

The Journal

Joining the dots: The need to focus on holistic balance sheet management

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One of the key lessons of the recent global financial crisis is the need to have a comprehensive overview of the balance sheet and an understanding of how various stress scenarios would impact the bank's liquidity, capital and leverage ratios.



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As banking structures have become increasingly complex it has become more difficult to understand and analyse the magnitude of potential risk outcomes and the contagion impact across risk types. The trend towards viewing a bank's operations by product or business lines over the past 10–15 years, combined with a lack of integration in the management of risk on a holistic basis, has clouded the view of the exposures at the ultimate holding company or even for individual legal entities. The impact of this has been disastrous for many institutions and a wake-up call for the industry to revisit its approach, focus, prioritisation and management of balance sheet risk. Banks need to build within the balance sheet management function (typically the asset and liability management unit (ALM)) the skills to perform overall, holistic stress testing across all risk types. Our recent PricewaterhouseCoopers¹ survey of balance sheet management practices in 43 leading financial institutions around the globe (with a bias to large international banks) shows that there is still a long way to go in this regard.²

The end of the 'good old days' of '3-6-3' banking

As balance sheets have become more complicated and risk management more specialised, it was only natural that this holistic overview would become more difficult to maintain. If we go back some 20 or 30 years or so, to the days of what is often referred to as '3-6-3' banking (borrow at 3%, lend at 6%, be on the golf

course by 3pm), banks were managed through the balance sheet. In those days, the primary profit centre was the legal entity or branch, and the management team of that entity could sit round a table and have a meaningful discussion of risk and profit. Given a balance sheet and some basic analysis (breakdowns of the loan portfolio by industry, product, etc, list of largest borrowers, a maturity gap analysis for liquidity risk, a repricing gap analysis for interest rate risk, etc), a skilled banker could quickly assess the risk profile of the bank. As virtually all business was simple on balance sheet (basically loans and deposits), the management team could set interest rates for assets and liabilities, and the profit and loss (P&L) would largely take care of itself.

In the late 1980s, driven by the liberalisation of financial markets and the globalisation of banking, this situation underwent a dramatic change. First, legal entities ceased being the primary profit centres. Banks were increasingly reorganised along functional business lines, and the legal entities became virtual 'hotels', which housed different business units reporting to global heads. As a consequence, the legal entity balance sheets became the by-product of business activity, not the driver, often with no clear owner. Secondly, given the pressure on banks to report ever-higher annual (or quarterly) earnings, perhaps exacerbated in some cases by bonus schemes based primarily on earnings, the principal area of focus became the P&L account, not the

¹ "PricewaterhouseCoopers" refers to the network of member firms of PricewaterhouseCoopers International Limited, each of which is a separate and independent legal entity.

² PricewaterhouseCoopers' 'Balance sheet management benchmark survey: Status of balance sheet management practices among international banks' – 09.

balance sheet. Thirdly, balance sheets themselves grew significantly and became more opaque as products became more complicated and the interface between economic banking decisions and the accounting treatment of these decisions became harder to understand. For example, many complex structured transactions are accounted for at ‘fair value’ calculated on a net present value basis. For the originating banker, once the deal is done and the profit booked, he or she would move on to the next deal, despite the fact that the deal just done would stay on the balance sheet for years to come. The result of all these trends was that balance sheets ballooned giving no indication of the underlying economic activity. This trend was exacerbated further by the understandable desire to increase leverage while asset prices were rising steadily across the board (see Figure 1).

This meant that the nature of risks was no longer immediately apparent from the balance sheet. A good example – and a painful lesson for some banks during the crisis – was the interplay between liquidity risk management and the use of liquid assets as

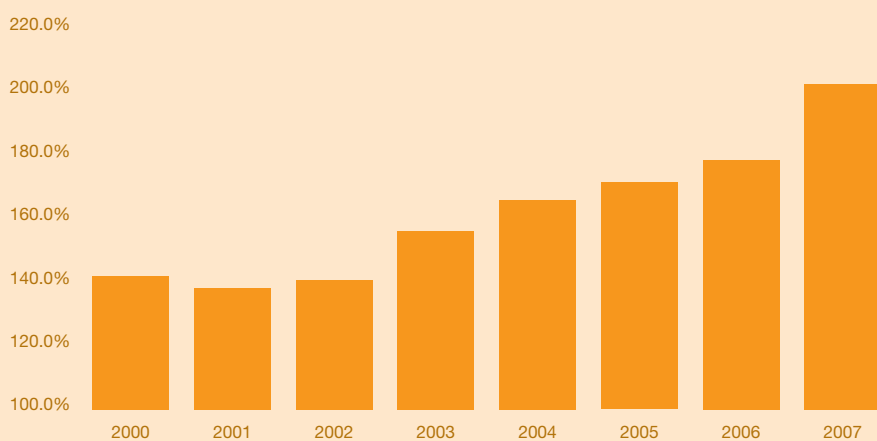
collateral for other transactions. The liquidity risk team might look at the balance sheet and take comfort from a large number of apparently liquid assets available for sale in a liquidity crisis. However, these assets may have been loaned out or deposited as collateral with third parties, which meant that they were not in fact available as a liquidity buffer. Not all banks’ liquidity risk systems were able to capture this vital additional information. Other examples include the provision of liquidity commitments to off-balance sheet vehicles such as SIVs, the use of derivatives to hedge risks on other parts of the balance sheet, etc. This does not mean that these developments are necessarily negative – they merely serve to show how balance sheet management has become immeasurably more complex and much less intuitive.

Specialisation in risk management and the interplay with complex accounting standards

At the same time, risk management itself became more specialised and silos started to emerge. The credit risk

team typically carries out its own stress testing of the credit portfolio, the ALM or treasury team would carry out interest rate risk and liquidity risk stress tests, the market risk team would do the same for the trading portfolio, and so forth. The finance department would be putting together capital stress tests, again often in isolation, or at least without a proper understanding of the nuances inherent in the risk models. This silo approach brought with it two problems: first, the scenarios themselves were often not the same, or even of the same level of severity. Secondly, the interplay between risk classes was easily missed. One only needs to look at the Collateralized Debt Obligation (CDO) market to see this in full destructive force. Is the marking down of a CDO held in the trading book a result of credit risk, market risk, liquidity risk or even accounting risk? The answer is: a combination of all of these. Another example – since pounced upon by the regulatory community with the imposition of the incremental risk charge and the proposed amendments to the counterparty credit risk charge – is the interplay between market risk and credit risk. The risk department tends to have an economic view of loss, whereas the finance department needs to take into account different accounting treatments for often similar assets. A question that has been posed to us many times over the past year is whether the measure of risk should be dependent on the accounting treatment. For example, is the ‘risk’ on a bond different if it is carried at cost rather than at market value?

Figure 1: G7 Banking assets as a % of GDP



Source: OECD, Bank of England, Bank of Japan

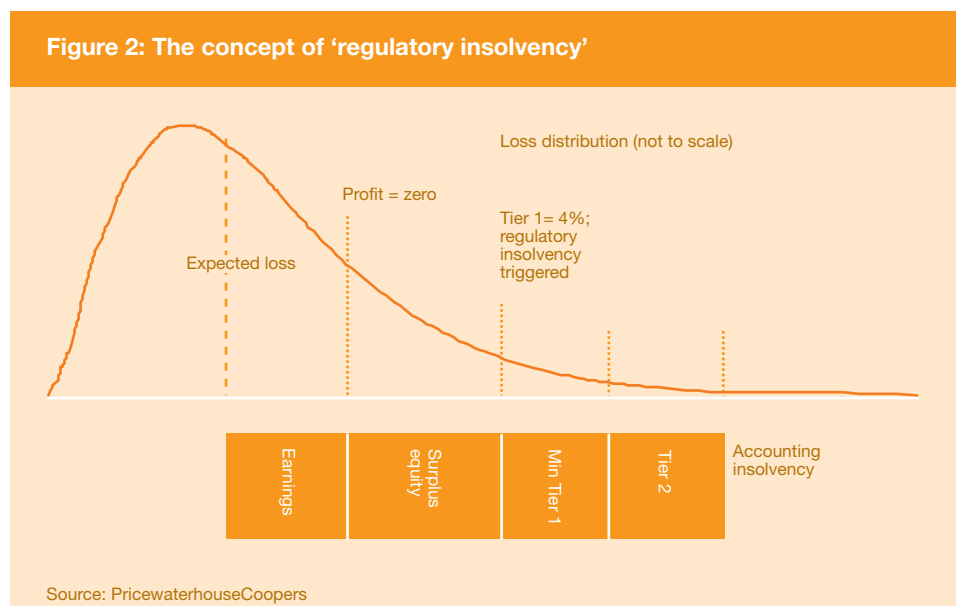
The translation of this risk information into capital brought further complications of its own. As previously covered in The Journal,³ risk and finance people speak their own language and do not always understand each other. Further exacerbating this difference has been the lack of clarity of roles and responsibilities between CFOs and CROs when ultimately harnessing the variables that ultimately roll into the capital adequacy equation. It is a huge challenge to understand the connections and their impacts, let alone how to manage them in the perfect storm, as illustrated by the financial crisis. How then do banks achieve this when management accountability and performance measurement are driven by limiting the scope of activities of the subcomponents within this interplay? Who is then looking at managing the full spectrum?

For example, how many credit analysts looking at approving an investment in a CDO understood the nuances of IAS 39 (or FAS 133, its equivalent under US GAAP)? The derivation of economic capital models from risk models provides another sobering

lesson. These models were often built using high degrees of confidence, assessing capital required to cover losses 99.95% or even 99.98% of the time. Leaving aside the question as to whether these confidence levels were really justified in the wake of the global financial crisis, a more fundamental issue is the definition of 'capital', and its composition. It's all very well and good having capital equivalent to a 99.95% confidence level, but if this capital consists of only a thin slice of core equity, then a bank could very easily reach what we call 'regulatory insolvency', i.e. the point at which the bank is close to or actually in breach of its regulatory capital minimum (see Figure 2).

The order in which losses are absorbed is critical – first out of profits, then out of 'surplus' equity (i.e. equity over and above the legal minimum), then out of other capital instruments. However, this ignores two aspects. First, there is the reputational impact of low capital ratios, which may lead to a self-fulfilling prophecy of trouble ahead. Secondly, once the minimum levels are reached, the reduction in capital ratios escalates, due to the various restrictions. For instance,

Figure 2: The concept of 'regulatory insolvency'



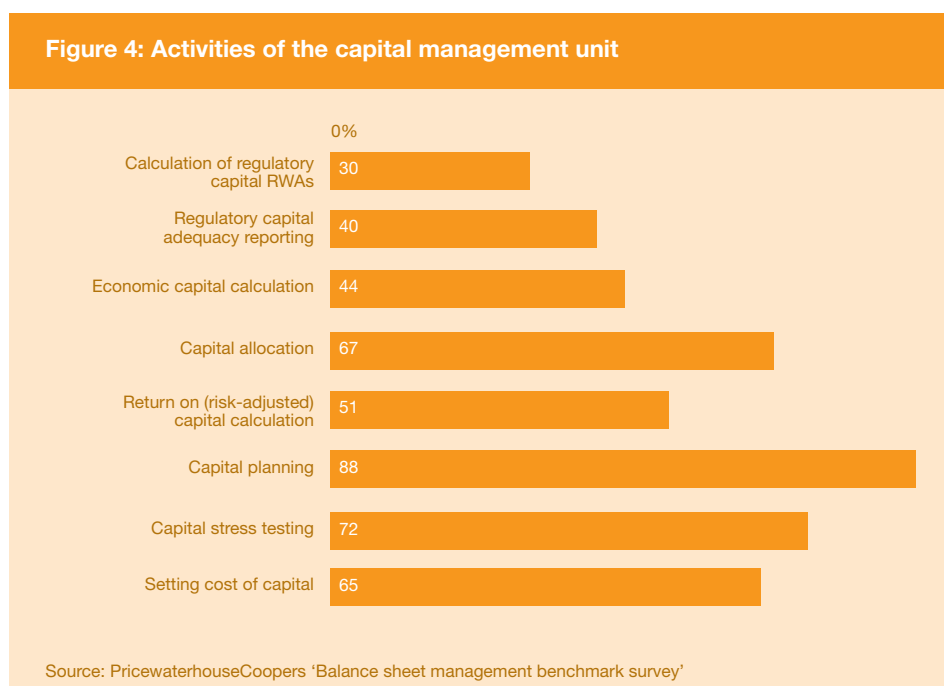
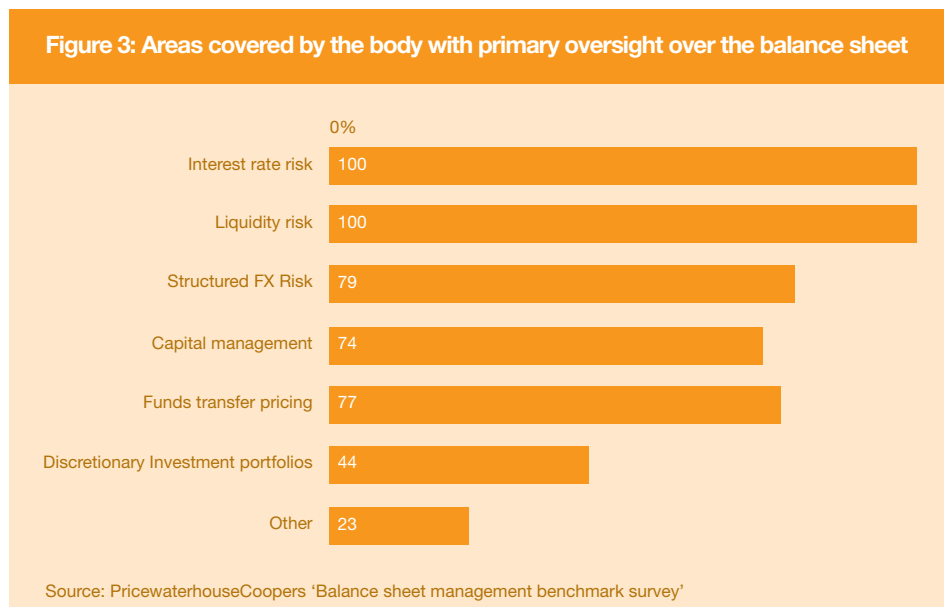
³ PricewaterhouseCoopers, The Journal article 'Chief Risk Officers are from Babylon, Chief Financial Officers are from Florence' – 04.08.

since Tier 2 capital cannot exceed Tier 1, there comes a point where every \$1 of additional losses causes a \$2 reduction in total capital. This distinction has now (in our view belatedly) been picked up in the regulatory community, with the December 2009 package of proposals from the Basel Committee on Banking Supervision distinguishing between ‘going concern’ capital (i.e. the buffer that can actually absorb losses while leaving the bank able to operate as an independent, adequately capitalised entity) and ‘gone concern’ capital (i.e. the residual capital that can protect depositors once the decision has been made to let the bank go under).

In The Journal article we referred to above, we concluded that it is right and proper for finance and risk to be separate disciplines with different core skills, but that each needs to make an effort to understand the other better. We believe that the financial crisis has only strengthened this view.

A holistic view of the balance sheet

What is needed then is a ‘holistic’ view of the balance sheet, looking at a coherent set of stress scenarios and then examining how the bank would perform under these scenarios. The modelling needs to take all relevant factors into account – not just the potential loss, but also how capital requirements will change (the demand for capital) and how this will affect the P&L (as profits and losses influence the supply of capital). It is really only the finance department that has the accounting skills to perform such an analysis, involving as it does the complex interplay between losses and accounting standards. But at the same time the skills to model potential losses reside primarily in the risk department. As this stress testing is



forward looking, strategy and/or planning departments may also have an important role to play.

The way to break through this siloed approach is to build within the balance sheet management function (typically the ALM) the skills to perform overall, holistic stress testing across all risk types. Our recent survey of balance sheet management practices around the globe shows that there is still a long way to go in this regard.

For instance, we find that while in all respondent banks the body with the primary oversight over the balance sheet (typically the asset-liability committee (ALCO)) attention is paid to interest rate and liquidity risks, a significant minority do not focus on capital management in the same body (see Figure 3).

This does not mean that these organisations do not look at capital management, just that it is typically covered by a different oversight body.

We believe this is potentially dangerous, as it risks continuing the piecemeal approach to understanding risks highlighted earlier.

We also find it a little worrying that even where a dedicated capital management unit exists, it is not always responsible for carrying out capital stress testing (see Figure 4).

Given that the technical expertise within banks is dispersed across different functions, we question whether the CEOs and boards of these banks would be able to exercise their responsibility to oversee the risk profile of their institutions.

Emerging best practice

We note an encouraging trend in some banks, however, which we believe provide a model for proper balance sheet management. These banks have a dedicated balance sheet management unit, which covers all of the relevant areas:

1. Interest rate risk monitoring
2. Liquidity risk monitoring
3. Funds transfer pricing
4. Regulatory capital reporting
5. Economic capital calculation
6. Capital allocation
7. Capital planning
8. Capital stress testing

We have even seen in a few instances the overall credit portfolio management being included in this unit (this is especially important if credit portfolio management plays an active role in shaping the balance sheet).

This is why many ALM systems vendors have been growing their products to incorporate credit, market and operational risk capabilities to build onto the ALM platform. After all, the ALM/BSM unit under the oversight of ALCO has been performing the

routine, full balance sheet modelling for decades. Breaking out of silo thinking provides the realisation that credit, market and operational risk are a subset of the whole and that, with new technology and the right architecture, greater steps can be taken to achieving the holistic, integrated view of balance sheet risk.

The staff in the balance sheet management unit will need to have a rare set of skills – an understanding of risk, capital requirement calculation and accounting.

From a governance point of view, we see this unit reporting to a senior executive-level committee charged with overall management of the balance sheet. This can mean simply broadening the mandate of the existing ALCO, or alternatively it can mean that the existing ALCO continues to focus on micro-management issues (margins, product pricing, etc) while the balance sheet management committee takes a broader look at the overall picture.

The recent developments on the regulatory front – in particular the proposed introduction of a leverage ratio and tougher capital requirements – make it all the more important that banks get a handle on the holistic management of the balance sheet.

The genie of modern banking is out of the bottle and it is unthinkable (and from an economic perspective undesirable) that banks will go back to the simple model of ‘3-6-3’ banking. However, one aspect of that model – looking at the balance sheet as a whole – does need to make a comeback, albeit with much more sophisticated tools to enable this.

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