

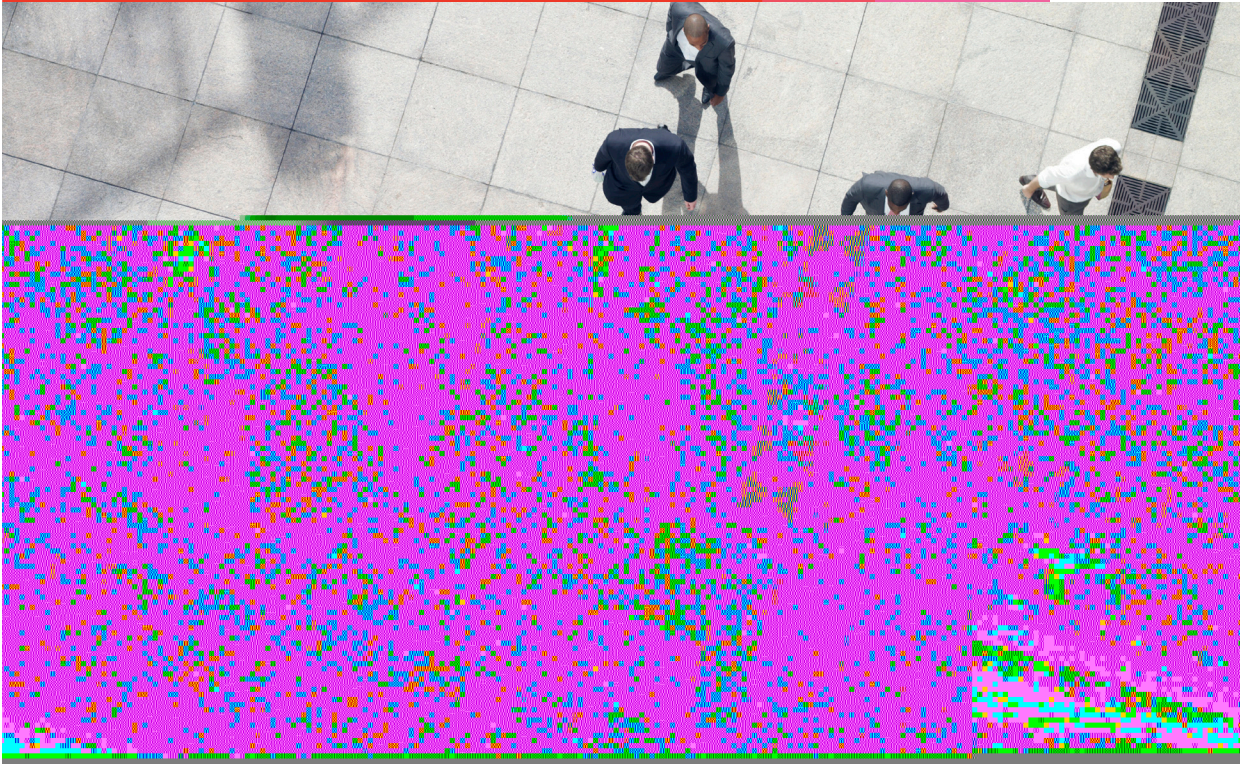
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# *PwC Valuation Index*

## Tracking the market to understand value

*Bank values, safe as  
houses?*

*October 2011*



**pwc**

# Welcome

Welcome to this fourth edition of the quarterly PwC Valuation Index series. The banking sector is the focus of our analysis in this edition.

European banks<sup>1</sup> have traded at a significant discount to historical levels since the onset of the financial crisis. This discount can be attributed to three factors: the immediate uncertainty arising from the Eurozone crisis; concern over bank balance sheets and their ability to generate economic returns over the near term; and the impact of regulatory and structural reform on profitability over the medium term.

The statement from the Euro Summit on 26 October 2011 has relieved some of the concern over the solvency and viability of European banks and the markets have responded positively to the announcement.

Our analysis of the overall UK market highlights that market multiples at the end of Q3 2011 dropped significantly compared to the prior quarter. This is against the backdrop of the lowest real government bond yields seen for some time; uncertainty and volatility has led to investors pricing significant risk into equities, as our standard measures of equity risk become less relevant due to the exceptional economic circumstances. As a result our Valuation Index was at 60 at the end of September – its lowest point since the financial crisis. Once confidence returns we expect the market to trend back to fundamentals – the question is how long that will take.



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Partner  
Head of Valuations

## The PwC Valuation Index stands at 60 for Q3 2011

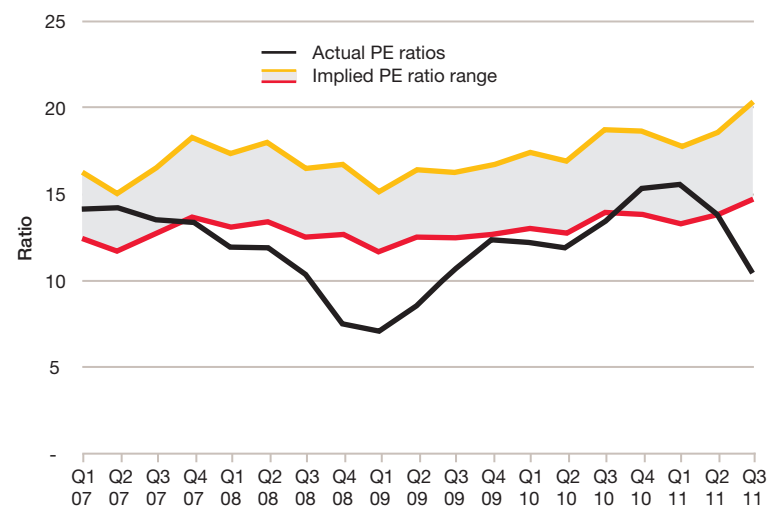
In this edition of the PwC Valuation Index we have continued to use a consistent framework in order to consider quarter-to-quarter index movements, but treat the results with interpretative caution. As illustrated by Figure 1 below, the trailing PE ratio for the UK market as a whole decreased by 25% between Q2 and Q3 2011. Conversely, over the same period, the PE ratio implied by economic fundamentals actually increased by 9% due to the exceptionally low 20 year real yield on government bonds. Although the PwC Valuation Index has consequently fallen to 60 as at 30 September 2011, the current low bond yields are arguably artificially depressed by monetary policy.

Given the exceptional nature of the current economic situation, we think it is important to look at alternative ways of assessing the fundamental PE multiple. In our analysis we have used a 4.5% - 5.5% range of market risk premia for equities over bonds (the Equity Market Risk Premium or “EMRP”). Although we believe this represents a reasonable long term view, we feel it is likely that investors currently perceive there to be a higher level of equity risk. Based on our analysis, in order for the PwC Valuation Index to be 100 (i.e. market PE ratios equal to fundamentally justified PEs), the EMRP would need to be 7%.

Investors may not only be factoring higher risk into their equity valuations, they may have a more pessimistic view of the outlook for corporate profits than those indicated by the consensus economic forecasts used in our Index. In order for the fundamental multiple to be aligned with the market, without adjusting the EMRP, zero real growth would have to be factored in for ten years or more before corporate cash flows return to trend economic forecasts for the economy as a whole.

It is likely that some combination of this higher perception of equity risk and pessimism over profit growth is causing the market to diverge significantly from our baseline fundamental analysis. Separately isolating the variance required in these key assumptions to bring the fundamental multiple back in line with the market highlights the depth of investors’ concerns over the likelihood of a swift upturn in market values. The current trailing market multiple implies either a further profits downturn in the short term or a significant period of minimal real growth, such as that experienced in Japan in the 1990s. Taking into consideration the current levels of market volatility, the Index level of 60 suggests only the longest term investors are likely to see this as a buying signal and in the short term the traditional caveat that share prices can go down as well as up needs to be kept in mind.

Figure 1: Implied vs Actual PE ratios

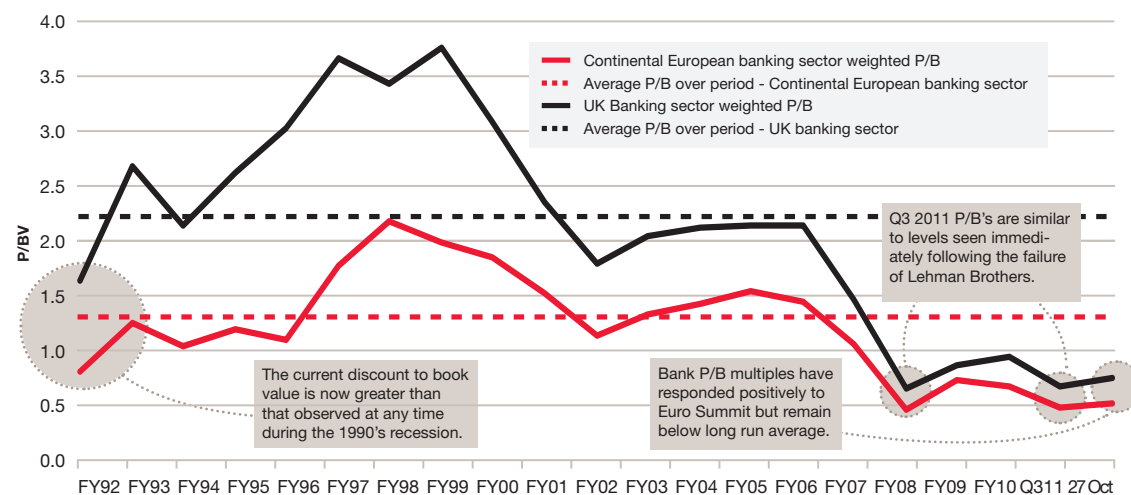


<sup>1</sup> In this document we refer to “European banks”. This refers to a peer group of 28 listed banking stocks from the UK, France, Germany, Spain, Italy, Switzerland, Denmark, Sweden, Norway, Netherlands and Belgium. We also refer to “Continental European banks” which comprise the same peer group, but exclude the UK listed institutions which are referred to separately as the “UK banking sector”.

# Focus on Banking: Summary

- Banks are balance sheet driven businesses and, as such, the key valuation metrics reflect their ability to generate profits from that balance sheet. While our valuation index considers market value against fundamentals by reference to PE ratios over time, this edition of the index considers the prospects for bank values with reference to the key market multiple for the sector: price-to-book (“P/B”). At the end of September 2011, the Continental European banking sector traded at a discount of around 50% to book value, with UK institutions at an equivalent discount of 40%, although we have seen sharp increases in banking sector values since the Euro Summit statement. This discount contrasts with average premia of 40% and 150% for the two sectors respectively over the 15 years before the financial crisis. Investors are as pessimistic about the sector today as they were in the period immediately following the failure of Lehman Brothers three years ago and the sector is now at a deeper discount than at any time during the recession of the early 1990s.
- Bank multiples are weighed down by a number of factors including: the uncertainty arising from the European sovereign debt crisis; the spectre of another seizure in the interbank markets; the threat of dilution from new capital; and the uncertainty around the true value of assets on their balance sheets. Although the measures announced following the Euro Summit on 26 October 2011 have reassured the markets and may address elements of this in the near term, other issues will continue to suppress market multiples for some time. Regulatory reform and the response that banks adopt will define the future structure of the industry and have a fundamental impact on bank profitability. Higher capital requirements under Basel III combined with lower yields on liquid assets and increased costs of attracting stable funding are likely to depress profitability, reducing returns and driving banks to consider whether and how to participate in certain markets. Investors therefore see high levels of sector risk over the near term coupled with higher capital expectations and lower profitability over the medium term. Based on Q3 2011 multiples, the market appears to be factoring in a forecast return on equity of 7% compared to the long term average of 13%.
- Over time, banks will reposition their activities and re-price to a level that captures the burden of regulatory reform including new fee structures and higher pricing for credit. While a more resilient banking sector should have a lower risk of failure, any benefit banks might expect to see in terms of a lower cost of equity is likely to be overshadowed by policymakers’ efforts to remove implicit support for the sector. Structural change may reduce risk across the system, but from an investor’s perspective it will bring little assurance that a specific shareholding is any less risky. When investors are able to look past the immediate uncertainty, they will value the sector according to their assessment of fundamentals. In our view, the structural reforms to the sector have changed these fundamentals to the extent that any return of valuation multiples for UK and European banks to levels seen during the pre-crisis decade looks unlikely.

Figure 2: Current P/B multiples compared to average P/B over the last 20 years



Source: Capital IQ, PwC analysis

# Bank values, safe as houses?

## Bank valuations post crisis: reversion to normal?

The European sovereign debt crisis has weighted heavily on banks' valuations. The crisis is not the only factor depressing investor sentiment towards the sector. The impact of major regulatory reforms - not least of which is the requirement for substantial recapitalisation - will exert downward pressure for some time to come. In a market facing such uncertainty, tried and tested methods and metrics for assessing shareholder value may no longer be sufficient. Instead, investors will increasingly need to apply a more fundamental assessment of banks' likely performance and returns. This article examines the extent of the challenges banks need to address and why previously reliable valuation methods may now have to be enhanced with a wider range of considerations.

## Bank valuation driven by historical returns on equity

The core business of any credit institution is driven by earning an interest margin between the rate at which it lends to customers and its cost of funds. As lending exposes the institution to default risks it must set aside capital. The returns on that capital, together with expected growth, become the key metrics with which to assess a bank's valuation. Over the last 20 years the European banking sector has traded at an average premium to book value of approximately 50%, rising to around 70% in the years immediately preceding the financial crisis, offering strong risk adjusted returns to investors. To illustrate this, analysts have highlighted a strong correlation between P/B multiples and the extent to which achieved returns on equity ("RoE") have exceeded the cost of equity ("CoE") of the institution. By considering the extent to which these returns represent a premium to the CoE and the growth opportunities ("G") available to an institution, the relationship can be expressed by the following formula:

$$P/B = (RoE - G) / (CoE - G)$$

To illustrate this relationship, in Figure 3 below we compare the actual P/B of quoted European banks against the multiples implied by reference to fundamentals<sup>2</sup>. This analysis broadly supports the assertion that banks have tended to be priced in line with historical returns on equity.

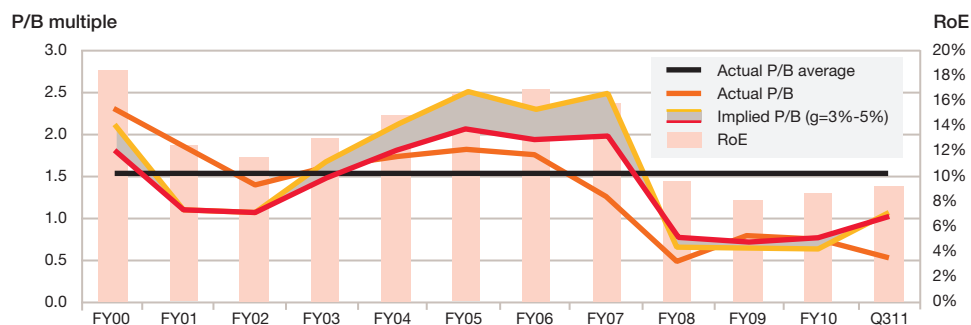
## Current valuation levels are not pricing in any return to normal

Comparing post-crisis valuation metrics to fundamentals suggests that bank valuations through the initial recovery period (2009 and 2010) reflected investors' expectations of a partial recovery, in terms of profitability and/or growth. The same framework suggests that investors have altered this view and now expect banks, on average, to generate returns below the current depressed levels and well below the long term sector average. Assuming a 3% growth rate and using a cost of equity of 10%, valuation multiples at the end of September implied a sector average RoE of 7%, contrasting sharply with the average sector RoE over the last 20 years of 13%. This compares to recent announcements from UK banks where target RoEs have been suggested to be in a range from 12% - 15%, albeit with some acknowledgement that this will be challenging given lower revenues and additional capital requirements.

With valuations suppressed, relatively small changes in sentiment can lead to significant percentage changes in market capitalisation. This volatility reinforces negative sentiment towards the sector, fuelling a lack of confidence and an unwillingness to extend medium and long term funding. As we saw in 2008, lower equity values can also form part of a dangerous feedback loop as attempts to address calls for increased capital in the form of rights issues lead to an erosion of confidence. With the equity markets closed to many institutions, compliance with the Euro Summit proposal to increase Core Tier 1 capital ratios to 9%, will require a recapitalisation from public funds or significant asset sales.

Although the fundamental valuation framework has a compelling logic and can be demonstrated to hold in most circumstances, we believe today's conditions are exceptional. The Q3 2011 valuations were driven by banks' individual direct, or, perhaps more importantly, indirect exposure to sovereign risk. The relationship between historical RoE and P/B has been masked by the impact of specific banks' exposure to sovereign risk and a sector-wide exposure to restricted funding along with a recessionary environment. Investor's initial response to measures announced following the Euro Summit have been positive. In particular the provisions to support term funding (with guarantees and coordination of liquidity schemes) should allow recapitalised banks to avoid a liquidity crisis. Discounts to book value are driven by a broad range of issues and valuing banks requires an understanding of the asset quality, balance sheet exposure to risk and stability of funding. While this has arguably always been the case it has become even more critical given the 50%<sup>3</sup> increase in bank leverage in the decade preceding the financial crisis. Figure 4 shows that the classic relationship between P/B and returns has been overtaken by greater concerns around balance sheet exposures, how sovereign risk will impact the banks in terms of future capital requirements and future profit generation. We note that PE multiples reflect a similarly pessimistic view with a sector coverage PE of around 7.0x as at 30 September 2011, compared to a 20 year long run average of 14.1x.

Figure 3: Quoted European bank multiples versus those implied by fundamentals

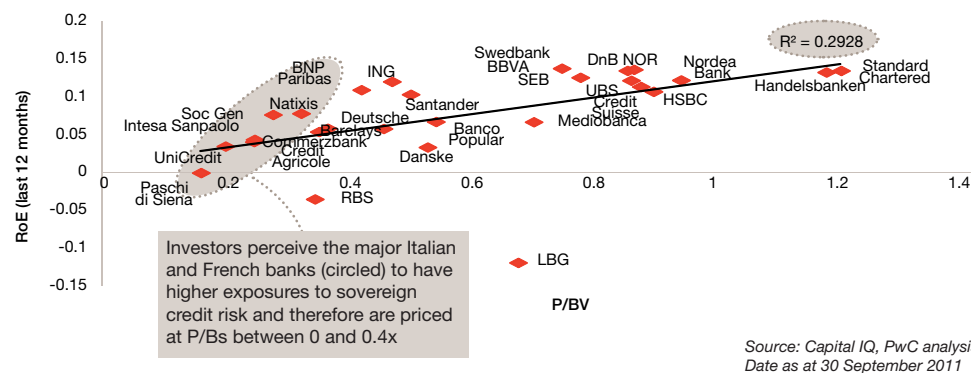


Source: Capital IQ, PwC analysis

<sup>2</sup> The fundamental approach considers: historical RoE; CoE calculated using the capital asset pricing model ("CAPM") and growth rates of between 3% and 5% (reflective of long run nominal GDP growth expectations in the Eurozone).  
<sup>3</sup> PwC analysis.

# Bank values, safe as houses?

Figure 4: Selected quoted European banks' P/B against RoE (last 12 months)



## Structural change will define the new normal

While the sovereign debt crisis may have dominated the short run concerns, we expect regulatory change to depress bank valuations over the medium term. These measures aim to put in place broader firebreaks across the financial system and between the sector and the state. Among the most significant steps are those intended to improve the quantity and quality of capital held in the banking system and measures to enhance liquidity. Although Basel III aims for international consistency, more stringent reform at a local level will also be relevant for many institutions.

Of particular relevance to the UK are the proposals from the Independent Commission on Banking ("ICB"). These recommend ring-fencing the retail operations of UK banks from other activities including investment banking. The estimates of the recurring impact on the industry of this and other measures in the ICB's report has been estimated at up to £10bn owing to increased funding and capital costs. The ICB itself estimates a plausible annual cost of between £4bn and £7bn, equating to 14% to 25%<sup>4</sup> of 2010 pre-tax profits for the largest quoted UK banks. While some of these additional costs will be passed on to customers, it is likely that equity holders will shoulder a significant share of the additional burden as their investments generate lower returns for a period before the market is able to restore equilibrium. David Cooksey, chairman of UKFI, summed up the prognosis for UK banking in the 2010 annual report:

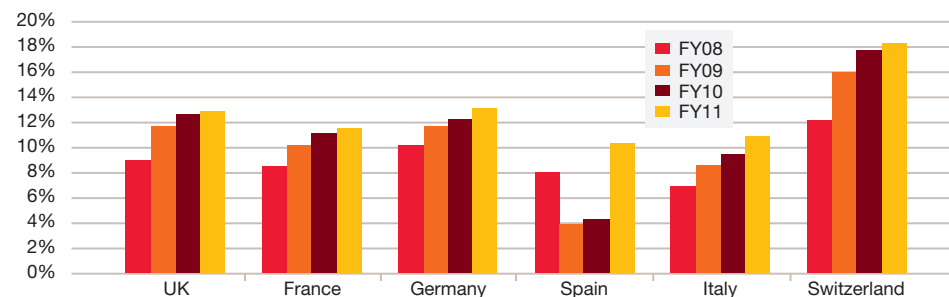
*"The past year has seen significant and ongoing reform of the international and domestic system of banking regulation, including increasing capital requirements, more effective resolution regimes.....The current share prices of Lloyds Banking Group and RBS reflect the ongoing uncertainty about banks' recovery prospects, particularly in view of the current problems in the Eurozone, as well as the long term impact on value as a result of these regulatory changes."*

(David Cooksey, Chairman of UK Financial Investments 13 July 2011)

## Impact of regulatory change will weigh on returns over the medium term

Although there are reasonably lengthy transition periods for Basel III and other measures, (these will be phased in over the period 2013- 2019) most European banks are seeking early compliance, an approach reinforced by the Euro Summit. Figure 5 below illustrates that both UK and European banks are working hard to accumulate capital and exceed the Basel III minimum in the near term and to meet more stringent local requirements. As a result, the impact of a higher capital base and the new liquidity standards is likely to run ahead of banks' ability to re-price their existing business or reposition their activities. While banks may be able to take action on their cost base relatively quickly, the impact of recession and the financial crisis has reduced refinancing options for some parts of banks' lending portfolios. As a result, they will face a combination of a rising capital base and lower asset returns which is likely to depress returns on equity over the medium term.

Figure 5: Reported Tier 1 capital ratios for selected European banking systems



Source: Capital IQ and published accounts, PwC analysis. Banking system data aggregated from individual banks (risk weighted) capital ratios, weighted by size

4 PwC analysis.

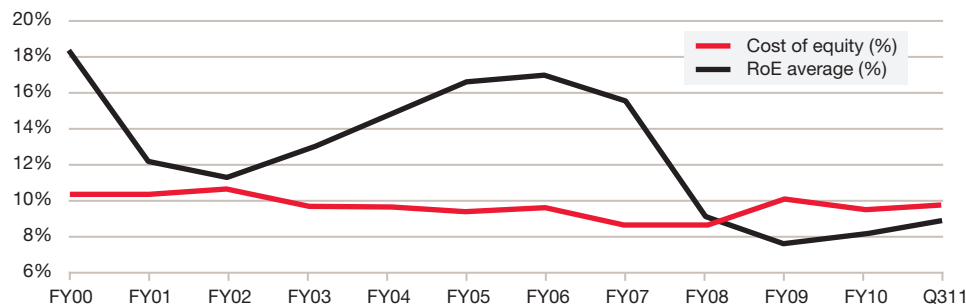
# Bank values, safe as houses?

Policymakers are also keen to remove implicit state support to the banking sector<sup>5</sup> – support that has allowed banks to access the debt markets on preferential terms and also insulated shareholders to some extent from bank failures. Some steps to remove sovereign support have already been taken, including the establishment of bank resolution regimes in some countries and the ongoing discussions about bailing-in unsecured creditors in resolution. If measures to ring-fence the state from the banking sector are ultimately successful, ratings agencies may, in the absence of any compensating reduction in risk of default, be forced to reconsider present credit ratings, potentially triggering downgrades for some institutions. Anticipation of this scenario is one of the factors that could drive banks' unsecured funding costs higher over the medium term, which will further depress returns.

## Does more equity mean safer banks and a lower cost of equity?

Arguably, higher capital requirements and a more resilient funding base will lower the probability of bank failure and reduce the cost of equity through a reduction in the equity beta. While this hypothesis is supported by academic literature such as Modigliani and Miller's<sup>6</sup> theorem, there is limited empirical evidence to suggest any observable decline since the post-crisis recapitalisation of the sector. Figure 6 below illustrates the CoE derived using the capital asset pricing model ("CAPM") and market observed betas for illustration. What this shows is that while banks have taken significant steps to improve their solvency and liquidity positions since 2008 and monetary policy has driven risk free rates down, CoE has continued to rise.

Figure 6: Cost of equity (CAPM) and RoE



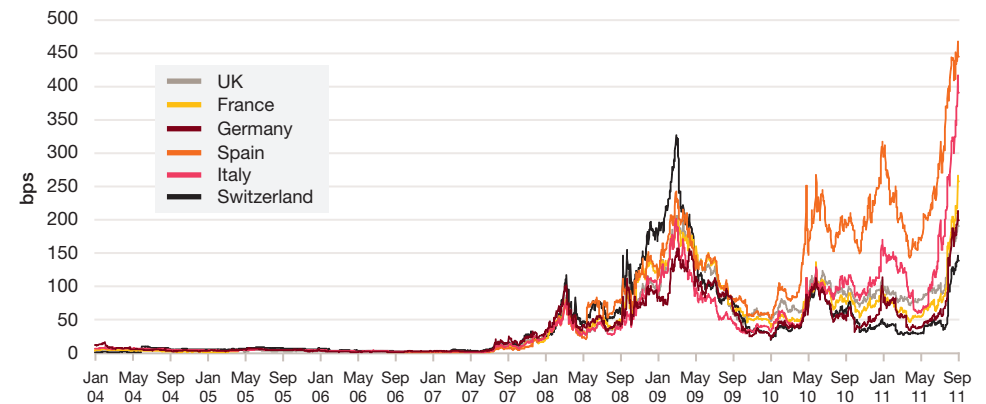
Source: Capital IQ, PwC analysis

<sup>5</sup> Moody's global credit research 24 May 2011: levels of systemic support to be reassessed.

<sup>6</sup> The Real Cost of Capital - Ogier, Rugman and Spicer 2004.

Reading across from credit markets it is clear that the reduced risks gained by deleveraging have been more than offset by other factors. The cost of insuring against bank default, as measured by Credit Default Swap ("CDS") premia, has remained above pre-crisis levels. The continuing elevation in the level of CDS spreads is driven by a combination of factors including macroeconomic risks, sovereign default risk and regulatory uncertainty. It appears unlikely that bank valuations will benefit from any reduction in the cost of equity while these uncertainties persist. In essence, the perceived risk of an equity investment has increased while prospective returns have fallen such that the risk/reward trade-off does not look attractive to investors.

Figure 7: One year CDS spreads on senior debt for selected European banking systems



Source: Capital IQ, PwC analysis

## Growth prospects

All western developed economies face significant challenges, including slow growth and relatively high unemployment. This economic environment and high levels of indebtedness is likely to constrain both the demand for, and supply of, credit in developed markets. While some of the emerging and developed markets beyond Europe offer better growth prospects, only a relatively small proportion of quoted UK and Continental European banks are well positioned to access these markets. Consequently, the prospects for most UK and Continental European banks are, at least in the short term, constrained by the region's limited growth prospects which will continue to be reflected in current valuations.

In the near term a combination of sovereign debt write downs and calls for higher levels of Core Tier 1 capital ratios will restrict European banks' ability to grow. Many may be forced to divest portfolios or otherwise shrink balance sheets.

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## Conclusion

An exceptional and, with the benefit of hindsight, unsustainable period of low and declining interest rates, rising asset prices and stable markets preceded the financial crisis. This favourable environment boosted bank earnings and drove growth that allowed analysts to reward the sector with high valuation multiples. Although the Euro Summit at the end of October has removed some of the Eurozone sovereign debt concerns, regulatory reform and the increased capital requirements continue to weigh heavily on bank multiples. Uncertainty and volatility hang over the sector and the tools that are typically employed to consider value are less applicable in the current uncertain market conditions.

With limited opportunities for growth it seems to us that structural reforms will change the fundamentals against which banks are valued. There is clearly a potential scenario whereby the transition to a more resilient banking system through enhanced regulation depresses returns over the medium term with no compensating reduction in risk for investors. In this scenario there will be no reversion to multiples reflecting the historical average. As restructuring of the industry takes place we will see that some banks are able to take advantage of other institutions' weaknesses and outperform their peers. Those institutions will, in turn, command a value premium over their competitors.

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