

A Quarterly Newsletter from Aptivaa 2010 Number 2

### **Splitting Utility from 'Casino' Banking**

Tokenism or foresight? Draconian or prudent? Path breaking or misguided? These are some of the questions that the issue delves into with respect to the regulatory proposal to hive off risky operations or 'casino banking' from normal banking.



The Post Crisis Regulatory Architecture

Brandon Davies



Howard Radley

Stress Testing Commercial Real Estate Portfolios





Counterparty Risk

Pravin Shirnamé



## **150-**Successful Risk Management assignments



## **75** Banks and other financial institutional clients



## **Ring Fencing Banking**

After Spain won the world cup, I read an interesting article in the Financial Times explaining how Paul, the Octopus has beaten the best financial quant modeler to get it right every time. Overcoming the 1/256 odds of being right on all eight of his World Cup predictions is impressive, even if you compare it with the best - JP Morgan finished 28th, Goldman Sachs 33rd, UBS 55th and Danske Bank 64th. All the banks performed worse than the betting markets, which finished 16th (based on Betfair odds). The good news is that there were no instruments designed and distributed by the global banks on these outcomes, so the depositors' money is safe.



Well, that brings us to the current regulatory focus on separating the "high risk banking activities" from traditional banking. The US senate had taken a first step on July the second, 2010, in separating these two parts, though the final proposals are a diluted version of the "Volcker Rule". It's interesting to see the modern adaptation of the Glass-Steagall Act, which established the Federal Deposit Insurance Corporation (FDIC) in the United States and introduced banking reforms, some of which were designed to control speculation. The new government in the UK has also set up a committee to work on similar proposals.

Interestingly, Paul's namesake is the legendary US central banker Paul Volcker, who is seen as the man behind the new financial regulation architecture. He wanted the nation's banks to be prohibited from owning and trading risky securities, the very practice that got the biggest ones into deep trouble in 2008. Bankers (and lobbyists) have been baulking, stating that it will not be possible to completely separate commercial banking from investment operations. In one of his recent interviews in NY times, he said, "The banks are there to serve the public and that is what they should concentrate on. These other activities create conflicts of interest. They create risks, and if you try to control the risks with supervision, that just creates friction and difficulties". Our cover story outlines the scope of this split as suggested by Volcker; and why it is considered to be beneficial. It provides insights on the practical and conceptual problems with the Volcker Proposal and critiques the premise that separation will be a panacea of all the ills.

Counterparty credit risk is another emerging topic, and this issue contains an article that throws light on the problems that beset the articulation of counterparty credit risk and its quantification. It also touches upon the aspect of mitigation in bilateral and multilateral setups. Liquidity is another aspect of banking regulation that is being brought under scrutiny. While our earlier issue touched upon the matter briefly, now we look in depth the various changes in the regulatory environment, the standards that are necessary for short term and long term resilience and other strategic and structural changes that are to be adhered to.

Apart from the above, there is a special article, 'Stress Testing' which reviews existing approaches to stress-testing for Real Estate loan portfolios. It is of special significance since Stress Testing is increasingly being looked at, as a key evaluator of banks' financial health, especially from a supervisory angle. The article identifies the weaknesses in the current stress testing mechanisms, proposes better solutions and illustrates using a case example, how reliable stress-testing solutions can be implemented.

Lastly, we would like to thank you for the overwhelming response our first issue has received. We strive to work toward making each issue better. We look forward to your valuable feedback again.

Alok Tiwari CEO | Aptivaa



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All rights reserved. Neither this publication nor any part of it may be reproduced, stored in retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of Aptivaa. This article explores the sources of counterparty risk, the predominant issues in modeling, the practical problems in hedging and the regulatory stance on the same

## **Counterparty Risk** A review of practices and proposals

Counterparty risk is among a host of factors being examined as causes of the severity of the economic and financial crisis. The Basel Committee published a consultative document titled 'Strengthening the resilience of the banking sector' in December 2009 which states '...Committee is proposing to strengthen the capital requirements for counterparty credit risk arising out of derivatives.....'

This article lists the definitions of counterparty risk, its quantification, mitigating actions on a bilateral basis as well as those being currently proposed on a multilateral basis.

#### **Counterparty Risk: Causes and Definitions**

Credit risk can arise from several transactions ranging from loans to trading derivatives. Credit risk in the context of trading derivatives is typically classified as counterparty risk.

Counterparty risk is a by-product of what is fundamentally a market risk related transaction. While trading derivatives such as swaps, options and the like, there are possibilities that over the life of the contract, market rates may vary and the counterparty will owe money to the bank.

Counterparty credit risk is the risk that a counterparty for a financial contract will default prior to the expiry of the contract and will not fulfill

all the payments required. Privately negotiated contracts such as overthe-counter (OTC) derivatives are exposed to the counterparty credit risk. The unique feature of counterparty risk is that the exposure is the uncertainty of the exposure and the uncertainty and switching nature of bilateral exposures.

If counterparty defaults on a derivative contract, the non-defaulting counterparty will have to maintain its market position and hence the concept of replacement cost (RC). If the value of the contract is negative to us at default, we will have to pay the counterparty, and close the resultant open position to receive value, with a net result of a nilloss. If the value of the contract is positive to us at default, we will not receive anything from the counterparty, and close the resultant open position to pay value, with a net result of a loss.

Further because the exposure can vary depending on changes in the market, one needs to consider the future exposure (potential future exposure-PFE) as well.

Counterparty risk exposure may be computed as (1.0) Current exposure = RC+PFE

#### **Quantification of Counterparty Risk:**

The quantification of counterparty risk may arise from two objectives i.e., providing capital and managing counterparty risk/limits.

The Basel II framework computes regulatory capital C applying the formulation:

#### (2.0) EAD \* K(PD,LGD) \* MA(PD,M)

Where EAD = Exposure at default, PD = Obligor's probability of default, LGD = Loss given default for downturn, MA = Effective remaining maturity of exposure. M is maturity of the transaction.

The major difficulty in applying regulatory rules to OTC derivatives is the uncertainty of future exposures and the complexity of computation of future exposures. Issues such as netting arrangements, margining, wrong-way exposures, and concentration add layers of complexity to the assessment of counterparty risk.

The process of computing potential future exposure on OTC derivatives requires a framework for both capital and counterparty risk assessment. Capital assessment focuses on the expected exposures at the netting set<sup>i</sup> level while counterparty risk assessment requires exposures at high confidence levels at the counterparty level.

The stages of assessing credit exposure are as follows:

1)Modelling scenario paths: This involves simulating market scenarios for a set of future dates for a group of the risk factors using a stochastic model. This is done individually for each risk factor (fig. 1: colored paths).



Factors that need to be kept in mind while generating the scenarios are the nature of the measure (real vs. risk neutral), matching the stochastic process to the variable concerned (foreign exchange vs. interest rates), simulation type (path dependent or direct jump)

2)Valuation of the instrument: Using the scenarios generated, the instrument is valued. The objective here is not pricing but generation of a distribution of future values using approximations.

#### 3)Generation of exposure profiles:

Exposures for instruments and portfolios may be visualized and used with the assistance of exposure profiles (fig.2).



The expectation of exposures (EE) is the average of all exposures estimated for a specific date. Effective EE is estimated using a recursive formulation to account for rollover risk (decreasing trades overtime).

(3.0) (Effective EE)<sub>k</sub> = max[(Effective EE)<sub>k-1</sub>,  $EE_k$ ]

The expected positive exposure (EPE) is defined as the average of the EE profile over the first year  $% \mathcal{A}(\mathcal{A})$ 

$$(4.0) EPE = \sum_{k=1}^{\min(1)yr,maturity)} EE_k * t_k$$
$$\min(1)yr,maturity)$$

(5.0) Effective EPE =  $EffectiveEE_k * t_k$ 

Where weights are defined as time intervals between simulation dates  $\Delta \tau_{s} = t_{k} \cdot t_{k,1}$ 

#### Factors that need to be kept in mind while generating the scenarios are the nature of the measure (real vs. risk neutral), matching the stochastic process to the variable concerned (foreign exchange vs. interest rates), simulation type (path dependent or direct jump)

As shown in fig.2, the maximum peak exposure is the Maximum Exposure reached during the entire period, while the Peak Exposure of Potential Future Exposure (PFE) (95%) is the maximum positive exposure at the confidence level.

Typically one may use the expected exposure for capital exposure computation, while the peak or PFE may be used for counterparty risk purposes.

The exposure profiles at the instrument level reflect two major factors. As time passes by, there is a diffusion effect (for all instruments) increasing exposure due the risk factor values moving away from current rates, while there is also an amortization effect (for some instruments) decreasing exposure as the number of cash flows reduce. The interplay of these factors results in a signature exposure profile for a specific instrument (fig. 3).



#### Mitigating actions: bilateral

The following alternatives are given from the bank's perspective of MTM value with reference to its counterparty.

1. Periodic Collateral: A bank may require its counterparty to place collateral with it depending on its assessment of credit risk of the counterparty and market risk of the contracts. Collateral may be placed after the positive value of the contract increases beyond a certain threshold level.

2. Periodic Settlement according to mark-to-market: Settlement occurs by the banks if the MTM becomes negative or by the counterparty if the MTM becomes positive. Such a process may be used in case of a high risk perception.

3. Early settlement on downgrade: A bank can have an early termination clause if the counterparty's rating falls to designated level

4. Special purpose vehicles (SPV): Market makers may want to retain only market risk and avoid credit risks. This may be addressed by creating a separate high rated SPV. The legal structure of the SPV is such that in case the parent entity defaults the SPV is shielded from claims.

5. Netting agreement: This is legal agreement / election in a master agreement that requires that the bank be liable for the net amount

owed and not the gross amount. The netting arrangement will apply to the selected products and the selected entities

6. Assessing counterparty risk limits: Limits may be assessed based on the risk appetite. The utilization of these limits may be monitored based on the MTM and the PFE.

7. Pricing and hedging for credit risk: Each derivative transaction should ensure that the bank is compensated for both, market and credit risk. Credit risk compensation would entail the addition of a required return to the derivative price. CVA (credit valuation adjustment) is the applied adjustment to correct the value of the derivative contract. It has been historically incorporated in favour of the stronger credit quality counterparty. Recent accounting rules require banks to remove from risk free valuations the CVA associated with future counterparty defaults.

CVA = Counterparty credit spread \* Expected Positive Exposure CVA may be managed and / or hedged using market instruments.

#### **Mitigating Actions: Multilateral**

1. Central Counterparties: The Basel consultative document of December 2009 refers to the strengthening of the capital requirements for counterparty credit risk. These requirements will increase the incentive to move OTC derivative exposures to central clearing counterparties (CCP) and exchanges. It is expected that exposures to CCPs will attract a zero risk weight.

2. Assessment of asset value correlation: In view of the observation that financial institutions credit quality deteriorated in a highly correlated manner, the Basel Committee is proposing that a multiplier of 1.25 be applied to the asset value of financial firms as an assessment of the correlation risk.

3. Improved internal controls will be required of banks in the specific areas of backtesting, stress testing and wrong way risk estimation for counterparty credit risk.

<sup>1</sup>Netting set refers to the netting arrangement between counterparties specifying the products and entities covered. Basel II assessment of counterparty risk assessment uses current exposure, standardized and internal models which are arrayed with increased complexity in its construction

#### **Comments:**

Due to recent market crises, new multi lateral infrastructure and regulatory steps are being taken with the expectation that these will mitigate risk. These as well as the common mitigating processes discussed here have a caveat that all risks need to be re-assessed for each alternate or modified process. These risks include at the very least, credit, market, liquidity, operational and reputation risks. While some measures may reduce one risk these may exacerbate other risks singly or sequentially as illustrated on several occasions over the last two decades. Moreover, with each added mitigating action, the exposure estimation may actually become more complex and uncertain.

While the recent focus appears to be on leading market makers operating in major international financial centers, the application of the counterparty risk related principles listed in the recent series of Basel publications are to be equally emphasized for banks, finance companies and corporates in all markets. Not all entities and jurisdictions however can be expected to cope with the implementation payloads. While the credit derivative market crisis has a major share of recent memory, counterparty risk related mishaps have consistently dogged all markets and geographies in the last two decades. It may therefore be assumed that unequal regulatory focus and implementations may continue to result in periodic market mishaps in the future.



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Pravin provides advisory and training services in the following areas of risk management: Market risk, counterparty risk, ALM, wholesale and retail credit; Risk software design; Skill development projects in areas of treasury and risk; Risk process reviews and recommendations.

#### Background

Pravin formerly headed the Market Risk function and oversaw analytics tasks at HDFC Bank, India for 15 years and has spent over two decades working in financial services and other businesses.

Pravin has dual MBA's from the University of North Carolina-USA and the University of Puné-India. He holds an M. Sc from M.S. University of Baroda, India and is an FRM charter holder.



## Summary of Regulatory Proposals in the United States

Banking Regulators, in what is seen as the biggest clamp down on 'casino banking', seem to think it is absurd to allow the banks to use taxpayer-guaranteed customer deposits to ramp up investment banking and other risky operations which are being referred to as 'casino banking'. Pedants point out that this is a misnomer, drawing attention to the extremely sophisticated risk

handling at the casinos. The regulators are going ahead and beginning to clamp down on the riskier aspects of the banking, starting with the House

of Representatives approving a landmark reform bill in the US. The salient aspects of regulatory proposals in the US are shown below





# The Post Crisis Regulatory Architecture

## Should we split utility from casino banking?

There have been a lot of ideas floated as to what the post crisis regulatory landscape might look like. One of the contentious proposals is to hive off 'casino banking' from the commercial banks. Path breaking or misguided?

There are significant differences of opinion on the new regulatory architecture between the United States, the UK and the European Union and it is clear that there are different views based not simply on national interests but also on political outlooks. The views which are yet to surface are those of the emerging economies. There is a real risk that the new regulatory architecture as proposed by the US and Europe will reflect the risk preferences of developed countries with aging and slowly growing populations rather than those of emerging markets with young and rapidly growing populations.

This article is based upon a paper written for Lombard Street Research which covers a whole range of issues relating to the proposed regulatory architecture but here we focus on one aspect that of splitting - the so called casino banks from the so called utility banks.

#### The Regulatory Process

Whilst it is very legitimate to question whether Basel based regulation has captured all of the important aspects of risk based regulation, it is also important to consider whether any other process is likely to produce better outcomes.

Basel is a disciplined process involving submissions and direct involvement of a wide range of stakeholders (governments, regulators, regulated), in which members come from 27 Countries. The regulatory development process is one of detailed development of new regulations involving:

- The rigors of cost benefit analyses.
- Consideration of cumulative effects of different regulatory requirements.
- Consideration of the interconnectedness of different regulatory requirements.
- A pre-implementation impact assessment process (Quantitative Impact Studies QIS).

The Basel process is, however, being supplemented by a number of much less disciplined processes based not on economic rationale but national political timetables.

If we contrast this process with Basel:

- · It is essentially politically rather than 'technically' led
- It has no cost benefit analysis constraint
- Its ability to look at the cumulative effects of legislation is very limited
- It has little ability to look across different legislations to judge their interconnectedness

#### **Casino And Utility Banking**

The main regulatory issue that the casino/ utility split are designed to address is that banks, because of their unique access to deposits from the public, the value of which is guaranteed by the state, can take speculative positions in financial markets. If this activity leads to profits, these will accrue to shareholders and staff (through bonuses), whereas catastrophic losses that might lead to corporate failure will be borne by the state - both through the deposit guarantee and the practical need to 'save' any bank that might threaten the stability of the banking system.

Basel III proposes to address this issue by greatly increasing the capital a bank has to place behind speculative market positions and by limiting the use of state guaranteed deposits to fund such positions. It does not address the corporate structure of banking. Other proposals most notably from the US propose to create a corporate structural solution by splitting banks between those that are allowed to take

speculative positions (so called Casino banks) and those that can only fulfil customer demand (so called Utility banks). These proposals have originated from Paul Volcker, an ex chairman of the Federal Reserve Board. The US has a history of splitting investment banking from retail banking through the Glass-Steagall Act (1933), which was only repealed by a series of acts between 1980 and 1999, and until the crisis the US had a banking structure largely resulting from this act.

Under the Volcker rule commercial banks would be prohibited from owning or sponsoring of hedge funds, private equity funds, and largescale purely proprietary trading activities in securities, derivatives or commodity markets. The intent is to "directly eliminate potential areas of risk, reduce conflicts of interest and focus management attention on the core functions of banking".

The Volker rule has been favourably commented upon in the United Kingdom, but has found much less favour with French and German politicians who point out that they have no history of separating retail and investment banking and do not believe there is any evidence that the lack of such separation was a causal factor in the crisis.

In the US, there is genuine concern that the close relation between investment banks, eager to sell mortgage backed securities and retail banks as initial providers of mortgages contributed significantly to creating the sub-prime mortgage backed securities bubble. This is, however, far from certain. The US retail banks had to work under the

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Community Reinvestment Act which required banks to ensure they did not discriminate against social and racial groups by requiring them to provide mortgage loans to such groups. A complex structure, it brought together social policy and directed lending, a potent mix that is often criticised in emerging market countries by the World Bank and the International Monetary Fund.

In the failure of Northern Rock was the classic failure of a retail mortgage bank that was funding its mortgage book with short term market deposits. Once depositors lost faith in the banks ability to refinance themselves, there was a classic "run on the bank". Once Northern Rock failed, other weaknesses in the banking system soon appeared, HBOS had a poor quality lending book, over extended in commercial property and construction lending, and when taken over in haste by Lloyds Bank it proved sufficient to drag down Lloyds. RBS was a classic case of an acquisition of another bank (ABN-Amro) made at the top of the market at a price that was not justified and soon proved disastrous as the poor quality of the acquisition's lending books became apparent. Indeed the irony of the UK situation is that the bank with by far the biggest mix of retail and investment banking, Barclays Bank, has not required government provided capital.

In addition to the lack of evidence there are both practical and conceptual problems with splitting casino and utility banking. Consider the case of foreign exchange. Should utility banks be allowed only to act as brokers then for every customer that wishes to sell say a domestic currency to buy, say, USD (e.g. a major oil company) there has to be a customer who wishes to do the opposite transaction. In practice this would never work and the utility banks would have to rely on casino banks to take currency positions to ensure transactions were matched. What would happen if there were a crisis in the casino banks threatening their ability to undertake this role, then surely governments would have to intervene to support casino banks. The 'split' would have achieved nothing except possibly to create a false sense of security that casino banks could be allowed to fail.

The point is an important and general one, in telling ourselves we have utility banks which are safe and casino banks which can be allowed to fail, we had better be sure we have indeed split off banking functions we can do without.



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Brandon has over 30 years of work experience in the banking sector, his positions included Head of Retail Market Risk and Deputy Group Treasurer at Barclays Bank, Managing Director of Financial Engineering and later of Structured Products at BZW.

On retiring from Barclays Brandon became Managing Director of the Global Association of Risk Professionals and produced five books on Basel II, risk management, governance, supervision and enterprise risk management, which form the basis of GARP's certification program in banking risk and regulation. These books are used by both banks and Central Banks in several countries worldwide including China, the UAE and Indonesia.

Brandon is also a member of the Financial Markets Group at the London School of Economics and produced a number of research papers for the Cass Business School and The Association of Chartered Certified Accountants (ACCA). He holds a degree in economics from University College London.

Brandon lectures extensively on subjects in banking and risk management and has written numerous articles on these subjects.



This article reviews existing approaches to stress-testing for Real Estate loan portfolios and identifies their weaknesses. It proposes better solutions and illustrates using a case example, how reliable stress-testing solutions can be implemented. The case study also indicates the strategic importance of accurate stress-testing. Stress testing is one of the fastest growing risk management techniques amongst lenders. Around the world, regulators are getting wise to the value of stress tests to their new found desire for macro-prudential regulation. After the very public round of stress tests in the US banking sector, the UK and other regulators have followed suit. Stress tests are designed to calculate the expected impact of a hypothetical set of changes in the economy – or shocks - on a bank's asset quality, losses and capital. The source and design of each stress scenario might be internal or provided by the regulator: in either case there are organisational and technical challenges in implementing stress tests. This article focuses on the technical aspects of stressing a particularly difficult but significant section of banking assets, namely, Income Producing Commercial Real Estate portfolios.

#### The scope of CRE loan stress testing.

Stress tests are designed to examine a combined set of risks which are often calculated separately, namely credit, market, liquidity and operational risk. The way that these risks are correlated or additive in nature is of particular interest.

Of particular interest is Fig 1 as shown below

Risk type	Market	Credit	Liquidity	Operational
Significance	High	High	Assume illiquid	Normally low
Correlation of risks	Very high with credit risk	Very high with market risk	NA	Not correlated
Factors to model	Changes in interest rates, market rents, capital values, bankruptcy rates, vacancy rates.	Lease structures, rental agreements, loan structures.	NA	NA

Fig 1: Correlation between risks

#### Liquidity risk

Although CRE loans may be liquid in theory, the safest and easiest assumption to make is that CRE loans are highly illiquid: if there is a market shock, we can assume that CRE loans can only be sold at a large discount to face value. From a modelling point of view, we can afford to ignore liquidity risk by assuming CRE loans to be practically illiquid in a crisis.

#### **Operational risk**

Through there certainly is a degree of operational risk in CRE lending, it is not commonly associated with other classes of risk. Although instances of fraud and other operational failures may be more noticeable in times of market stress (this is particularly common in the case of valuation fraud) the actual risk, in a modelling sense, is not correlated with the shock – possibly only the measurement of operational risk events. It is reasonable to assume, in the first instance, a continuing level of operational risk whatever the stress scenario. In an ideal world, the correlations of operational risk with market shocks could be observed and some way of incorporating these effects could be modelled. But given the relative infancy of quantitative risk modelling in CRE portfolios, the safest approach is to allow a qualitative override of stress tests to reflect any management assumptions about how operational risk and the other main classes are related to stress conditions.

#### **Market and Credit risks**

So we are left with the major challenge of modelling market and credit risk in CRE loans. A simple historical observation is that CRE loan losses have been concentrated in economic downturns. Loan losses in the UK between 1995 and 2007 were vanishingly small (and even the small amount of these losses were, arguably, the result of fraudulent valuations which strictly count as operational defaults). The story in other markets is similar: it is hard to lose money on income producing, property backed, lending in benign markets with rising collateral values – whatever the credit risk factors of a particular

loan. But during a market downturn, many of the factors on which credit quality depends decline in unison: rents fall, tenant default rates rise, void periods lengthen and collateral values plummet. These correlations are critical to understanding and modelling CRE risk and thus performing CRE stress tests.

#### Time Horizon

The loss characteristics of CRE loans are highly time dependent, varying significantly over the years even without allowing for changes in the economy. In the absence of secondary markets, (a safe assumption for stress-testing), CRE loans continue to present a risk to term, thus the modelling time horizon recommended (by the FSA) is to loan maturity. Note that the maturity date for CRE loans is a particular risk point in that refinance risk is concentrated at this point. For the purposes of risk measurement, (whatever we might do in practice), we need to assume that a loan that can not refinance is in default and will in almost all cases result in a loss of some sort (actual or accounting).

Not only do changes in a range of market variables affect the debt service and collateral recovery characteristics of a CRE loan, they change over the life of a loan as the rental income and debt servicing costs are affected by breaks, lease ends and rent review dates as well as changes in interest rate structures such as fixed to floating dates

#### Measures

The chief output measure for stress tests should be the level of losses or the expected loss (EL) in each future year in the stress scenario to maturity. Using existing CRE risk models may be inadequate, as many

rating models focus on static, one-year, probability of default (PD) measures, since it is possible for CRE loans to have a high probability of default but a low measure of loss given default. For example, a 20% LTV loan may suffer from temporary loss of income and thus have a high PD, but the expected loss is still insignificant; either the borrower finds cash to cover the debt service from other sources or the collateral covers the loan amount. Either way, PD alone is insufficient for modelling loss.

The difficulties of defining 'default' are also significant. Many CRE lenders in recessionary economies are unsure how to categorise their problem loans: if the 'inability to refinance loans on commercial terms with other lenders' is taken as a technical default, then default rates in some books exceed 50%. If 'non-performance' is the criterion, then defaults are smaller by an order of magnitude. These PD measurement problems can more or less invalidate regression models based on default histories.

The third, related, and more deep-seated problem is that regression based PD models assume, by their nature, that past losses are reflective of future losses: the very fallacy that stress-testing is designed to overcome.

#### Top down modelling

Most stress testing is carried out using top down models, modelling the portfolio as a whole or breaking the portfolio into segments by product type or LTV band, geography etc. Top down modelling is often carried out using historic loss data for each segment. It has many appealing practical advantages; it is easy, cheap and quick to carry out. However, the effectiveness and appropriateness of top down models depend on a number of critical requirements:

- Large numbers of small loans
- Homogenous loan structures
- Homogenous collateral assets/lease structures
- Small number of factors to stress
- Extensive historic loss data for sensitivity analysis

#### For CRE loans, none of these critical requirements hold true. Typical portfolios feature:

- A relatively small number of high value loans;
- · Loans are extremely varied both in terms of loan structure and in terms of lease structures -
- The loans often have multiple tranches, interest structures and principle repayment structures.
- Extremely limited historic loss data

There are many factors to stress and loss data, though however extensive and well recorded (rare on our experience), it is always difficult to isolate each factor to measure its stress sensitivity. Put in more practical terms, how can a single, top down model explain the difference between, for example:

- loan A: a 12 year floating rate, amortising loan (with a junior portion) comprising a single unit with a government quality tenant on a 8 year inflation based lease with no breaks and current LTV of 93% and
- loan B: has 3 years to term, with 3 units, one of which is empty, on a fixed rate, interest only, 85% LTV loan

It is easy to see that top down models are likely to be crude at best: our experience is that they are also significantly misleading.

#### **Market and Credit Risk correlation**

The main risk classes that affect CRE loan losses are multi-dimensional and highly correlated. Not only do changes in a range of market variables affect the debt service and collateral recovery characteristics of a CRE loan, they change over the life of a loan as the rental income and debt servicing costs are affected by breaks, lease ends and rent review dates as well as changes in interest rate structures such as fixed to floating dates. Some of the main effects are summarised in the Fig 2: as shown below



Fig 2: Effects of the market changes on debt service and recovery

To compound this already complex picture, the changes in market factors themselves are highly correlated. It may not be sufficient to model a fall in capital values in isolation since the correlation of capital values with market rents is very high. If a unit is expecting a market rent correction (for example in a forthcoming lease event), this may reduce debt servicing capability at the precise point that collateral values are falling. The correlations affect each loan structure differently and not always in the same direction. For example, a fall in capital values can be associated with a deflationary recession with low interest rates that protect and favour floating rate loans over fixed rate loans (e.g. UK 08/09). But in some recessions, interest rates rise significantly, penalising rather than rewarding floating rate loans. Some of these correlations are illustrated in Fig 3. Again, they may change over time.



Fig 3: Correlations between stress factors and their second order impacts on loss characteristics.

#### The Ideal Stress Test Model

If highly heterogeneous loans - with small amounts of loss data, compounded by default measurement problems and with multiple, highly correlated risk factors, are not suited for top-down stress models, what approach should we consider?

From our analysis above, we can say that a good stress test model must:

- Model Market risk and Credit risk together
- Avoid the need for loss history
- Not depend on problematic issues of PD measurement
- Recognise correlations between market risk factors

- Acknowledge that multi-year models recognising EL changes over time
- Calculate refinance risk

#### Macroeconomic cash flow simulation models.

The advent of cashflow simulation risk models has enabled some banks to make stress testing fast, flexible and accurate. Though they pose some not insignificant implementation challenges, the users of these models are in no doubt as to their ability to generate detailed, granular, bottom up stress tests at the loan and portfolio level.

Simulation modelling approaches use a cashflow model of each borrower, modelling their ability to service their loans from the modelled rental income. In the event that the loan cannot be serviced, the model calculates the loss (if any) resulting from a recovery process. In each year and in each scenario, the model calculates a loss (mostly a zero loss one hopes). These losses are averaged over a large number of scenarios to calculate an expected loss. Schematically this process is illustrated in Fig4 as shown below



Fig 4:Cashflow simulation approaches

Why is this approach an advantage for stress testers? To calculate the risk statistics using a cashflow approach, each loan must be described in terms of its net rental income:

- number and type of units
- actual rents per unit ٠
- rent review dates ٠
- rent review types (e.g. inflation indexed, open market, agreed etc.) ٠
- break dates
- lease end dates ٠
- ٠ tenant quality (normally a tenant PD estimate)
- operating costs ٠

#### Then, to calculate the debt servicing costs, users need to describe:

- the number and seniority of loan tranches (if more than one) ٠
- ٠ the loan amount
- the interest rate structure (fixed/floating) ٠
- the interest rate (over what measure, e.g. LIBOR) ٠
- the currency ٠
- the swap rate (if hedged) ٠
- the date of change if interest rate regime is to change (e.g. fixed to floating)
- the rate cap or floor ٠

#### To calculate recoveries, users need to describe

- the age of the building (to apply different depreciation rates)
- the value of the building and its valuation date (to track changes since valuation)
- the vacant value of the building (the loss will be affected by the type of default did the tenant vacate or was the interest rate too high?)

Once we have a full description of each loan (see challenges, below), it becomes practical to model how it would perform in one scenario. And from this point, it becomes possible to model large numbers of possible scenarios and over many years.

Some events are independent of market factors (will a main tenant leave or stay at the lease end?). These can only be modelled statistically, but the

attraction of the simulation approach is that by laws of large numbers, a set of scenarios can describe independent probabilistic events such as the departure (or otherwise) of tenants. In simulation, like in the real world, a tenant's decision is always binary: they stay or they go; we do not have to calculate 'expected rents' by applying averages.

Once the loan descriptors have been presented to the simulation model, we can ask, what scenarios should we use to model the cashflows? We need scenarios at a minimum for the following macroeconomic variables:

- Interest rates (LIBOR)
- Inflation (RPI)
- Bankruptcy rates
- Property capital values by sector (CV)
- Market rents by sector (ERV)

For grading loans a large set of scenarios should be used that realistically reflect the probability of different outcomes in the economy. From this, risk statistics can be generated that reflect the operation of market changes on individual loan factors. Thus we might say, such and such a loan is will default in 100/10,000 scenarios in the next year with an average loss of 10% but will default in 500/9,900 remaining scenarios with an average loss of 12% the year after. The scenarios themselves are designed to replicate the historical trend, volatility and correlations of the macroeconomic variables. So, for example, if rents and capital values are highly correlated historically (which they are) we should make sure that the scenarios exhibit similar levels of correlation. This element of the model makes sure that the correlation of risks is properly recognised. There may be little loss data for CRE loans, but there is good data about the correlation of commercial property prices with other economic factors.

So far we've seen how a simulation model can calculate PD in a wide range of possible scenarios in normal conditions. To convert this model to a stress test model, we need only a single scenario, the stress scenario, to the cashflow model and run it 10,000 times. The resulting EL is an accurate estimate of the expected loss in the stress scenario. (The scenario still needs to be run 10,000 times because there are independent events such as tenants leaving at lease ends that are still unknown, even if we 'know' the future of the economic parameters.)

Criterion	Simulation modelling	
Model Market risk and Credit risk together	Yes. In the interplay of market scenarios and loan specific description	
Avoids the need for loss history	Yes. Loss history data is replaced, by analogy, with economic data	
Does not depend on problematic issues of PD measurement	PD definition is flexible - primary measure is expected loss	
Recognises correlations between market risk factors	Yes in the scenarios - historic cross- correlations can be replicated in the scenarios	
Multi-year models recognising EL changes over time	Yes. Multi-year cashflow model generates multi-year risk statistics	
Calculates refinance risk	Yes. The probability that a loan can not be refinanced can be calculated using the scenarios.	
Focus on EL rather than uncorrelated PD and LGD measurement	Yes, loss is calculated directly in each scenario	

fig 5:To return to our criteria for an ideal model in

#### Where has simulation modelling come from?

Like many techniques, the approach to simulation modelling has been adapted from other domains. It has been used extensively by engineers to model risk in complex systems, for example in mass-transit systems such as underground railways. In some senses, it continues the work carried out by VaR models, though it differs in some important respects, not least, it can handle non-normally distributed risks (fat tailed risks).

### Challenges for implementing simulation based stress-testing models

As ever, there are both organisational and technical challenges in making this somewhat complex approach work. They can be summarised under the two headings of data quality and calculation quality.

In the first place, the actual, current information describing the loan must be available for the model. Lenders are typically good at recording the conditions of the lender (loan structure, interest rates, balance etc.) but less good at maintaining information on their borrowers. Tenants are often good at descriptions of the borrower's lease structures, rents at the point of loan approval, but the quality of this type of data often deteriorates over time. If a key tenant is no longer paying the rent, five years into a loan, we need to know this fact for stress testing purposes. The key to maintaining risk data is to have a system that warns users when certain data fields require updating (e.g. upcoming rent review dates) – this is the 'carrot', and a system that generates exception reports by loan administrator the data that is now out of date: the 'stick'. Such systems significantly improve operational control but careful IT implementation and consistent management are required to deliver cleansed, validated and up-to-date risk data of the required quality.

The large volume of calculations presents its own challenges. To stress a portfolio through a large number of scenarios, year by year, unit by unit, building by building, and facility by facility, within a few hours is no longer impossible due to state of the art techniques. But it does require modelling

abilities beyond the use of Excel spreadsheets. Stress modelling at the portfolio level also requires highly cleansed and validated loan data for a wide range of loan types to be presented to the simulation model in a rigorous and controlled manner. Exercises using Excel tend to be difficult to recreate (for audit purposes) and incorporate high levels of model risk. Assumption management (for there are always assumptions to manage in any model) can become a problem unless they are managed in a specialist library.

#### **Case study**

A UK CRE lender carried out a stress test on a large, mixed CRE portfolio. Having loaded their current loan information and property data to a simulation stress-model, a week long exercise was carried out to update and validate the property data. Once the data was all current, the system was run first on a set of standard scenarios and then a single, stress scenario, was loaded and the system run again. The standard scenario set for capital values (see fig 6) was quite positive



Though the losses were high, the stress test indicated that 2010 would most likely be the worst year for losses.

Subsequently a number of single stress scenarios, developed by senior management were run through the model. The illustrated stress scenario reflected a fear that the UK economy might suffer a double-dip recession and suffer a fall in the pound leading to increased inflation and interest rates as well as falling residential and commercial property values. This particular scenario was surprisingly damaging for the portfolio that contained many smaller, floating rate loans.



Using a standard set of scenarios as well as individual stress-tests, helps managers to calibrate not only the loss under the stress-scenario, but the probability of the stress scenario occurring .It is a Good practice to generate a set of stress-scenarios and report the expected losses alongside the probability of the stress occurring.

In this scenario, a sudden rise in interest rates in 2011, affecting the floating rate loans of a portfolio of loans that were already at high LTVs, resulted in a 14.2% loss in 2012. The loss in this scenario was close to the worst possible loss described by the standard scenario set (fig7). This indicated that the stress scenario was associated with about a 1% chance of occurring. Once the potential damage had been identified, along with a sense of the likelihood of it occurring, the senior management were able to make a judgement about the amount and level of interest rate protection they should arrange for the portfolio.

...during a market downturn, many of the factors on which credit quality depends decline in unison: rents fall, tenant default rates rise, void periods lengthen and collateral values plummet. These correlations are critical to understanding and modelling CRE risk and thus performing CRE stress tests. Tenants are often good at descriptions of the borrower's lease structures, rents at the point of loan approval, but the quality of this type of data often deteriorates over time

#### Conclusions

Stress-testing is a valuable tool in the armoury of senior management and is increasingly being demanded by regulators. For CRE portfolios (and other asset backed lending such as shipping finance, aircraft leasing, and project finance portfolios) existing, top down stress-test models and regression type grading models are not usually adequate and may even be significantly misleading. This is because CRE loans are highly heterogeneous and combine high levels of interrelated market and loan specific risk as well as being highly sensitive to economic shocks. Possibly the only fast and accurate approach to stress-testing is to use macroeconomic cashflow simulation models. Although they present some technical and implementation challenges, these can be overcome and the approach lends itself to all aspects of stress testing, the results of which can be of significant strategic value to senior management.



Howard Radley

After receiving his doctorate from Oxford University, Howard joined Gemini Consulting becoming a member of the Global Leadership Team and Head of Financial Services for the UK. In 1998 he joined Oliver Wyman & Co as a Senior Partner and Managing Director with global responsibility for Transformation and Retail Banking. He founded Radley & Associates in 2001 with the express goal of putting the best risk analytics at the centre of business strategy. Howard has over 20 years experience of working with leading Banks on strategic issues and risk management.



Charles Cardozo

Following his MBA at Columbia Business School Charles joined the MAC Group where he led the analytics group and developed new approaches to techniques such as Activity Based Costing. Charles has worked with Professor Robert Kaplin at Harvard Business School and other leading academics to address complex issues in the Financial Services and Telecommunications Industries. In 2001 he joined Howard Radley to help establish a firm specialising in implementing complex risk and other analytical techniques for the financial services industry. Charles also has an MA in Engineering, Economics and Management from Oxford University. A top-level analysis of the new standards proposed by the Basel Committee on Banking Supervision (BCBS) in its consultative document titled 'International Framework for Liquidity Risk Measurement, Standards and Monitoring', published in December 2009.



## Liquidity Risk Regulation What is changing?

#### **Overview**

#### Why is there a change?

The market turmoil that began in mid-2007 re-emphasized the importance of liquidity to the functioning of financial markets and the banking sector. Right before the turmoil, asset markets were buoyant and funding was readily available at low cost. The reversal in market conditions illustrated how quickly liquidity can evaporate and that illiquidity can last for an extended period of time.

Recent events have also highlighted that even banks that appear otherwise solvent can suffer liquidity problems, for several reasons. Creditors may be uncertain about a bank's solvency position, leaving them unwilling to lend even though the bank may be fundamentally solvent. Even if they do not doubt the bank's solvency, they may doubt that it is liquid and so that if they make short-term deposits, they may not be repaid in a timely fashion. This may be compounded by the fact that a 'run' on a bank can be self-fulfilling: even if the 'run' starts on the basis of unfounded rumors that it might be insolvent or illiquid, the 'run' itself may lead to the feared outcome.

In the wake of these events, the study conducted by the BCBS yielded startling revelations that many banks had failed to take account of a number of basic principles of Liquidity Risk management when liquidity

was plentiful. Many of the most exposed banks did not have an adequate framework that satisfactorily accounted for the Liquidity Risks posed by individual products and business lines.

Nevertheless, the increased globalization of banks and the financial system, the increasingly concentrated number of banks that provide market volume and liquidity, the increased reliance on secured funding, and the lack of harmonization of global liquidity standards, suggested that a closer look was needed.

#### What is changing?

As a response to the above and G20's recommendations to enhance the tools, metrics and benchmarks for supervisors to measure and monitor the liquidity risks in banks and to develop a global framework for promoting stronger liquidity buffers at financial institutions, BCBS has proposed liquidity standards in its consultative document 'International framework for liquidity risk measurement, standards and monitoring' issued in December 2009. These standards are in line with capital adequacy standards and establish minimum levels of liquidity to be maintained by financial institutions.

The following standards are proposed to promote both short-term and long-term resilience

- Liquidity Coverage Ratio
- Net Stable Funding Ratio

The following minimum metrics are proposed for supervisors in order to introduce more consistency in liquidity supervision across the globe

- Contractual Maturity Mismatch
- Concentration of Funding
- Available Unencumbered Assets
- Market Related Monitoring Tools

#### What will you need to consider?

Banks need to improvise their current ALM and Stress Testing systems, to meet the computing and frequent reporting requirements of the proposed liquidity standards. Also, various banks would have to rethink their liquidity strategies, as the proposed standards and tools revisit the liquidity in banks in a more rigorous way. The coming sections deal with the considerations for a bank in further detail.

#### **Regulatory Standards**

#### What are the Regulatory Standards?

#### A) Liquidity Coverage Ratio

This standard is to ensure that a bank maintains an adequate level of unencumbered, high quality assets which can be easily converted into cash to meet any liquidity needs for a 30-day time period under scenarios of severe liquidity stress. The ratio is needed to be kept at or above 100%.

I CR	=	Stock of high quality liquid assets
2011		Net cash outflows over 30-day time period

The high quality liquid assets are those assets which, apart from being unencumbered and normally eligible at the Central Bank, display fundamental and market related characteristics of low credit and market risk, along with ease and certainty of valuations, low correlation with risky assets (e.g. securities issued by other banks, listed on recognized exchanges), have an active and sizable market, with the presence of committed market makers, low market concentration and attract market interest during stress. In short they are the assets, which can be easily and immediately converted into cash in periods of stress with little or no loss in value.

Typically, the following assets would qualify the definition of high quality liquid assets.

- Cash
- Balances and reserves with the Central Bank
- Marketable securities representing claims on entities risk-weighted at 0% in Basel II accord, with deep-repo market for such securities
- Debt issued in domestic currency by the home central bank or the government
- Corporate bonds and covered bonds with 20% or 40% haircuts on market value, subject to various supervisory discretion and portfolio diversification criteria.

Values of both, numerator and denominator are calculated under stress scenarios as specified by supervisors. The basic scenarios incorporating the combination of firm-specific and market-wide stress, as specified by BCBS, include:

- Three-notch downgrade in the institution's public credit rating
- Run-off of a proportion of retail deposits
- Loss of unsecured wholesale funding capacity and reduction in potential sources of secured funding on a term basis
- Loss of secured, short-term financing transactions for all but high

quality liquid assets,

- Increases in market volatilities that impact the quality of collateral or potential future exposure of derivatives positions and thus, the requirement of larger collateral haircuts or additional collateral,
- Unscheduled draws on all of the institution's committed, but
  unused credit and liquidity facilities
- The need for the institution to fund balance sheet growth arising from non-contractual obligations honoured in the interest of mitigating reputation risk.

The adjustment in the values of assets and liabilities for the computation of the above ratio is done using a 'Multiplication Factor', which varies from 100% (Cash, Qualifying Central Bank Receivables, Liabilities from maturing ABCP, SIVs, SPVs, etc.) to a minimum of 7.5 % (Stable retail deposits, Unsecured wholesale funding for small secure businesses.)

#### **B) Net Stable Funding Ratio**

This standard establishes the minimum amount of stable funding based on the liquidity characteristics of an institution's assets and activities over a one year period. It complements the liquidity coverage ratio and promotes stable longer-term funding, rather than the earlier reliance on short-term funding mismatches for managing liquidity. The ratio is needed to be maintained above 100%.

NSFR =	Available amount of stable funding	
	Required amount of stable funding	

Stable funding is defined as those types and amounts of equity and liability financing, which are expected to be reliable sources of funds over a one-year time period, under conditions of extended stress. The amount of such funding required is a function of the liquidity characteristics of various types of assets held, off balance-sheet contingent exposures incurred, and/or the activities pursued by the institution.

The computation of both available and required stable funding from the bank's balance-sheet uses a multiplier known as 'Availability Factor', which varies from 100 % to 0% for both, Available Stable Funding and Required Stable Funding. (Tier 1 % Tier 2 capital instruments – 100%, Cash and securities with exactly offsetting reverse repo – 0%)

#### What is changing?

Banks have been traditionally computing liquidity ratios and reporting the same to the respective supervisors. However, this method has various drawbacks. The definition of liquid assets was inconsistent, time periods were different, thus not only making it difficult to compare liquidity across different geographies, but also reducing the effectiveness of such ratios as a measure of liquidity during periods of stress.

The new guidelines would standardize ratio computation and make it more relevant. The Liquidity Coverage Ratio identifies the possible liabilities which the bank could be faced with during acute stress periods and whether the bank has enough assets that can still be liquid during such periods to cover those liabilities.

Net stable funding ratio is the new ratio that bank needs to compute. It is aimed to promote longer stable funding for bank assets.

#### What will you need to consider?

Banks are needed to perform stress testing on their assets and liabilities, based on the scenarios specified by the supervisor and estimate the cash outflows over 30-day stress period, for which they are required to maintain an equivalent amount of high-quality assets. Also, borrowing from the central bank, outside regular open market operations is not considered in this ratio, in order to avoid a reliance on the central bank as a source of funding. This might require banks to reconsider the sufficiency of their existing stock of liquid assets and can have short term impact on the business,

Net stable funding ratio computation is along similar lines as RWA computation under Basel-II, it consists of a factor-weighted approach, where factors represent stable funding requirements of the assets and stability of the liabilities. To maintain this standard, banks with high reliance on unsecured wholesale funding and non-maturity deposits may need to move to more stable sources like secure long term deposits.

#### **Monitoring Tools**

#### What are the Monitoring Tools?

The monitoring tools are designed to complement the standards discussed above. The tools would help the supervisor to analyze the liquidity situation and assess the potential deterioration in various liquidity positions of the bank and take appropriate corrective actions with time in hand.

Following metrics are proposed in the framework

#### A) Contractual Maturity Mismatch

The bank is expected to report flows (contractual cash and securities) of all on and off balance-sheet transactions in the proposed time bands, based on their residual contractual maturity. Cash flows from assets are required to be reported based on their latest possible maturity whereas liabilities are to be reported based on their earliest possible maturity.

This report should be free from any assumptions; like roll-overs, prepayments, new business, etc. The supervisor is expected to analyze this data and present the flows with its own assumptions and scenarios to understand any potential liquidity problems in the bank and also build a market wide view. This will help the supervisor take necessary bank level or market level actions.

#### **B**)Concentration of funding

This metric analyses the banks funding concentration by counterparty and by product. It proposes the ratio of funding obtained to total liabilities for each significant counterparty or product.



'Significant' in the context of above ratios would mean the counterparty/group or product where aggregate amount exceeds 1% of total liabilities of the bank.

The above ratios and information need to be reported separately for various specified time buckets. This metric intends to capture the liquidity risks related to wholesale funding and exposures in foreign exchanges during stress periods.

#### A) Available Unencumbered Assets

This metric involves providing the supervisor with information regarding the available unencumbered assets. These assets can be used as collateral for secured borrowing in secondary markets at reasonable costs and serve as additional source of liquidity during stress periods. The information may include at minimum the type, location, currency denomination, applicable haircut, expected monitised value when used as collateral and business lines which have access to the asset.

#### **B**)Market-related monitoring tools

These involve various metrics to be used by the supervisor to monitor financial health of the bank and the banking system. The metrics typically include,

- Market-wide information
- Information on the financial sector
- Bank-specific information

Through this information supervisors are expected to monitor movements in major markets and assess their impact on the liquidity of the bank, as well as the financial system.

#### What is changing?

Banks were so far required to submit a structural liquidity report to their supervisors, which used to incorporate various assumptions related to the new business, roll-overs of liabilities, prepayments on various assets, stability of non-maturity based liabilities. These assumptions are mostly based on the bank's internal analysis and can be very different from reality during stressed conditions. The new monitoring tools will include contractual maturity reports from banks without any of these assumptions, which would help supervisors to apply their assumptions and stress scenarios to assess the liquidity situation at bank and system levels.

Currently most banks are already reporting top 'n' sources of funding to their supervisors. The new metrics will involve reporting of funding obtained not only from all the significant counterparties but also from various products across specified time buckets.

Banks would also have to provide detailed information on instruments maintained by them for liquidity purposes. Apart from these, supervisors may request additional information from the banks, which they consider important to judge the liquidity positions of the bank.

#### What will you need to consider?

Most reports could be generated by the banks using their existing ALM (Asset Liability

Management) systems. However, the required frequency of these reports might be higher than status quo. Hence, some banks may have to improve current ALM systems and processes.

Banks with concentrated funding sources may be asked to diversify them; supervisors may also specify the minimum quantum of highly liquid unencumbered assets, to be maintained solely for liquidity purposes. It canpotentially challenge thetraditional asset liability management in banks and may require them to reconsider their strategies in the wake of regulatory changes.

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### **Consultative Paper on Article 122a of the Capital Requirements Directive** Jul 2010

The Committee of European Banking Supervisors (CEBS) published its consultation paper (CP40) on guidelines to the new Article 122a of the Capital Requirements Directive (CRD). Article 122a of the CRD provides new requirements to be fulfilled by credit institutions when acting in a particular capacity, such as originator, sponsor, or original lender and also when investing in securitizations. These include retention - on an on-going basis - of a material net economic interest of not less than 5% (so called "skin in the game"), due diligence and, disclosure.

For more details visit http://www.c-ebs.org/News--Communications/Latest-news/CEBS-today-publishes-its-consultation-paper-on-gui.aspx

#### **CEBS today publishes its revised consultation paper on the management of operational risk in marker-related activities** June 2010

CEBS published its revised consultation paper on its draft guidelines on the management of operational risk in market-related activities. Improvements and adjustments have been applied to the requirements regarding the detection and prevention of fraudulent behaviour (Principle 5), the audit trail requirements (Principle 9), the confirmation, settlement and reconciliation processes of the executed transactions (Principle 11), the monitoring of nominal values of the transactions (Principle 14) and, more in general, the interfaces between operational risk and market risk management.

For more details, visit http://www.c-ebs.org/News--Communications/Latest-news/CEBS-today-publishes-its-revised-consultation-pape.aspx

### **CEBS makes explicit rules for treatment of instruments eligible as capital** June 2010

The Committee of European Banking Supervisors (CEBS) today publishes its implementation guidelines on capital instruments. The revised Capital Requirements Directive (CRD) introduces explicit rules for the treatment of instruments eligible as capital and, in particular, requirements for their inclusion in institutions' original own funds without limit. The amendments will need to be transposed into Member States' national law by 31 October

2010 and will be applied from 31 December 2010. A set of 10 criteria has been developed for the assessment of capital instruments that may be included in original own funds without limit. These criteria form the basis of CEBS's guidelines.

For more details, visit http://www.c-ebs.org/Publications/Standards-Guidelines/CEBS-Guidelines-on-instruments-referred-to-in-Arti.aspx

#### **CEBS today publishes its draft guidelines on liquidity cost benefit allocation** March 2010

The Committee of European Banking Supervisors (CEBS) published its consultation paper on draft guidelines on liquidity cost benefit allocation. The main objective of CEBS's guidelines is to provide high-level guidance to the institutions on the main elements to be considered when creating or reviewing adequate fund allocation mechanisms including liquidity cost, benefits and risks. Thus, a liquidity cost concept that includes not only direct funding costs but also associated indirect costs such as liquidity contingency support is proposed. The guidelines focus on liquidity cost benefit allocation mechanisms as an important contribution to the institution's liquidity management framework and can as such help institutions to link their strategic objectives with liquidity resource allocation.

For more details visit, http://www.c-ebs.org/News--Communications/Latest-news/CEBS-today-publishes-its-draft-guidelines-on-liqui.aspx

#### LGD floors revisited

March 2010

Paragraph 266 of Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework - Comprehensive Version (June 2006) sets a floor of 10% for Loss Given Default (LGD) estimates for retail exposures secured by residential properties. It further provides that the Basel Committee will review the potential need for continuation of this floor. In light of the recent volatility of some mortgage portfolios during the financial crisis, the Committee agreed at its December 2009 meeting to maintain the 10% LGD floor for claims secured by residential mortgages.

#### **Risk Weight for Multilateral Investment Guarantee Agency (MIGA)** May 2010

The Basel Committee on Banking Supervision has agreed that supervisors may allow banks to apply a 0% risk weight to claims on the Multilateral Investment Guarantee Agency (MIGA) in accordance with paragraph 59 of the document International Convergence of Capital Measurement and Capital Standards, A revised Framework, June 2004 (Basel II Framework). MIGA will be included in the list of multilateral development banks as set out in footnote 24 to paragraph 59 of the Basel II Framework.

### Adjustments to the Basel II market risk framework announced by the Basel Committee June 2010

The Basel Committee on Banking Supervision has agreed on certain adjustments to the document Revisions to the Basel II market risk framework . The Committee has re-confirmed the capital charge for non-correlation trading securitisation positions, however the charges may be based on the larger of the capital charges for net long and net short positions during a transition period. For the correlation trading securitisation positions, the Committee agreed to set this floor at 8% of the standardised measurement method. As a result of these revisions, market risk capital requirements will increase by an estimated average of three to four times for large internationally active banks.

For more details visit, http://www.bis.org/press/p100618.htm

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### **Dubai Office Opening**

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Aptivaa proudly announces the launch of its new office in Dubai, its fifth globally. In the five years since inception, Aptivaa has developed a clientele spanning several geographies. With the launch of its office in Dubai, we position ourselves to serve the clients better, especially those in the GCC region, where Aptivaa has a strong presence with more than 35 leading banks as its clients. The new client-centric delivery model seeks to offer the clients enhanced services with a localised and dedicated team from Aptivaa based out of Dubai to cater to the clients' specific needs. The office is located at Emirates Tower, Sheikh Zayed Road.

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