplus liquidity with their central institutions.

Deposits and their breakdown in individual banking markets also merit a comparison over time. In the five largest EMU countries the growth of deposits lodged by creditors from the euro area as a whole has been very uneven: while deposits grew relatively modestly in Germany and the Netherlands over the past ten years at merely 2.5% and 4% p.a., respectively, their annual growth was much more robust in Spain (11%) and Italy (8%) (see chart 6).

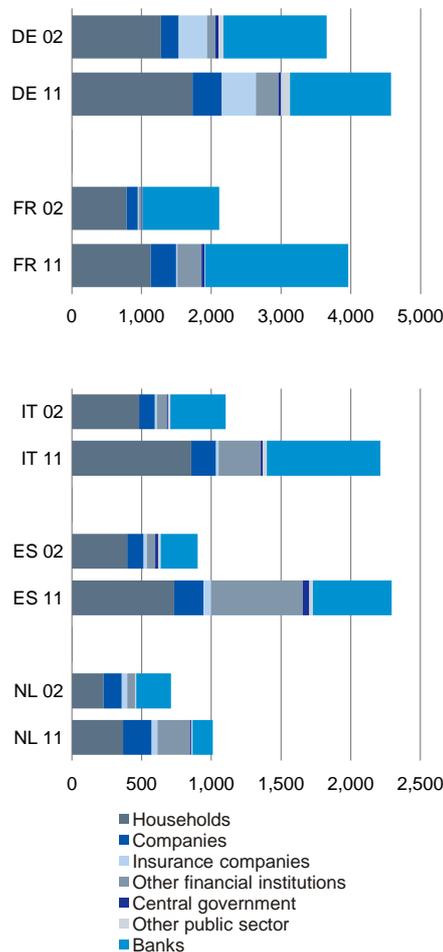


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Deposits from the euro area by sector

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EUR bn, 2002 and 2011



Sources: ECB, DB Research

There is a host of explanations for this phenomenon: in Germany, deposit growth has been curbed over the past few years by the generally weak growth of GDP (and thus of disposable incomes and corporate earnings). Equally, the surge of deposits in Spain was influenced by the longlasting economic boom there, while the strong increase in Italy is put into perspective by its very low starting basis: in 2002 Italy was the only one of the five countries whose deposit volume was smaller than GDP. Even today, Italy's deposits-to-GDP ratio of "only" 140% is still far below the 180% average of the top 5 euro-area nations, this being attributable not least to the use of retail bonds mentioned above.

At the same time, the data deliver more concrete insights into the breakdown of deposits held by so-called non-banks:

1. All in all, government deposits play only a very minor role. This is hardly surprising. After all, governments do not set aside any reserves and as a rule – the experience of the current sovereign debt crisis is not yet reflected here – they have no problem in tapping the capital market to raise fresh liquidity to fund expenditures that exceed their revenues. Given the current sovereign funding crisis in several European countries it may be assumed that governments will increase their liquidity holdings in future.
2. Non-bank deposits usually constitute the lion's share of the total volume (with France being the exception here). On closer examination, however, the boundaries become increasingly blurred: the other financial institutions and insurance companies (especially in Germany) hold a rather substantial share of the deposits, so they cannot really be classified under the private sector in the actual sense. Furthermore, unlike the deposits held by households and companies they may not be considered particularly stable.
3. The deposits of the private sector in the narrower sense are very largely attributable to households; corporate deposits equal only about 25% (over 50% in the Netherlands) of the total held by households. Since 2002, the individual countries have posted average annual deposit growth rates ranging between 4% in Germany and 7% in Spain, with the readings thus remaining closer to one another than in the case of deposit growth as a whole (see above).

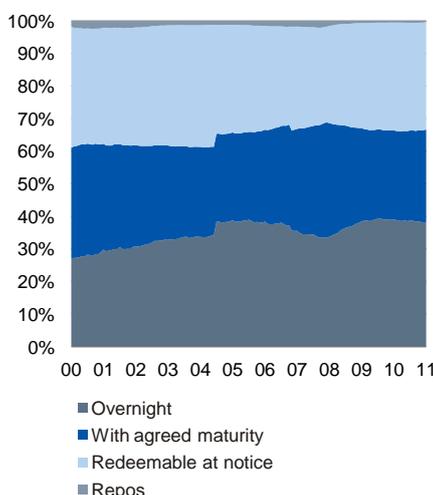
Furthermore, the private sector's deposits can be broken down further in line with the maturity agreed with the bank. In the euro area as a whole households now hold about EUR 5.9 tr worth of deposits with banks, this being a 60% increase – or solid 4.8% growth per year – over the past ten years. The volume can be divided roughly into three equal parts: overnight deposits (i.e. sight deposits), deposits with an agreed maturity date (time deposits) and deposits redeemable after an agreed notice period (savings deposits) (see chart 7).

However, there have definitely been shifts between the different types of deposits. For one thing, the share of time deposits provides a good reflection of the development of general interest rate levels and key rates in particular: during the low-interest-rate phase of the first few years of the past decade the absolute volume of time deposits stagnated in a growing overall market – their share declined from 34% to 27%. This trend reversed completely between 2006 and 2008 and time deposits regained all the ground previously relinquished, only to again lose much of their attractiveness when the ECB started to slash its key rates in autumn 2008.

The importance of traditional savings deposits changed only little during this period, so the mirror-image development of sight deposits (vis-à-vis time deposits) becomes obvious: these gained considerably in importance over the entire period, yet suffered understandably from the ECB's tightening of monetary policy before the financial and economic crisis. Even though there is no quantitative evidence available, it may be presumed that these shifts in

Euro area: Household deposits at banks

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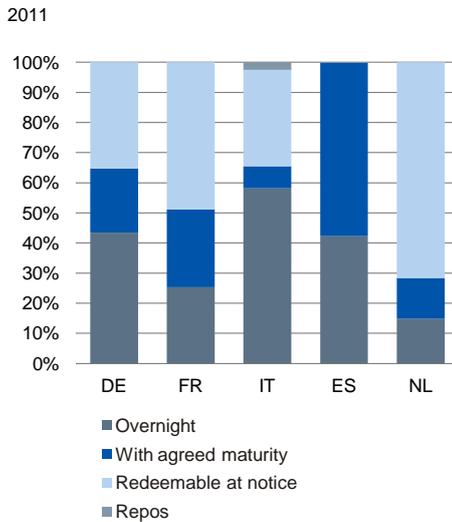


Sources: ECB, DB Research



Poised for a comeback: Bank deposits

Household deposits from the euro area **8**

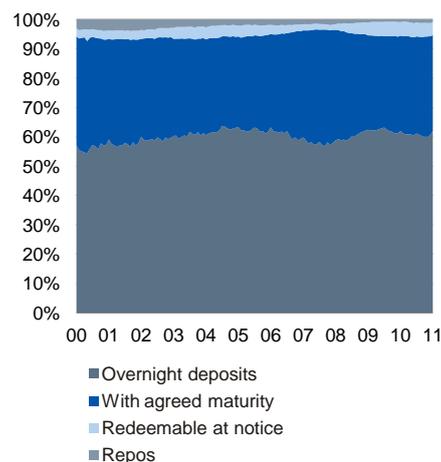


market share are attributable to households directly switching their portfolio holdings out of time deposits and into sight deposits, and vice versa. On balance, sight deposits were the clear winner among the various types of deposit instruments chosen by households, showing an average growth rate of 7.5% p.a. between 2001 and 2011.

A look at the five largest eurozone countries again reveals several peculiar features. The two countries that still most closely approximate the average of the euro area as a whole are Germany and France; in the three other economies there are substantial deviations (see chart 8). In Italy, the very large share of sight deposits is just as striking as the virtual absence of time deposits. Spain does not report any savings deposits redeemable at agreed notice whatsoever; the Netherlands, by contrast, reports these to be the most dominant form of investment by far. Probably the main reasons for the differences lie in national legal conditions, the shape of the healthcare and pension systems as well as risk awareness and appetite.

Things look slightly different with corporate deposits – which are less prominent in quantitative terms – at banks in the eurozone. There are practically only two variants, sight and time deposits, though their relationship similarly fluctuates in line with the interest rate cycle as household deposits do (see chart 9). The apparent preference of companies for liquidity is probably due to the fact that deposits serve different purposes: while households basically use them to build savings, companies focus on the aspect of liquidity provision to fund ongoing operations (i.e. their working capital). As a consequence, sight deposits account for more than 60% of the total corporate deposit volume of close to EUR 1.7 tr. Moreover, this total increased by 75% over the past ten years. With average growth running at 5.6% p.a. this rate slightly outstripped the reading on the household side.

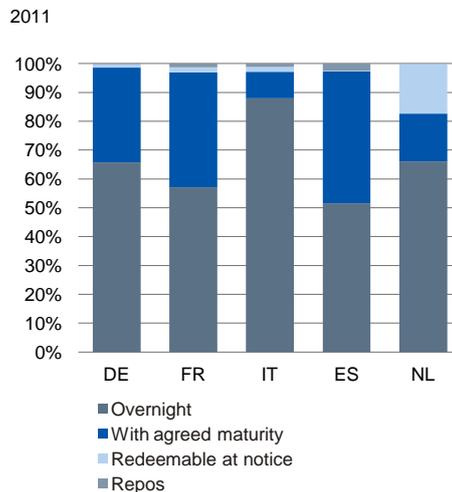
Euro area: Corporate deposits at banks **9**



The differences from country to country are also much less dramatic than for households (see chart 10). However, one feature that stands out is the high liquidity preference of eurozone companies that have lent money to Italian banks (that is, especially companies from Italy itself).

The importance of deposits for what the ECB classifies as other financial institutions has increased in all countries.¹ This is partly a reflection of the trends towards specialisation and division of labour that have developed in the financial sector over the past few years. In Spain their share has more than quadrupled (see chart 6 above). The regulatory regime being developed for the banking industry in the next few years could continue to drive this trend.

Corporate deposits from the euro area **10**



Given the key role that deposits play in bank funding, the question arises as to which factors shape deposit growth.

Which factors are the determinants of deposit growth?

Factors that determine the growth of deposits may be broken down structurally into supply-side and demand-side components. One further differentiation level is duration: while some factors have a relatively long-term, fundamental influence on the relative attractiveness of supply or demand for deposits, other factors have an only short-term impact on their growth.

¹ This category includes, for example, finance leasing companies, factoring companies, special financial vehicles, securities dealers or companies which broker derivative financial instruments and hedging instruments such as swaps, options and forward contracts.



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Empirical analysis and scientific studies on the growth of monetary aggregates and deposits

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An empirical analysis of relevant factors allows virtually no significant conclusions to be drawn on monetary or deposit growth. The variables tested were disposable income, the deposit interest rate, inflation, equity market performance and bank competition. Looking at a long period since 1970 in Germany, for example, finds that the only significant driving force for the growth of deposits is the expansion of nominal gross domestic product. This pushed up disposable income in turn, boosting the volume of deposits.

In economic literature there has been no detailed research to date into the supply of deposits held by households or into the determinants of this supply.

Edmister and Merriken (Measuring interest rate sensitivity of consumer depositors, *Journal of Financial Services Research*, February 2, 1989) examined to what extent a change in interest rates can shape the volume of deposits. The finding was that other macroeconomic factors usually exerted a bigger influence on deposit growth than interest rates do.

Setzer and Wolff (Money demand in the euro area: new insights from disaggregated data. 2009) give an overview of the findings of various studies on monetary demand in the eurozone since 2001. It emerges that the influences of various factors may differ greatly depending on the context.

Furthermore, numerous studies address the subject of household savings ratios in country comparisons. However, these mainly deliver findings on the development of total capital accumulation and/or how this wealth adapts to changes in macroeconomic variables (e.g. Hüfner, Koske: Explaining Household Saving Rates in G7 Countries: Implications for Germany, OECD Economics Department Working Papers 754, 2010).

Furthermore, there are studies devoted to the composition of household portfolios (e.g. D. Christelis, D. Georgarakos and M. Haliassos: Differences in Portfolios across Countries: Economic Environment versus Household Characteristics, Accepted for publication, *The Review of Economics and Statistics*, 2010). In such cases, data are usually taken from household surveys; however, there are no detailed analyses examining the motives for such portfolio adjustments.

OIS spread

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The spread between the EURIBOR and the OIS is a measure of how much banks trust one another and how much money they lend each other. In this context, the focus is on the spread between the interest rate charged by the ECB for funds lent and the interest rate at which banks lend each other money.

EURIBOR = Euro InterBank Offered Rate

OIS = Overnight Index Swap

Supply

In this context, supply is to be understood in the sense of “supply of deposits from depositors”. From a theoretical standpoint the following factors could have an influence:

- **Income:** One assumption would be that as incomes rise, deposits with banks do so as well.
- **Inflation/interest rates:** As inflation accelerates, deposits become less attractive, depending on the interest rate. In this case, the assumption would be that as deposit interest rates rise, deposits would increase in principle as well. The narrower the spread between deposit rates and inflation, the less attractive it should be to hold deposits above the required level.
- **Risk-reward profile of investment alternatives:** The assumption would be that the relative attractiveness of deposits falls if investment alternatives offer more favourable risk-reward profiles. In comparison with deposits, the risk-reward profiles of alternatives display not only structural but also intertemporal differences. Structural differences emerge from the characteristics of the respective investment form, for example, the possibility of a total loss on equities. Further structural factors are differing tax treatment or other regulatory treatment of certain investments (for example: Germany’s introduction of a flat-rate definitive tax on investment income (January 1, 2009) and the tightening of the link between building-society contracts and residential building projects (January 1, 2009)). One factor with a short-term impact was the political deposit guarantee declared by Germany’s Chancellor Merkel along with Finance Minister Steinbrück at a press conference in October 2008.
- **Demography:** The life-cycle hypothesis assumes that deposits increase in the course of a person’s lifetime, only to decrease as the person reaches old age. So with a population generally ageing, one would have to expect an overall decline in deposits.
- **Trust in the banking sector and its stability:** The assumption would be that given pronounced trust in the banking sector the volume of deposits would tend to increase. Credible guarantee systems (deposit guarantees, bank bail-out funds) could be helpful in this case.

Demand

In this context, the term means the banks’ demand for deposits. The following factors could have an impact on demand:

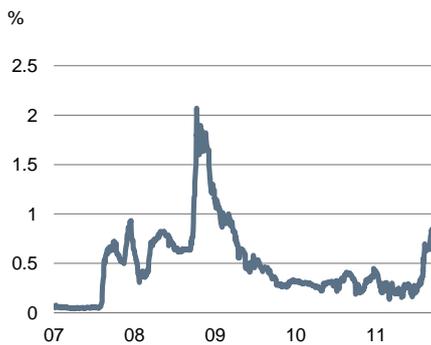
- **Regulation:** The regulatory regime changes the relative attractiveness of assets. In respect of deposits, Basel III and some laws on bank levies are of relevance. In some laws on bank levies, deposits have the impact of reducing the contributions levied. Under Basel III, household deposits have a lower weighting in the liquidity ratios than other liabilities. This could boost demand for deposits, since the relative attractiveness of deposits increases.
- **Competition:** Strong competition in the banking sector could necessitate higher interest rates being offered to attract deposits. From the banks’ point of view, this could reduce the attractiveness of deposits as a funding instrument. At the same time, depositors would find them more attractive.
- **Costs and availability of alternative funding instruments:** Their availability and costs hinge on national legislation, collateral, competition, the bank’s rating and the rating of the country in which it is domiciled.



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EURIBOR-OIS spread

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Source: Bloomberg

Changes due to the crisis

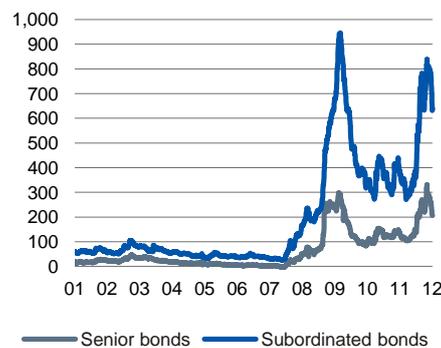
The crisis triggered the following major developments for deposits:

1. **Banks/market:** A greater degree of risk aversion among banks and investors. The EURIBOR-OIS spread demonstrates a smaller degree of trust felt by banks in the payment promises of other banks (see chart 13). While banks and money market funds from other eurozone countries covered 25% of the funding of EMU banks back at the peak in 2008, the figure is now only 20%. Also the cost of funding via bond issuance has jumped since the outset of the crisis (see chart 14). The asset swap spread indicates the credit risk of a bond. Subordinated bonds are currently (as of end-January 2012) trading far above the cost of new deposits, at 760 basis points (bp), and senior bonds, at 280 bp, also above such costs. Other funding sources such as deposits are therefore gaining in their relative attractiveness. This is partly due to the pronounced stability associated with household deposits (see chart 15). While household deposits are more expensive at present (see chart 16), they seem to be priced relatively favourably given their reliability and stickiness.

Increase in risk premia on bank bonds

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iBoxx Euro Banks Debt Indices, asset swap spread (bp)

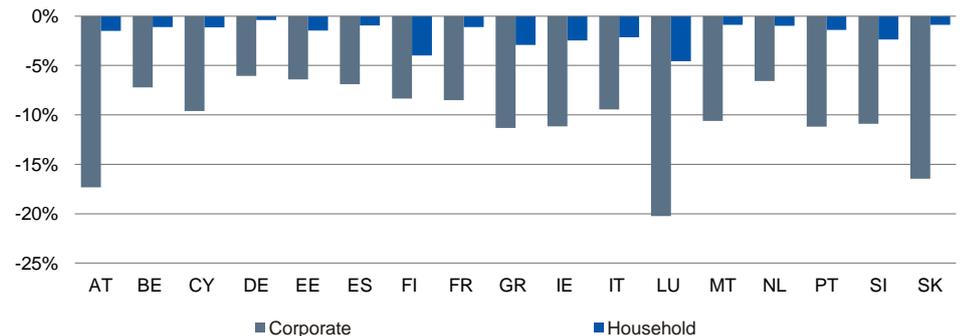


Source: Deutsche Bank

Maximum decline in deposits in one single month

15

Total deposits, Dec 2002 - Sep 2011



Sources: ECB, DB Research

Deposits currently more expensive than interbank loans

16

Interest rates for household deposits and interbank loans (%)



Source: ECB

2. **Households:** Greater risk aversion among non-banks. Over the past ten years, households boosted their investments in insurance policies, deposits and cash. Equities, equity funds and also fixed-income securities, by contrast, tended to experience outflows or perform sideways (see chart 20).
3. **Government:** Regulatory proposals have been presented by both national and supranational legislators. The most important proposals pertaining to deposits are the amendment to the EU directive on deposit guarantee schemes, Basel III/CRD IV and laws on bank levies. What will be the concrete impact of the regulatory changes? The directive on deposit guarantee schemes will increase the cost of deposits as a funding instrument. Banks will initially face higher costs because of larger contributions to deposit guarantee funds. The banks can expect an annual contribution equalling roughly 0.1% of their covered deposits. In the medium term this could pay off in the shape of greater trust and possibly lead to lower interest rates. From the banks' point of view, Basel III/CRD IV and the bank levy laws will tend to enhance the attractiveness of deposits as a funding instrument. The liquidity requirements boost the attractiveness of household deposits covered by deposit guarantees. They are weighted with the lowest withdrawal rates, which has a positive impact on the calculation of the liquidity coverage ratio (LCR) (see box 17).



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CRD IV

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Under the EU's Capital Requirements Directive IV (CRD IV), household deposits are to play an important role for reports on stable funding (in Basel III: net stable funding ratio, NSFR) as well as for the liquidity coverage ratio (LCR).

The LCR must be greater than 1 and is calculated by dividing a bank's liquid assets by its net outflows over a 30-day horizon. For retail deposits which are covered by a deposit guarantee scheme, are part of an established business relationship and are held in a payment transaction account, the assumption is a 5% outflow for 30 days. The factor for all other deposits is a minimum of 10%. The higher the net outflows assumed, the higher the amount of liquid assets necessary to fulfil the liquidity requirement of the LCR. Details of what is to be included under "liquid assets" have still to be clarified. There will probably be a large proportion of covered bonds as well as sovereign bonds and deposits.

Initially, it is proposed that stable funding ratios only have to be reported, with retail deposits falling under the heading "available stable funding".

The CRD IV consists of a regulation and a directive and will replace the capital requirements directives 2006/48/EC and 2006/49/EC. Both the regulation and the directive are to be applicable from January 1, 2013.

Quite generally, these changes will drive up the banks' funding costs. The higher risk aversion among all participants in the economy will probably be a temporary factor while the tightened regulatory regime represents a permanent structural break in the relative attractiveness of deposits as a funding instrument.

How stable are deposits?

Fundamentally, deposits are a form of debt, a loan granted to a bank by a customer, with the termination of this loan either being contractually defined or undefined, depending on the type of deposit. However, whether contractually agreed or not, this does not necessarily have a bearing on the stability of deposits as a funding instrument.

A comparison of the volatility of eurozone banks' various liabilities shows that private-sector deposits tend to be more stable than other liabilities, yet the differences are relatively minor (see table 18). This may be due to the strong aggregation approach in the observation method which waives analysis of microdata from individual banks. Remarkably, since the outbreak of the financial crisis in summer 2007 debt securities held in the euro area have shown the lowest degree of volatility, followed by deposits belonging to companies, banks – again surprisingly – and households. At the high end of the "volatility" range, as to be expected, one finds debt securities held by non-EMU creditors, deposits from non-bank financial institutions and other liabilities. So, all in all, private-sector deposits prove to be a relatively reliable funding source without, however (presumably partly because of aggregation effects), showing major differences to other liabilities. Moreover, it remains to be seen whether the increasing use of online banking and the related simplification of ways to withdraw or transfer money will have a negative impact on the stability of deposits in future.

A closer analysis of bank deposits in individual countries offers further insights. Chart 15 shows the maximum decline in total deposits in one single month during the December 2002-September 2011 period.² Outliers become very apparent. Surprisingly, only six of the 17 outliers are from the crisis period after September 2008. However, outliers provide virtually no meaningful information about how volatile deposits are over time.

It is generally assumed that household deposits are more stable than corporate deposits. A look at the coefficients of variation shows that this is not necessarily the case everywhere. The variation coefficient measures the average fluctuation around a given mean value in a particular period. In Spain, the Netherlands, Slovenia and Slovakia the variation coefficient for household deposits was slightly higher between January 2008 and September 2011 than that for corporate deposits. A look at a longer period (December 2002-September 2011) finds several countries in which the variation coefficients of household deposits are permanently higher. This is the case in Greece, Ireland and Italy. To a very minor degree, this also applies to Slovenia, Slovakia, Spain and Portugal.

A look at the various types of deposit shows that deposits redeemable at agreed notice have the highest variation coefficients on average. This holds for both corporate deposits and household deposits. However, viewing the overall picture, after repos it is deposits redeemable at agreed notice that account for the smallest share of euro-area bank deposits.

Deposits with an agreed maturity date show a lower variation coefficient and constitute about 30% of total deposits with banks.

Coefficient of variation* for bank liabilities in the euro area: June 2007-December 2011 (%)

18

Debt securities vis-à-vis euro area	2.9
Deposits vis-à-vis euro area	5.1
Of which: corporate	5.3
Of which: bank	6.1
Of which: household	6.2
Of which: government	10.2
Of which: other financial institutions	10.6
External deposits	7.8
Equity capital	9.9
Other liabilities	10.4
External debt securities	11.8

* Coefficient of variation = Standard deviation/mean

Sources: ECB, DB Research

² In some cases the period is shorter: Estonia: from January 2008; Cyprus: from November 2005; Malta: from January 2005; Slovenia: from January 2004; and Slovakia: from January 2006.

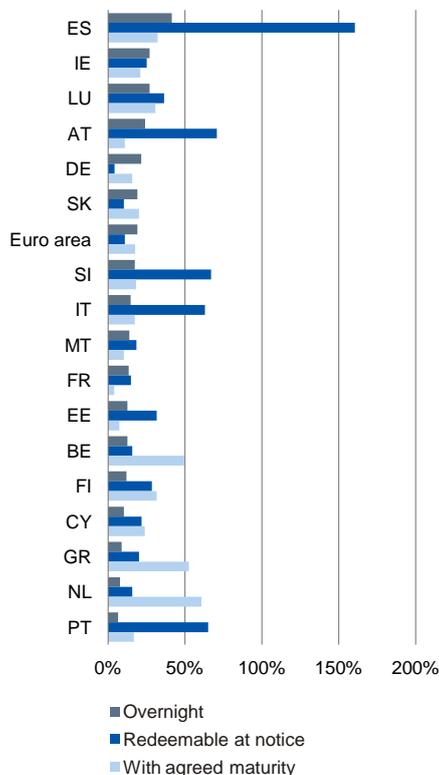


Poised for a comeback: Bank deposits

Deposit types differ in degree of volatility

19

Variation coefficient of the respective type of household deposit from December 2002-September 2011, in some cases shorter depending on data availability



Sources: ECB, DB Research

Sight (overnight) deposits have the lowest volatility. Their share of total deposits averaged 53% between 2002 and 2011. To put it in a nutshell, a large part of deposits may be attributed (in aggregation!) to stable sight deposits.

One level down, considerable differences are to be seen between the various types of deposit in different countries (see chart 19³). In Spain, Italy, Austria and Slovenia deposits redeemable at agreed notice display much higher variation coefficients than the average (11%). In Belgium, the Netherlands and Greece, by contrast, deposits with an agreed maturity date vary much more considerably than the average of 18%. Spain, Ireland, Luxembourg and Austria have higher variation coefficients on sight deposits than the eurozone average of 19%. However, the differences on sight deposits as a whole are not as large between the countries as they are for the other types of deposit.

These pronounced differences between the individual countries show that the structural and institutional environments have a certain impact on deposit supply and demand.

Altogether, it may be said that deposits are generally a stable source of funding. Nonetheless, substantial differences exist from country to country as well as between the different types of deposit, and presumably also from bank to bank. However, this last aspect is not visible in the ECB's publicly available aggregated data.

Alternatives to the current funding structure

Given difficult funding conditions in the capital market, new regulatory requirements and the heightened awareness of the need for more stable funding, banks are basically left with the choice of two complementary alternatives:

- An increase in the equity share of funding
- An increase in the deposit share

Is equity capital an alternative?

Besides interbank loans, bonds and deposits (debt capital), equity capital is also one potential alternative funding instrument. In principle, equity capital can be increased by issuing new shares and retaining profits. Both possibilities are subject to restrictions. There are basically two trends that are working against a significant increase in the share of equity capital:

- The cost of capital rises, *ceteris paribus*, when the share price falls. This currently applies to the market price of European banks and will presumably continue to apply on average in the medium term.
- The changes under Basel III and CRD IV simultaneously have a three-pronged effect in tightening the capital supply and thus making it more expensive: the equity ratios demanded by the regulatory authorities are to be gradually increased, with the requirements of the numerator (core capital) rising in both quantitative and qualitative terms. At the same time, the risk weights for calculating the total risk position (denominator) will in some cases be increased or linked to more stringent requirements. So the

³ The generally higher variation coefficients in chart 19 compared to household deposits as shown in table 18 emerge from the fact that chart 19 goes two aggregation levels deeper than table 18 (deposits disaggregated by country and type of deposit). Shifts between the individual types of (household) deposits are not captured in table 18. In addition, calculating a European average balances out mutually opposing trends in the eurozone countries.



Poised for a comeback: Bank deposits

present amount of capital held will allow less business, or less risky business, to be done in future. This in turn will squeeze potential earnings.

Potential for deposit growth

Since equity capital is not an alternative on its own, at least in the short term, expanding the deposit volume of the private sector will play a decisive part. Household and corporate deposits are considered (generally rightly, as demonstrated by the above analysis) to be particularly stable – even though traditional bank runs play a key role in the classical theory of banking. No doubt one of the main reasons for this is that during the days when major underlying theories and concepts for a bank run were being developed, capital market funding played a much smaller role than today and the crises that actually hit individual banks or entire systems were nearly exclusively attributable to outflows of deposits. Since then, however, extensive deposit guarantee systems have been set up in virtually all the developed banking markets; these serve to protect savers and have substantially helped to ensure the stability of customer deposits. So, at its peak, the financial crisis of 2007-09 was a crisis of capital market funding, and the drying-up of liquidity was mainly to be blamed on an *institutional* bank run.

Considering this backdrop, what potential is there for a future increase in the volume of household and corporate deposits? Before looking at this question, however, we need to discuss how an economy's excessive dependence on bank deposits may also have disadvantages (which indeed exist, especially with longlasting effects), and these will have to be taken into consideration in the further course of this report:

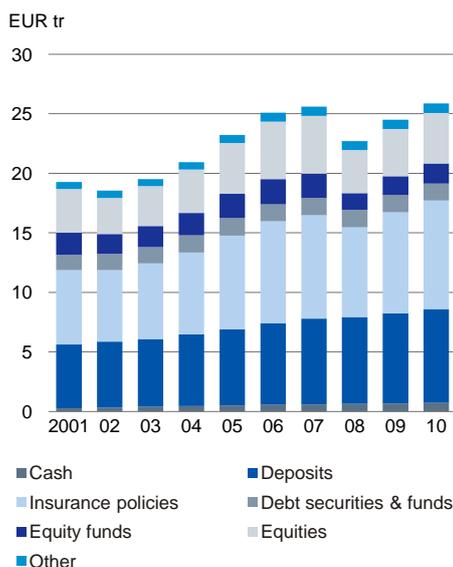
1. On the household side, a cluster risk might develop that could no longer be credibly covered even by deposit guarantee systems.
2. From the companies' vantage point, too, a predominance of deposits as an investment form would reduce the volume of direct or indirect inflows of funds (via other financial intermediaries such as mutual funds or insurance companies) to the capital markets, lowering their funding capacity. As a result, companies would be less diversified in their financing structure and would have to rely more heavily on conventional bank loans.
3. Finally, it is doubtful whether it would make sense for households to substantially increase the weight of deposits for long-term financial investments such as private provision for old age. Given the (relative) security offered, the returns on deposits would probably remain below the returns on investment alternatives, so with an increasing deposit share – and decreasing disbursements from the statutory pension system – this would give rise, *ceteris paribus*, to a larger pension gap.

The points listed above underscore once again that a balanced, fairly mixed funding structure is of elementary importance not only for the banking industry alone. This means that capital market funding instruments such as securitisations will continue to play a major role for banks also in future.⁴ Thus, a sustained recovery of the securitisation market is of considerable significance.

Nevertheless, a moderate upturn in the deposit share, which has trended lower over the past few years, back to a higher level would be sensible and desirable both from a financial stability and regulatory point of view. It still needs to be determined to what extent households and companies will be able to boost the corresponding supply of deposits in the first place, i.e. how large the empirical potential for such deposit growth actually is.

Households' financial wealth in the EU-27*

20



* Includes MT from 2004, LU from 2006

Sources: Eurostat, DB Research

⁴ Zähres, Meta. Capital market funding of banks – (not such a) brave new world (Working title). DB Research. Current Issues. To be published in May 2012.

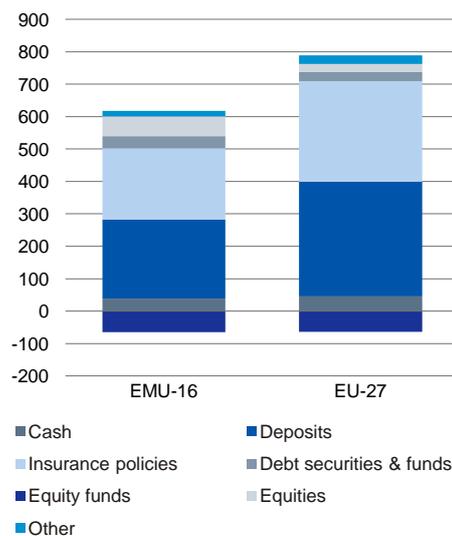


Poised for a comeback: Bank deposits

Deposits are not only a crucial funding instrument for banks. They are also one of the most important forms of investment for private individuals. In addition to real estate wealth (which is relatively difficult to quantify), EU households own financial assets worth a total of EUR 26 tr (see chart 20). Of this total, over EUR 9 tr is comprised by claims on insurance companies, over EUR 7 tr by investments in securities such as equities and fixed-income instruments and EUR 7.9 tr by bank deposits (in the euro area, in fact, deposits represent the biggest individual asset class).

Households' net financial investments 21

EUR bn, average 2006-10 p.a.



Sources: Eurostat, DB Research

The developments during the past ten years – with an average increase in financial wealth of over 3% per year – have been very mixed: deposits and insurance policies registered above-average growth of more than 4% p.a. and expanded their share of total assets. By contrast, the wealth invested in securities largely stagnated – which is admittedly not very surprising considering the meagre performance of the capital market during this period. Remarkably, cash holdings showed the most robust growth by far (+12% p.a.), possibly driven by heightened risk aversion on the part of households or by an increase in the scale of moonlighting.

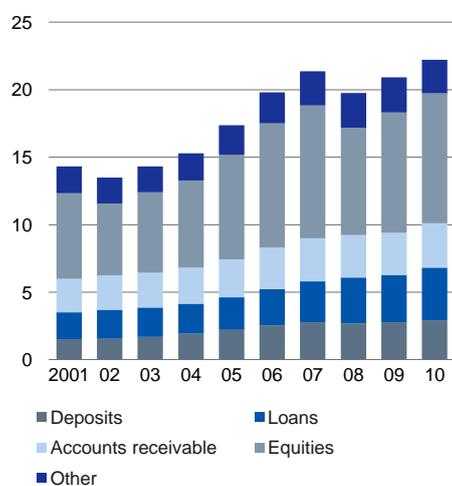
Given the increased fluctuations in capital market valuations over the past few years it is worth taking a glance at actual new investment in the various asset classes and at the share claimed by deposits. Altogether, EU households' net new investment totalled roughly EUR 650 bn in 2010, matching the pre-year level but falling far short of the financial investments in the period before the crisis (see chart 21). Of this total, EUR 220 bn flowed into additional deposits, EUR 74 bn into equities and equity funds, and nearly EUR 300 bn into insurance policies; moreover, households withdrew a net EUR 15 bn from debt securities and debt funds. This means that the share of bank deposits constituted nearly one-third of new assets – and thus slightly more than their average share in total wealth.

From the combination of these statistics it is possible to draw a host of conclusions about the medium-term growth of deposits:

- Combined with life insurance policies, deposits already account for a very large part (nearly two-thirds) of household financial wealth today. It would probably be difficult to increase this share by reducing direct involvement in the capital market still further – provided the performance of the equity and bond markets did not deteriorate further. Moreover, an even heavier focus on deposits and insurance hardly makes sense for households also in terms of portfolio diversification.

Companies' financial wealth in the EU-27* 22

EUR tr



* Includes MT from 2004, LU from 2006

Sources: Eurostat, DB Research

- However, the question arises whether bank deposits might not gain attractiveness relative to insurance policies, thus conceivably offering scope for portfolio shifting between these two asset classes. Several arguments do indeed back this notion: for one, claims on insurance policies do not enjoy statutory protection for existing entitlements (and are only partially covered by an insurer's guarantee of capital preservation). While there is an interest guarantee in Germany in certain cases (albeit only for the "savings portion" of a policy), this is not the case for instance in the United Kingdom, the largest insurance market in Europe. As insurance companies invest funds in the capital market, policyholders' claims may indeed be exposed to heavy fluctuations in value – consider the losses witnessed in the crisis year 2008. By contrast, deposits enjoy extensive statutory coverage, currently totalling as much as EUR 100,000 per customer and bank in Europe. Another supporting argument is that the interest rates offered on insurance products are likely to (continue to) fall over the next few years in a generally low-rate environment, while rates at banks are likely to trend upward, because banks will want to, and have to, replace other forms of funding (from institutional

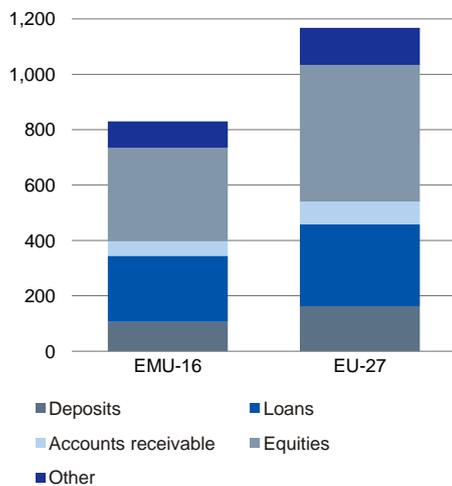


Poised for a comeback: Bank deposits

Companies' net financial investments

23

EUR bn, average 2006-10 p.a.



Sources: Eurostat, DB Research

investors in particular) by a higher deposit share (see “Changes due to the crisis” above).⁵

- A massive shifting of *existing* financial investments from insurance policies into bank deposits remains unlikely, however. Rather, changes are more likely to focus on the distribution of *newly formed* wealth. With a substantial increase in the deposit share the banks could indeed succeed in virtually closing the funding gap on the liabilities side that is developing on account of a decrease in capital market funding and further (albeit vis-à-vis pre-crisis times considerably more modest) growth of business volumes. Table 24 shows the development of banks' funding needs and the contribution that deposits could play in covering them under three possible scenarios – one optimistic, one realistic and one pessimistic. In doing so, consideration is additionally given to corporate deposits (see also charts 22 and 23), for which though there is less likelihood of a potential increase than for household deposits, not least because companies hold deposits not so much for savings purposes but rather for liquidity reasons.

In the realistic baseline scenario the banks can manage to close three-quarters of the funding gap that emerges above all due to balance sheet expansion via an increase in households' and companies' annual new investment in deposits from a combined EUR 350 bn (the average for 2006-10) to EUR 434 bn. However, this would still leave a shortfall of EUR 1 tr. This scenario is based on the assumption that the banking sector will grow moderately and the level of capital market funding will decline by 25% versus end-2010. In that case the deposit share in household wealth would increase as would the reliance of banks on this investment form, which enjoys special regulatory protection. Without this significant (but in view of growing nominal income probably achievable) increase in the deposit share of households' new investment in

Simulation: Future bank funding in the euro area

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EUR bn	Growth scenario	Baseline scenario	Stagnation scenario
Households' average annual financial investments, 2006-10*		552	
... of which: deposits		244	
Potential net investment in deposits, 2011-20 p.a.	366 (+50%)	317 (+30%)	244 (unchanged)
Corporate investments in deposits per year, 2006-10*		106	
Potential net investment in deposits, 2011-20 p.a.	127 (+20%)	117 (+10%)	106 (unchanged)
Total potential new investment in customer deposits, 2011-20 (excluding interest payments)	4,932	4,338	3,500
Balance sheet total in 2010		32,200	
... of which: capital market funding		5,083	
... equity capital		2,045	
... deposits		19,986	
Balance sheet total in 2020 (growth 2000-10: 6.8% / 2005-10: 6.4% p.a.)	47,663 (+4% p.a.)	39,251 (+2% p.a.)	32,200 (unchanged)
Capital market funding (decrease)	-508 (-10%)	-1,271 (-25%)	-1,694 (-35%)
"Other liabilities" (increase)	2,442 (+4% p.a.)	1,114 (+2% p.a.)	0
Equity capital growth	982 (+4% p.a.)	448 (+2% p.a.)	0
Interest on existing household and corporate deposits	1,966 (2% p.a.)	1,441 (1.5% p.a.)	939 (1% p.a.)
Funding gap before new investment in deposits	10,582	5,319	755
Remaining gap	5,650	981	-2,745

* The simulation assumes that two mutually opposing effects arising here cancel each other out:

- 1) Investments of euro-area households and companies in bank deposits outside EMU, and
- 2) Investments of households and companies domiciled outside EMU in euro-area banks.

Sources: Eurostat, ECB, DB Research

⁵ The minimum rate of interest guaranteed by German life insurers, for example, declined from 4% to 2.25% p.a. from 2000, falling further to just 1.75% as of January 1, 2012.



Poised for a comeback: Bank deposits

Assumptions for the simulation

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- The volume of additional corporate deposits is set to increase moderately over the coming ten years in comparison with the past five, while the amount of deposits held by governments, banks and other financial institutions is expected to remain unchanged.
- The distribution across the different sectors of the economy and the development of deposits held by investors outside the euro area are identical to the patterns within the monetary union.
- Households' nominal income growth in 2010-20 is set to roughly match the growth in 2000-10, influenced by factors that are contradictory but which cancel each other out: a smaller increase in real terms, but also a greater degree of currency depreciation via inflation.
- Nominal equity capital (and "other liabilities") are expected to increase just as strongly as banks' total liabilities: on the one hand, banking industry profitability will no doubt be lower than it used to be (which is why building up capital via retained earnings or share issuance is likely to become more difficult); on the other hand, however, the banks should also manage to lower their cost levels by reducing staff and administrative expenses.

financial instruments, however, even very limited nominal banking-sector growth could not be funded – so the banks would either have to depend on tapping other funding sources or they would have to restrict their lending activities even more heavily. Therefore, it is of vital importance to see whether or not banks will indeed manage to attract a substantial volume of the monies hitherto invested in insurance products every year. In the latter case, major companies – but increasingly also small to medium-sized enterprises – would probably have to fund themselves directly in the capital markets, while the financing of, say, residential property might only be guaranteed to a significantly smaller degree by banks.⁶

In the more crisis-like, pessimistic "stagnation scenario", which assumes there is not even any nominal growth in the European banking market over the next ten years (a very drastic assumption), it is easier for the banks to digest even a downturn in capital market funding of more than a third as long as deposits merely continue to rise in line with the recent pace. The reason for this is the absence of any increase on the asset side, which in real terms would imply an unusually strong degree of deleveraging and contraction in the financial sector.

Finally, in the positive "growth scenario", not even a particularly distinct increase in the volume of deposits is sufficient to fund the banks' balance sheet expansion. In this case, too, there would most probably be a decline in the volume of funds (above and beyond deposits) made available by institutional investors; however, this decline would be much smaller than the resulting funding gap.

Conclusion

In the end, it is clear that due to funding limitations Europe's banks will probably find it difficult to generate any significant growth (on a net basis) over the next few years. In this context, it is clearly desirable and feasible to boost inflows of deposits, although this will presumably only be possible at the insurance industry's expense. With a greater share of deposit-based funding, banks would at least be able to maintain, or perhaps slightly expand, their lending volume with the private sector. Anything "extra" is scarcely likely to be realistic after the turning point brought on by the financial and sovereign debt crises. A revival of capital market funding could prove helpful in closing the funding gap – however, this would require a more attractive regulatory environment that sets the right incentives.

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⁶ Unless the securitisation market stages a major recovery, which, however, so far appears to be a long way away. Alternatively, an expansion of the Pfandbrief (covered bond) market would be a possibility yet its potential is also naturally limited. See: Ahlswede, Sophie (2011). Bank funding of residential mortgages in the EU. DB Research. EU Monitor No. 86. August 12, 2011. Frankfurt am Main.

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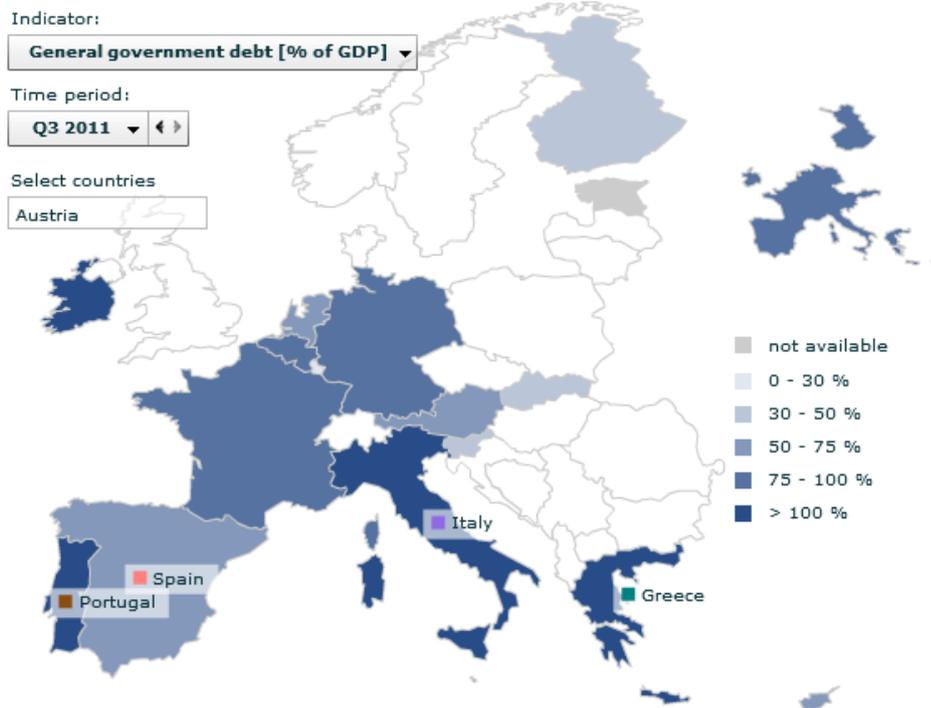
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