Risk Reward
riskupdate
The quarterly independent risk review for banks and financial institutions worldwide
JAN 2011

10 KEY PREDICTIONS FOR 2011

Also in this issue

- DO WE HAVE ANYTHING NEW SINCE 2008 TO OFFER PROTECTION FROM A NEW CRISIS?
- BANK INTERNAL AUDIT...THIRD LINE OF DEFENCE OR FIRST LINE OF ATTACK?
- BEYOND THE CALCULATION KERNEL: SOLVENCY II'S PROPORTIONATE ROGUES!
- REASSESSING AND UPDATING CREDIT ANALYSIS AND MODELS
- OPERATIONAL RISK – HERE ARE THE NEW RULES, SAME AS THE OLD RULES
- HELICOPTERS DROPPING MONEY OR THE NEED FOR A NEW WORLD ORDER

Dear Subscriber

We are still living in a financial world of great complexity, with the future remaining unclear and the solutions that the world is developing to these problems often creating new problems. If there is a theme for this issue of the Risk Update it is that we live in difficult times – but they could easily get worse. None of us could have been other than concerned at the changing events that we are seeing daily on our television screens. This enhanced level of uncertainty has been approached by our authors in a number of ways to show you both what is going on and what we believe is likely to be the consequence going forward. We start with our predictions for 2011. Here I have attempted to highlight some of the key issues for the key markets of the world, explaining the uncertainty but also identifying the key trends that are most likely. Marc Eichinger in his satirical article reviewing changes to regulation proposed or developed since 2008 also comes to the conclusion that much of what is being proposed would make very little difference were negative events to occur – which they almost certainly will.

Looking at insurance capital adequacy regulation from a different perspective is John Webb, our own Director of Solvency II Consultancy and Training. In his article he considers the proportionate nature of ROGUES or Risk management, ORSA (own risk solvency assessment), Governance, the Use test, Economic capital and Supervisory review.

Model risk remains a real problem for many banks and this will be a subject we will return to in future editions of the Risk Update. In this issue Tracy E Williams, a former managing director at JPMorganChase considers reassessing and updating both credit analysis and models highlighting the pitfalls. We have seen many firms that have failed to comprehend the impact of the changing risk circumstances. Clearly the need to make sure that credit models remain fit for purpose and have good predictive ability is of great importance and Tracy tells us why.

Peter Hughes, Director of Internal Audit and Risk, asks what is happening to bank internal audit? Is it the third line of defence or first line of attack? There can be no doubt that the changing obligations emanating from the Bank for International Settlements will result in many firms seeking to enhance the quality and depth of their internal audit functions.

Two further articles look at changing regulation and whether it adds value. The first on Operational Risk considers the changing requirements recently published and concludes that perhaps the change is limited. The final article entitled Helicopters Dropping Money looks at the impact of quantitative easing and whether this could ever really work.

We are living in difficult yet interesting times. The level of uncertainty is certainly not reducing and it remains important for all of us to look, listen and learn. Risk Reward will support you throughout the year providing information to address key issues here, on our web site **www.riskrewardlimited.com** and also in out Linkedin Group the Risk Reward Global Risk Forum Please be sure to join in with your comments and thoughts, too.

With best wishes

Dennis Cox BSc, FSI, FCA
Chief Executive Officer

INDEX

PAGE

PLEASE CIRCULATE TO:

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- ☐ Head of Operations
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TO THE EDITOR

Do you have risk issues in your organisation or region you would like to share? Email your thoughts to the Editor at DWC@riskrewardlimited.com

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INVESTMENT IN UNCERTAINTY TIMES:

10 KEY PREDICTIONS FOR 2011

Dennis Cox is the Chief Executive of Risk Reward Limited and chairs the Chartered Institute of Securities and Investment Risk Forum based in London.

Global financial markets are going through a period of change and consolidation following the tumultuous events of the past few years. As expected post- November 2010 we have reached a period of relative calm, although this might be seen with hindsight as being little more than another period of false optimism. That would mean that things were not actually getting better, rather they were getting worse more slowly than before. The financial landscape remains bumpy with major potholes lurking around the corner.

Previous Global Risk Updates have referred to some of the regulatory changes that are now in process, with Basel III and the emergence of OTC derivative central counterparties being at the heart of the response. Due to the timetables envisaged for their implementation you should not expect these regulations to have a major impact on markets this year, but in succeeding periods there will be direct consequences, many of which are unintended. In the near term the uncertainty which results from developing new solutions to the challenges posed by regulation will have an impact, causing levels of banking activity to remain subdued throughout the year. This of course is unlikely to be good news for the economy or unemployment prospects. In this article we will review the prospects for 2011 from both a UK and global viewpoint. Recognise that Risk Reward Limited does not trade financial products or services in any way, so our views are expressed on the basis of the research conducted and are not influenced by any on-going trading relationships.

I The Sovereign Debt Crisis

We are now in the position that the debts of the Southern Euro zone countries are at a higher rate than the so-called developing world. Global debt is not reducing, although in some cases the rate of increase is reducing. The largest borrowers will still borrow this year, and next year and… This is combined with what might also be referred to as a quasi sovereign crisis caused by the build up of difficult to service debt in municipal and semi-state entities globally. The inability of global organisations to effectively deal with the burgeoning debt crisis still is at the heart of the concerns that overhang the market and this appears unlikely to change significantly this year. It is unrealistic to solve problems in Europe in isolation – a world solution is needed.

There remain significant uncertainties in Q2/2011 and Q4/2011 both caused by the volume of parties that are seeking to tap international capital markets at the same time. They will not all succeed. Looking to Western Europe for the next default is unlikely to be the case and we would suggest that problems from much further afield are more likely to be at the heart of the issue.

We continue to expect the Euro to stumble on, although its credit rating will be impacted. By the end of the year we anticipate a clamour for the creation of a currency additional to the Euro which would be backed by the reserves of the strongest Euro member to be used in international trade only.

II Inflation

During the course of 2011 inflation will clearly become of global significance. There are two main types of inflation we consider – that which you experience and those balanced figures produced by governments. Since food price inflation is a major concern for 2011 with many staple prices

INVESTMENT IN UNCERTAINTY TIMES: 10 KEY PREDICTIONS FOR 2011

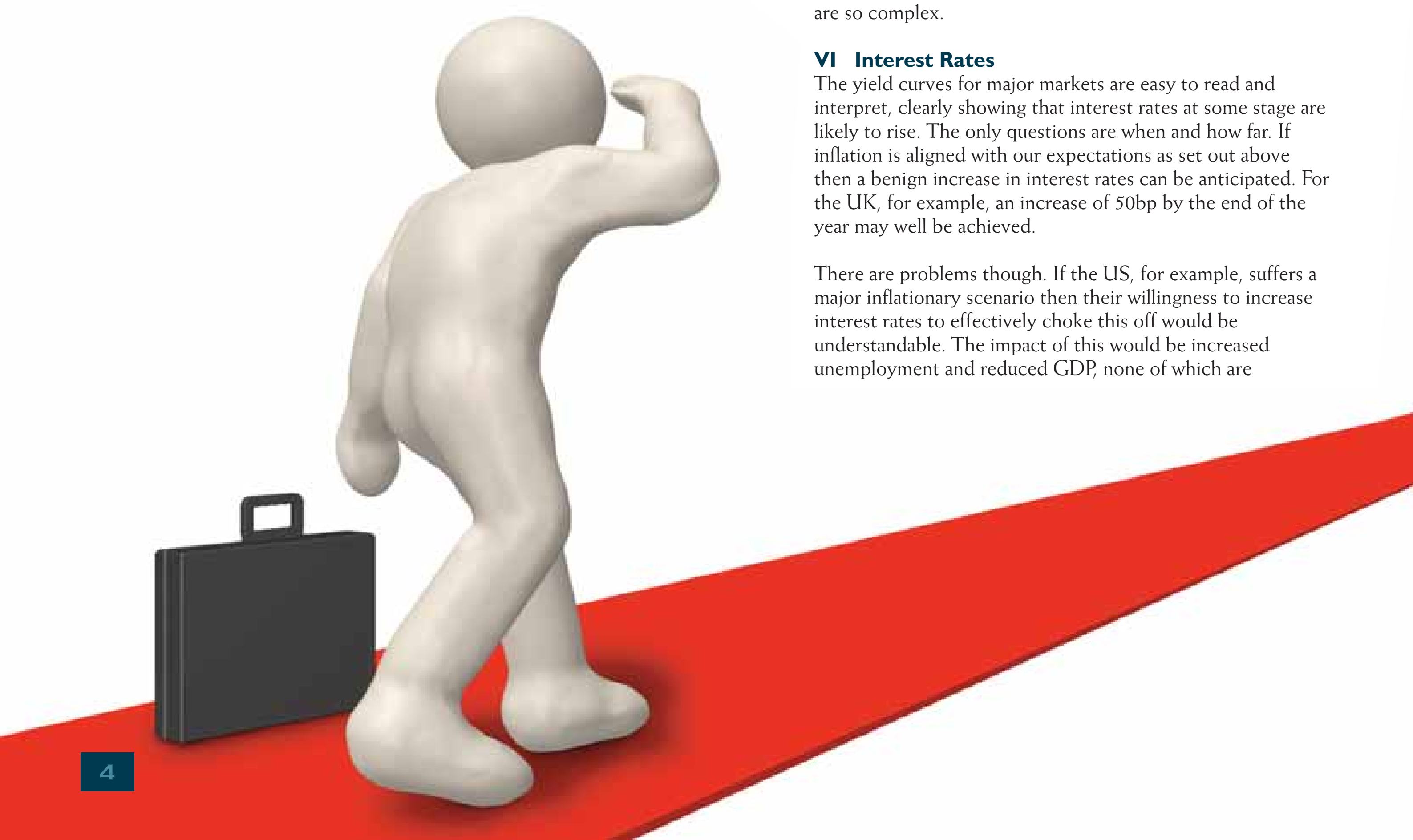
significantly increasing, perceived inflation is actually greater than reported inflation. You can already see a number of developing world countries starting to take action to attempt to curb inflation enthusiasm. There will be more of this during the year as significant increases in commodity prices ensue.

We remain concerned that some developing world countries may find it increasingly difficult to obtain the food required to adequately feed their population. For the UK the impact of the taxation changes announced has been reduced by the extremely competitive trading environment. Consequently the effect of the changes will not be felt immediately in all areas, but when combined with the commodity increase, then further rises in inflation must be anticipated to perhaps 4.5%

III GDP

There has been a reduction in GDP in many countries as a result of the crisis, and accordingly growth will be calculated from a lower base than would otherwise have been the case. It is hard to be optimistic regarding many of the global markets. Financial uncertainty exacerbates a shortage of activity in the banking sector, making it more difficult for companies to obtain the capital they require for growth.

For most countries a modest growth in GDP from the reduced baseline position can be anticipated with the UK probably achieving around 2% due to companies learning how to survive in difficult financial markets. It will not feel like growth and it will not create significant optimism. This could all be blown off course were a major sovereign default to occur, but our expectation is that there will be more muddling though in 2011.



IV The Banking System

To be a bank you need a licence and this is generally required to enable a firm to take deposits. Many companies lend money but are not banks. Others of course do fund transmission or wealth management. The changes set out in new regulations are likely to put banks at a competitive disadvantage to their often unregulated competitors. Remember there is nothing stopping you lending money to anyone – it does not make you a bank. A fool maybe, but not a bank.

In the course of 2011 you will see a number of new entrants into the financial markets who will be seeking to extract competitive advantage from the poorly drafted revised regulations. Most of these will not be banks in the traditional sense, but instead pockets of assets available to be leveraged and take these opportunities. There will be a slowly developing understanding of the impact of regulations and rules which are developed in isolation being individually appropriate yet in combination dangerous. The global market needs a financial services sector that is robust and profitable to become the engine for growth.

V Political Issues

The austerity packages that are now being introduced will remain unpopular and there will be sporadic outpourings of ineffective social unrest. In some extreme cases there will be political upheaval and many governments around the world appear to be moving into a period of increased uncertainty. Clearly in this article we will not specify where change is likely, but both the submerging countries of the West and the emerging countries of the developing world are all at risk. The solution to these crises is always wealth creation – making the populace feel part of the greater success of their nation. This is of course difficult to achieve when the markets themselves are so complex.

VI Interest Rates

The yield curves for major markets are easy to read and interpret, clearly showing that interest rates at some stage are likely to rise. The only questions are when and how far. If inflation is aligned with our expectations as set out above then a benign increase in interest rates can be anticipated. For the UK, for example, an increase of 50bp by the end of the year may well be achieved.

There are problems though. If the US, for example, suffers a major inflationary scenario then their willingness to increase interest rates to effectively choke this off would be understandable. The impact of this would be increased unemployment and reduced GDP, none of which are

INVESTMENT IN UNCERTAINTY TIMES: 10 KEY PREDICTIONS FOR 2011

acceptable. Accordingly a US increase of no more than 50 basis points would also appear appropriate.

VII Bonds

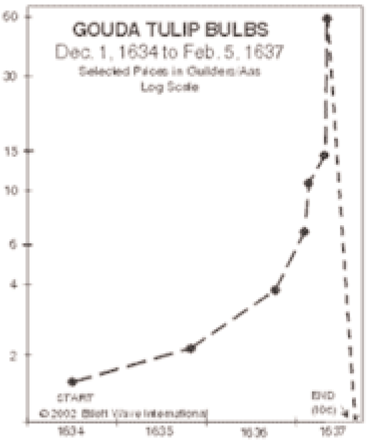
Why does anyone now buy a fixed rate bond other than a zero coupon bond? The yield curve clearly shows that interest rates are likely to rise, which will directly reduce the value of bonds. The sell- off that we anticipated last year has now begun to bite and will accelerate. This is unlikely to be a good year for anyone involved in long fixed- income strategies.

Of course zero coupon bonds with their repayment floor remain acceptable, but we do anticipate increased issuance of floating rate paper – or variants of the same. However the major reduction in value is likely to be in 2012 and 2013, not 2011.

VIII Gold

The gold price is at an all time high. Gold has some uses, but not many and in times of stress it is perceived as a store of wealth. The graph of the increase in the gold price is as follows:

From 2004 the gold market has moved to replicate the standard bubble chart.



The 17th century Dutch bulb crisis illustrates the same growth pattern and then the fall from grace. In the case of gold there is a resistance band around 250-450, so a fall to nil is not likely under any realistic scenario. However when some form of market stability returns the gold price will fall – but from which peak? We do expect a fall to occur this year to perhaps 1,000; but from a peak higher than that currently exists.

IX Equity Markets

Then there are the equity markets. There is some buoyancy at present. There are four main choices for investment – equities, bonds, commodities and money market. Since the money market is producing negative real returns (yields are below inflation), bonds are declining and commodities appear well priced, there are few alternatives. Accordingly much of the growth in the equity markets is driven by money having nowhere else to go. Companies are also finding ways to remain profitable in times of stress through flexing their business models.

> "The brave and most flexible will probably show the greatest success."

This would suggest a growth in equity markets. Further we anticipate that much of the regulation implemented during 1982-2009 which encouraged the acquisition of fixed- income securities will reverse also creating equity market growth. Already many of the developing market securities appear to be well priced, but on balance we anticipate global growth of perhaps 20% over 2010.

X Looking Head

There are many things that result from this analysis. From an individual investor point of view it is incumbent on each of us to review our existing investment strategy and identify changes to meet the demands of the changed paradigm. In terms of financial service firms they will need to see the opportunities and challenges that this changing environment presents and balance their resources to enable full advantage to be taken. The brave and most flexible will probably show the greatest success.

DWC@riskrewardlimited.com

DO WE HAVE ANYTHING NEW SINCE 2008 TO OFFER PROTECTION FROM A NEW CRISIS?

With more than 18 years in the global banking sector Marc Eichinger, CEO, API Capital, specialises in offering advice and guidance to institutional investors, high private wealth, lawyers and NGOs seeking to invest in high risk areas within emerging markets. Marc is keen to answer questions that people don't often dare to ask, and is used to looking at problems in a forthright manner. In this article he gives us a satirical update on the financial reforms.

When you have to answer this kind of question you must keep up a good sense of humour. Now that we are in the New Year it is so depressing to hear about rising unemployment and poverty, and don't you just wonder why all these people just don't go back to work? Honestly where is the problem?

Major US banks and securities firms paid a record USD 145 billion for 2009 bonuses. The question is, what can you do with your bonus?

New National Legislation

Let's buy some diamonds from Zimbabwe because in June 2010 the Kimberley process said that the country complies with its minimum requirements and should be allowed to export its diamonds.

Zimbabwe's military seized control of diamond fields in the Marange district in late 2008. More than 200 people were killed and the local population was forced to work but Mugabe bears no responsibilities. Its country could supply 25% of the world's diamonds with such a low production cost that it would be almost insane not to support the mining industry. After all we must participate in humanitarian activities and show solidarity with African countries.

This year one notorious City trader gave us a brilliant example of combining ethics and fair trade. His name is Ward, Tony Ward, not exactly an SAS but he would enjoy the same motto "who dares win". Just call him King Cocoa or Choc Fingers if you meet him.

In July he bought 240,000 tons of cocoa beans, the largest trade in the last 14 years. It represents GBP658M or five Titanics full of beans in terms of volume. At least if there is a civil war after the Ivory Coast election he will be able to supply the chocolate manufacturers. Nothing is forbidden in doing this; he did it previously in 1996 and 2002. You can gamble with 7% of the world cocoa production and as long as you can get the cash to do it there is no hurdle.

DO WE HAVE ANYTHING NEW SINCE 2008 TO OFFER PROTECTION FROM A NEW CRISIS?

Facing higher taxes and potential regulation large hedge funds started their migration from London to Geneva which welcomed them. Calvin's city remains very conservative as far as tax and banking secrets are concerned. Looking for a real improvement we found out that in June Switzerland adopted the Council of Europe Convention so it is now forbidden to engage the charms of a 16 years old girl, now she must be at least 18, quite a change!

If Madoff had worked in Switzerland instead of the US he would be free today. The Code of Criminal procedure is not a matter of concern, no risk to stay in jail for the next 150 years.

Bernie was not a terrorist and in Switzerland even if you raise funds with the intent to finance an act of criminal violence to intimidate a population or compel a government or international organization (article 260 quinquies of the Code) your maximum risk is five years of imprisonment.

Missing your regulatory compliance would not be a big deal. "If the author has only accommodated the possibility that those funds are used to finance a terrorist act, it is not punishable under this provision".

Financial Crime Regulation

After the 2008 crisis we could have faced some anti-corruption rules but the Bribery Act 2010 will not be implemented until at least April 2011. There is no objective reason to hurry up, as an example the Financial Action Task Force estimates that "only" 60% of the investments made in Africa are coming from money laundering activities. So we can relax on the remaining 40%.
(Source: Money laundering and Terrorist Financing Threat Assessment presentation July 2010, GAFI in Paris.)

Commodities Regulation

Since 2008 we saw some disasters and the most important thing if you invest in an oil company is to make sure that they don't do like BP in the US or Shell in Nigeria. Offshore exploration is highly regulated so you need to check the company expertise.

Market wizards are keen to keep their secrets so I will not give you the name but a small junior company listed on the Toronto Venture Market managed to get six exploration blocks offshore Namibia for a total of 32 000km2. That is definitely the kind of company you can trust for offshore drillings. If something goes wrong they cannot hide it. There is evidently no risk of corruption at all, as Namibia ranks 56 on the Transparency international corruption index 2009, nearly as good as Jacob Zuma's country which ranks 54. Anyway, the Prevention of Organized Crime Act, which criminalizes money laundering, was passed in Parliament in December 2004, but has not been put into effect by the Namibian Ministry of Justice.

> "London still attracts the best performers especially within the oil and gas or mining sector"

In 2010 London still attracts the best performers especially within the oil and gas or mining sector, and that remains the best protection you can dream off as an investor.

Take the example of Tullow which paid cash USD1.45 billion to Heritage for a licence in Uganda that was just cancelled by the Government of Uganda after the deal. Tullow Oil CEO Aidan Heavey has been named as this year's UCD Business Alumni of the Year.

First Quantum also did well investing huge amounts in the Congo before being completely frustrated in favour of ENRC. Both companies are listed in London, that did not protect First Quantum shareholders but they can expect an arbitrage to take place in the next ten years.

Banking Regulation

As far as banking regulation is concerned, Basel 3 remains the most important challenge. The international banking system will be safer but nothing will happen until 2019. Until then you just have to pray. In the US where God saved us from the communists, Obama's administration has been defeated and the Financial Reform could be in trouble but so far the bill has been signed into law.

This Law constitutes an attempt to prevent a future financial crisis. It establishes a Consumer Financial Protection Bureau within the Federal Reserve and there should be no more sub prime crisis. Banks and other financial institution must do due diligence on the income and credit histories of mortgage applicants. The Financial Services Oversight Council should also scan the market and detect potential dangers that could destabilize the system.

In theory federal regulators will have the power to seize and dismantle troubled financial firms before their bankruptcy make a new mess. 2010 saw

DO WE HAVE ANYTHING NEW SINCE 2008 TO OFFER PROTECTION FROM A NEW CRISIS?

125 bank closures, with six in a single weekend in September.

Proprietary trading is almost forbidden and private equity investment is restricted to 3% of the bank capital.

Capital Markets Regulation

But the most protective rule was released by the US SEC on November 3rd through the whistleblower provisions. Under the proposed rules which should be implemented in 2011, whistleblowers are eligible for awards when they provide original information to the SEC voluntarily. Only individuals are eligible but they can make a fortune. The award will range between 10% and 30% of the monetary sanctions whenever the penalties exceed USD 1 M. No wonder why the FBI is getting busy these days, but the future will tell us whether this "revolutionary" program will remain in place.

"According to the Center for Responsive Politics in Washington, during the second quarter of 2010, the finance, insurance and real estate sector donated $28 million to congressional candidates, party committees and political action committees, with $16 million going to Republicans and $12 million going to Democrats. That's a major shift from the first quarter of 2009 when the sector pumped $15 million to Democrats and $10 million to Republicans. The finance, insurance and real estate industry also allocated $252 million into their own lobbying efforts in 2010." (Source: Market Watch October 28th 2010)

Finally Belgian bonds are rated AA+ at Standard & Poor's and Fitch Ratings and Aa1 at Moody's Investors Service, the second highest grade at each company. Irish debt is rated AA- at S&P and Fitch and Aa2 at Moody's. Portugal's is A- at S&P, AA- at Fitch and A1 at Moody's.

The ratings are stable when compared to 2008 but during the crisis Belgium had a government which is not the case since April 22 2010. The country will inevitably split in two and they keep on issuing public debt. Ironically Belgium took over the Presidency of the European Union Council as from July 1st, without legitimacy at home; Belgium's politicians are managing the new Euro zone crisis. Still within this context France and Germany pushed for the reopening of the already irrelevant Lisbon treaty and Herman Van Rompuy bought a suit of armour. Euro in Greek "uro" means urine and the Euro zone is now so much at risk that we may remember this detail very soon.

A Glimmer of Hope?

A tiny glimmer of hope comes from the other side of the Atlantic with Jules Kroll innovative Kroll rating agency. Kroll wishes to restore trust in credit ratings by establishing new standards for assessing risk and by offering accurate, clear and transparent ratings. In other words the rating agency is not paid anymore by the issuers but the asset managers. Does it not make sense?

Marc Eichinger welcomes feedback from readers and can be reached at the Editor@riskrewardlimited.com.

BANK INTERNAL AUDIT...THIRD LINE OF DEFENCE OR FIRST LINE OF ATTACK?

Peter Hughes FCA is Director of Internal Audit and Risk at Risk Reward Ltd and a Visiting Research Fellow at the York Management School, University of York. He was formerly a bank Chief Auditor and Head of Risk Management. In this article Peter examines the three lines of defence concept that is widely accepted as risk governance best practice and assesses its implications for internal audit.

The 'three lines of defence' concept has become the widely accepted standard for best practice risk management governance. Banks' internal capital adequacy assessment processes (ICAAPs) invariably feature it as the means of achieving a strong risk culture in their particular organisations.

What are these three lines of defence? Here is not an untypical representation developed specifically for banks:

First Line of Defence
Top Management and Front Office

- Promote a strong risk culture and sustainable risk-return thinking
- Portfolio optimization on the macro and micro level
- Promote a strong culture of adhering to limits and managing risk exposure
- Ongoing monitoring of positions and inherent risks

Second Line of Defence
Risk Management Function

- Combination of watchdog and trusted advisor; police limits with 'teeth'
- Understand how the business makes money and actively challenge initiatives if appropriate
- Top talent with business experience engaging with front office as equals
- Risk management separate from risk control
- Overarching 'risk oversight unit' across all risk types
- Intraday availability for data and positions; comprehensive report at T+1 / 6 a.m.

Third Line of Defence
Audit

- Good understanding of capital markets, the business type, and risk management
- Top talent within audit to challenge the front office and risk management function
- Independent oversight function with enforcement ability (e.g., immediate fulfilment of findings)
- Ability to link business and risk with process and IT know-how

Source: Booz & Co

This three lines of defence concept is about to be set in stone. In a consultative document recently issued by the Basel Committee on Banking Supervision entitled 'Sound Practices for the Management and Supervision of Operational Risk' reference is made to reliance on three lines of defence as common industry practice for sound operational risk governance. These are:

I. Business line management
II. An independent corporate operational risk management function
III. An independent review and challenge

Whereas the paper does not explicitly assign the third level of defence to internal audit this would be the expected configuration in the majority of cases.

The use of the word 'defence' with such prominence when applied to risk governance implies that there is exposure to threats that is both ongoing and unpredictable. In other words, the nature of systemic and related risks exposes banks to unexpected losses that can occur at any time and to any degree. Evidence that this is the case can be found in the financial crisis. Many banks of all sizes had accumulated unidentified and unquantified risks on an unprecedented scale which ultimately triggered losses causing the failure, bailout and nationalisation of banks around the globe that in turn wreaked havoc on national and global economies.

In examining the causes of the financial crisis, in written testimony prepared for the US House of Representatives Financial Services Committee in October 2009, Professor Andrew Lo commented; "Before we can hope to reduce the risks of financial crises, we must be able to define and measure those risks

BANK INTERNAL AUDIT...THIRD LINE OF DEFENCE OR FIRST LINE OF ATTACK?

explicitly. Therefore, a pre-requisite for effective financial regulatory reform is to develop dedicated infrastructure for defining, measuring, monitoring, and investigating systemic risk on a standardized, ongoing, and regular basis."

If an industry and the organisations that comprise it have not yet been able to neutralise threats by resolving the underlying causes then there is little alternative but to construct lines of defence to cushion and contain the actual and potential effects. The increased minimum capital requirements mandated in Basel III in the absence of any risk management based theory or rationale is just one example of effects being addressed rather than their causes. In the case of risk governance, as indicated by Professor Lo above, the neutralisation of systemic and related risks requires the development of 'dedicated infrastructure for defining, measuring, monitoring, and investigating (them) on a standardized, ongoing, and regular basis'; a capability that is lacking across the financial services industry.

In such periods of ongoing and unresolved threat it is not unusual for functions that possess relevant expertise to assume roles and responsibilities beyond their normal attributes in order to ensure as robust a defence as possible. But such exceptional arrangements only need prevail for as long as the related threats prevail. If threats to risk governance are resolved through the design and implementation of an effective risk identification and measurement framework then the role of risk management, in all probability, will devolve to the maintenance and operation of the framework. Enterprise-wide risk management then becomes the natural response to such a common risk measurement framework provided it has credibility. In the absence of such a framework risk managers are more likely to act as 'watchdogs', 'trusted advisors', 'police with teeth' and 'challengers of initiatives' whereas such attributes are more likely to be associated with audit.

In these unusual times functional boundaries between risk management and internal audit can easily become confused with one function gaining profile to the detriment of the other. Consequently, Chief Auditors, Audit Committees and Chief Executive Officers must remain sensitive to this eventuality and ensure that the role of audit does not lose profile or suffer impairment. After all, whatever the functional boundaries are in practice the accountabilities audit has vis-à-vis the board of directors and various external stakeholders is non-negotiable.

There are real grounds for concern here given that the label 'third line of defence' applied to audit implies subordination to risk management's 'second line of defence'. Indeed, such labels may be inappropriate if the view is taken that the lines of defence concept is transient and only meaningful for as long as there are ongoing and unresolved threats. After all, the three lines of defence concept is not used in conjunction with the relationship between internal audit and the more established and mature functions such as finance management.

Chief Auditors, Audit Committees and Chief Executive Officers should ensure that the roles of internal audit and risk management are examined, evaluated and unequivocally reaffirmed. In this regard a healthier view of internal audit in relation to ineffective risk governance, and one that is more likely to ensure the audit function's effectiveness and optimisation, is 'first line of attack' rather than 'third line of defence'. In this scenario, the primary role of the relatively new discipline of risk management is to complete the creation of the framework that enables the proactive definition, measurement, monitoring and investigation of risks. The primary role of internal audit is to evaluate and challenge emerging solutions and, through its ongoing audit activities, identify and inform senior management and the board of shortfalls between the actual incidence of risk and the framework applied in its identification, measurement and management.

It goes without saying that if internal audit is to be positioned as the first line of attack on inadequate risk governance then it must have the necessary 'top talent' within its ranks and operate state-of-the-art risk-based approaches to auditing.

PJH@riskrewardlimited.com

BEYOND THE CALCULATION KERNEL: SOLVENCY II'S PROPORTIONATE ROGUES!

John Webb, Director of Solvency II at Risk Reward Limited, believes that the pivotal requirements of comprehensive risk management, clearly defined governance and the management use test (for both running the business and to make decisions strategic decisions), are mutually inclusive. The failure of one would erode and destroy the other two. This article is one of a series relating to those facing Solvency II compliance.

In my last article (Q2 - 2010) *"Auditing Solvency For Insurance Companies: Some Preliminary Considerations"* I concentrated on modelling capital assessments and governance systems, highlighting that particular difficulties arise with regard to risk aggregation, diversification and fat tails of normal distribution curves (where there is a greater frequency of extreme events than predicted by Gaussian modelling techniques). I will now address what I consider to be the primary areas of Solvency II to concentrate on. This article draws upon a presentation (and subsequent discussion) I made to the UK Compliance Institute on 20th October in London.

The Solvency II directive aims to reduce the likelihood of corporate failure, significant customer loss and disruption of the insurance market. In answer to the question "what are the main things to get right in complying with this vast body of regulation & guidance?". My opinion is that we should remember the "proportionate rogues" and the need to report on them properly. Why is this? Because, in my view, proportionality is promised by regulators and the main rogues to which this applies are:-

R **Risk management**
O **Own risk and solvency assessment**
G **Governance**
U **Use test**
E **Economic capital**
S **Supervisory review**

Let us take these one at a time and in a proper order, so as to give us a clear direction when wading through the detail of the various CEIOPS Level 2 and 3 consultation and FSA papers. The guidance therein is still emerging and will change more or less continuously ahead of implementation two years away and inevitably, afterwards too.

First, may I refresh our memories? Pillar 1 sets out the quantitative requirements for determining capital adequacy and covers the role of the internal model, with its calculation kernel and risk management elements. Pillar 2 is the qualitative approach; corporate governance, enterprise risk management, internal control, supervisory review and capital add-on implications, all play a part. Pillar 3 covers the reporting requirements, public disclosure and market discipline.

Governance

The clear and logical allocation of responsibilities, provision for effective challenge and monitoring at all levels, as well as sign-off at key stages are vital.

Documentation to prove this has been complied with, will be an absolute necessity; it is also important to document what has not been done and why. I will look again at adequacy of documentation under risk management, later.

Risk management is not negotiable, nor will internal audit be in the future. Article 47 of the Level 1 framework text requires that "insurance and reinsurance undertakings shall provide for an effective internal audit function." Its remit is to cover, inter alia:–

BEYOND THE CALCULATION KERNEL: SOLVENCY II'S PROPORTIONATE ROGUES!

- The internal control system,
- Other elements of the system of governance,
- Data auditing, which should not be performed by the actuarial function,

Internal audit is required, at least annually to produce a written report on its findings. In the FSA's three lines of defense model, whereby Risk Management is in the second line, Internal Audit is the third line as an independent check and assurer.

Economic capital

The good news, for UK insurers used to the present regime, came from FSA's Discussion Paper 08/4 is that "the use of an economic/realistic balance sheet and internally-modelled individual capital assessments based on a defined level of confidence, share some similarities with the Solvency II framework….but *"firms should note that while the essential concepts and objectives driving the Individual Capital Adequacy Standards (ICAS) regime are similar to those underlying Solvency II, many detailed requirements will differ from those with which they are familiar."*

The FSA has thus suggested that, to aid their transition from the ICAS regime, firms should be undertaking gap analyses to identify any shortfalls in expected compliance with the emerging Solvency II requirements.

Under Pillar 1, Solvency II capital is called 'own funds'. The critical Solvency Capital Requirement (SCR) can be calculated by the standard SCR formula or, with regulatory approval, by an internal model (to achieve a 1/200 VAR level over one year). Of course, and as the consultation papers explain, to calculate their Solvency Capital Requirement, firms can use a partial internal model rather than a full internal model. Neither is a standalone process; the internal modelling activity needs to be integrated into the firm's risk management activities. I will return to this under the own risk and solvency assessment section.

The Minimum Capital Requirement (MCR) is calculated in accordance with a standard formula; then adjusted, if necessary, to fall within a range of 25-45% of the SCR (to achieve a 1/10 VAR level over one year). The FSA talks about a ladder of intervention, so if an insurer's available resources fall below the SCR, supervisors are required to take action with the aim of restoring the insurer's finances back into the level of the SCR as soon as possible. If, despite supervisory intervention, the available resources fall below the MCR, ultimate supervisory action will be triggered, e.g. the license will be withdrawn and the insurer's liabilities will be transferred to another insurer and/or the insurer will be closed to new business and its in-force business will be liquidated. Of course, it is the job of risk managers to ensure remedial action by management has been taken well before this point and before the higher Solvency Capital Requirement is in danger of being breached.

Insurers must hold Tier 1 and 2 basic own funds to support their Minimum Capital Requirement and Tier 1 must be at least 80% of the MCR; equity capital being the most desired and the most able, to absorb sustained losses.

One of the lessons from Basel II was that *"initially, some banks may have believed that their systems and processes were already ready to cope with Basel II. It was only when the full demands of the project began to emerge during 2004 that they realised how much they had to do. In particular, many underestimated the difficulties of sourcing the huge amount of data needed from within the company, along with the scale of the information, validation and documentation demanded by supervisors as 'proof' of compliance."** The specific experience of banks, as far as capital modelling was concerned, was that they needed to carry out several dry runs followed by extensive re-calibration of their models before go live. These problems should be anticipated by the insurance sector and addressed by project teams in plenty of time. Loss data, in particular, needs to be consistently collected over a long period.

It is important to remember that insurance is different to banking

It is important to remember that insurance is different to banking; insurers tend to hold far more long-duration risk than banks through life and pensions policies and long tail non-life business. Also, the differences between Basel II and Solvency II and the distinctive nature of insurance business mean that the challenges faced by insurers may actually be more complex.

Obviously the integrity of the internal model is paramount and again it must be seen to be so. Draft CEIOPS Level 3 guidance suggests evidencing that the model documentation is clear on: -

1. Senior management understanding of the internal model;
2. How the internal model is used in decision-making processes;
3. Techniques used in the calculation of parameters and model distributions and how risks are aggregated;

BEYOND THE CALCULATION KERNEL: SOLVENCY II'S PROPORTIONATE ROGUES!

4. How profit and loss attribution is a tool for validating the internal model, managing the business and improving the internal model;
5. Validation policy;
6. Documentation;
7. Use of any external model and data.

Senior management understanding of the internal model is likely to require their ability to explain such things as the structure of the model and its fit with their business model and risk-management framework, methodology and the dynamics of the model. Also, they must be able to explain its scope and purpose and the risks covered or not covered, together with any limitations of the model, diversification effects and dependencies. An onerous responsibility, I believe and one driven by the use test and risk management accountabilities.

The expected impact of Solvency II on insurers, in a nut shell, is that business losers will be those with embedded guarantees, volatility and complex investments. Whereas winners will have agility, diversification and crucially, strong risk management. Solvency II reporting will allow investors to differentiate between those insurers that have volatile businesses and those that generate high-quality, sustainable profits.**

Risk management

Enterprise wide risk management is not a new concept. the embedding of risk assessments, linked to board approved risk appetite and linking specific internal controls to each of the risk objective, as well as tracking operational and business losses incurred/or near misses, is all common place and there is much already written on this subject. What is important for those awaiting Internal Model Approval Process feedback, or with IMAP intentions, is to demonstrate sound model governance, data management and documentation of all that is important to the internal model (including data).

Sound documentation is a necessity; it must: -

- Be thorough, sufficiently detailed and sufficiently complete to satisfy the criteria that an independent knowledgeable third party could form a sound judgment on the reliability of the internal model and on the wider risk model / ORSA process,
- Describe the technology and software tools and how data flows through the internal model,
- Be reviewed annually, at least.

Data is used in the valuation of technical provisions and in the broader capital requirements. It is expected that its architecture and policies are to be reviewed and approved at least annually. As data management is so important, it may help for me to point out, albeit in bullet point form, some of the key generic elements of a Data Quality Policy, which are as follows: -

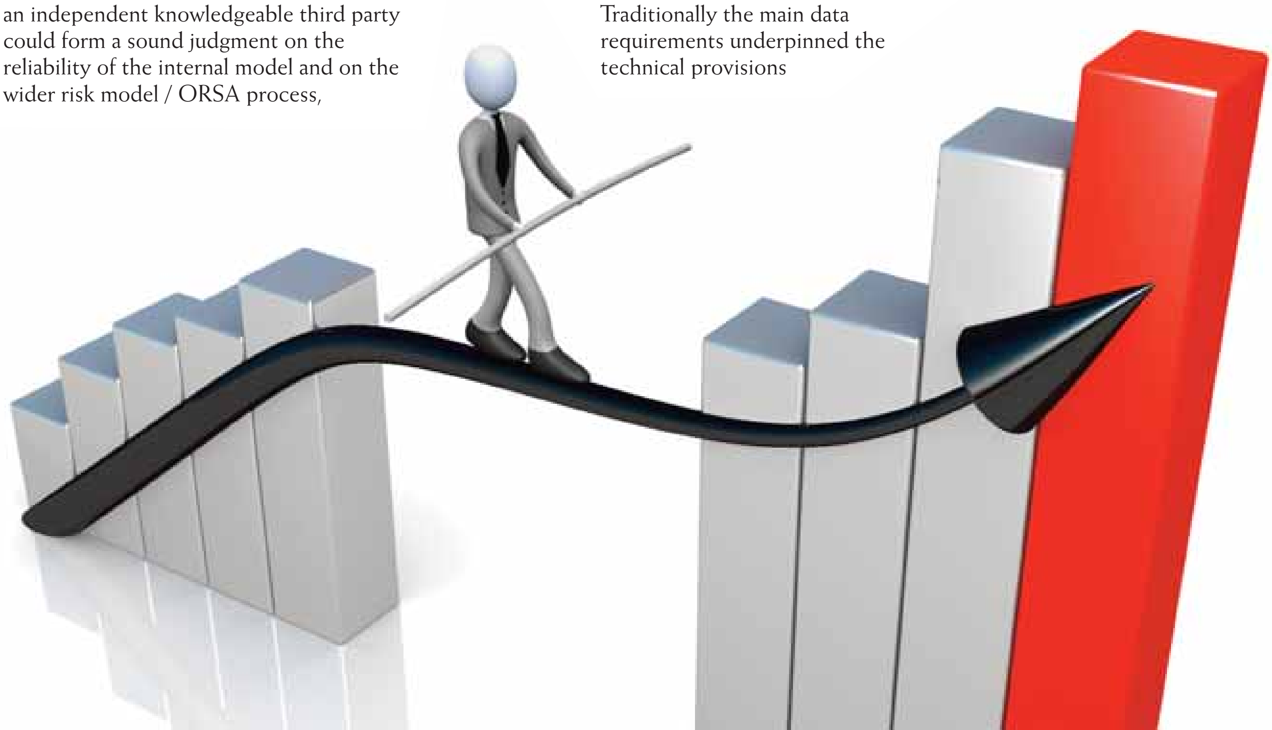
... winners will have agility, diversification and crucially, strong risk management

1. Data quality assessments and needs
2. Data quality controls
3. Data quality management
4. Data quality monitoring
5. Data quality auditing
6. Data flow diagrammes
7. Data directories and inventories
8. Data ownership within the undertaking and within 3rd party entities
9. Data Transmission Policy
10. Spreadsheet guidance, inventory, control and data quality
11. Inventory of user developed applications

This topic needs another article or a whole book in its own right but I will pick out data flow diagrammes and end user computing (EUC) concerns as, in my experience, they need highlighting.

Insurers going along the internal model route do so in different ways. Some initially restrict the internal model to the calculation kernel and actuarial processes for underwriting liabilities, whereas others are broader, covering the policyholder databases, assets and business operations. Proportionality suggests there is no right answer, though there are some wrong ones.

Traditionally the main data requirements underpinned the technical provisions



BEYOND THE CALCULATION KERNEL: SOLVENCY II'S PROPORTIONATE ROGUES!

supported by a data directory and log of data defects. We now expect to see detailed end to end data flows documented. These need quality control points to be shown at various stages and explained in the data dictionary; this dictionary being an all embracing directory, should contain the characteristics, usage and relationships between the data. Risk Management and Internal Audit should concentrate on the flow of data from source system to the point of valuation/aggregation and reporting, regardless of the model scope. Albeit that any scope limitations may themselves be a matter of concern.

Most insurers will have developed end user computing guidelines for spreadsheets and databases, however not all of this guidance was prepared with Solvency II in mind and therefore may not be fit for purpose. There has always been a risk that errors, circular logic, corruption of macros and formulae (whether by accident or design) or data feed problems will occur. Much of the research points to an unacceptably high level of such errors, in practice and so this is inevitably an area for management attention and strong quality assurance practice. The use of spreadsheets in preparing ICAS and IFRS reports should be considered very carefully as there is a significant risk that the organisation has not eradicated all the aforementioned deficiencies or does not have a full set of documentation, detailed data flow diagrammes or strong validation of the integrity of such applications.

Sometimes observed is a very heavy actuarial emphasis on liability data, because accountants are expected to provide data on assets. Because of outsourcing, asset data flows inwards from external parties whereas the liability modelling is carried out in-house. ***

Own Risk and Solvency Assessment (ORSA)

CEIOPS define the own risk and solvency assessment as:

- **"the entirety of the processes and procedures employed to identify, assess, monitor, manage and report the short and long term risks a (re)insurance undertaking faces or may face and to determine the own funds necessary to ensure that the undertaking's overall solvency needs are met at all times".**

It is very much a forward looking process and document. Pillar 2 is at the heart of Solvency II, and ensures the internal model is fed by the material facets of all relevant risks and their potential impacts, what is not mandated or included by the strict capital requirements (SCR / MCR) but is relevant to the (re)insurer, has to be picked up here. The Association of British Insurers gives a good example -volatility in equities is not an element of the standard formula. If however, it important to your company, cover it here in the ORSA.

It is important to realise that the Pillar 1 model feeds the ORSA not the other way round. The resulting enterprise wide risk management benefits can be reaped, as long as we: -

1. Identify and manage all key emerging risks and opportunities,
2. Synchronise corporate strategy with defined risk appetite,
3. Correctly target the allocation of capital,
4. Involve the principal employees and other players, right across the group.

Remembering that article 37 provides for a capital add-on in situations where the system of governance within a firm does not meet the standards required.

ORSA is pivotal to management demonstrating its control over the risk management process. Underpinning the internal model and ORSA is a clear and pressing need for strong documentation, audit trails and comprehensive evidence. As internal auditors are trained to ask, virtually from day one *"don't tell me, show me."*

I would also stress the importance of profit and loss attribution and back testing to ensuring the integrity of the output. If everything else has been done well and is clear, it should be possible to efficiently describe changes in patterns of profitability by reference to the detailed calculations; variances between plans and assumptions made and the actual model and accounting outcomes can be explained.

BEYOND THE CALCULATION KERNEL: SOLVENCY II'S PROPORTIONATE ROGUES!

The Use Test

Article 120, governing the Use Test requires that: -

- The internal model plays an important role in their system of governance, risk-management and the economic and solvency capital assessment and allocation processes.

- The administrative, management or supervisory body (BoD) shall be responsible for the design and operations of the internal model and that it reflects the risk profile of the (re)insurance undertakings.

Furthermore, each member of senior management needs an overall understanding of the internal model as well as a detailed understanding in the areas where they use the internal model. It is a strict requirement to show that the model and its output are extensively used in making decisions (including strategic decisions) and for running the business. That this is so is necessary but not sufficient; it is important to document it and be able to evidence it thoroughly.

It is evident that the insurance industry understands the importance of the use test; anecdotally, any firm treating the internal model activity as pure actuarial is going to struggle. It used to be normal for firms to have their Actuary lead a conversation on internal models. The world has moved on and the vast majority of firms now show the involvement of:

- Business leads
- the Chief Risk Officer (CRO)
- Finance
- Internal Audit.

Supervisory review

The Solvency and Financial Condition Report disclosure policy should have *"appropriate governance procedures and practices in place so that the information publicly disclosed is complete, consistent and accurate."* The Solvency and Financial Condition Report has to be consistent with the Report to Supervisors sent to the Financial Services Authority.

The Report to Supervisors is a stand-alone document, which provides a description of the risk exposure, concentration, mitigation and sensitivity for: -

- Underwriting risk
- Market risk
- Credit risk
- Liquidity risk
- Operational risk
- Other risks
- Any other disclosures

It should also include any material future anticipated risks. Also important will be financial instruments, derivatives and off balance sheet transactions or similar arrangements; all the more so given their risks and use prior to the financial crisis that started in 2007.

Within the list above, I would emphasise operational risk as being the one least likely to be tracked and have its events data thoroughly logged and analysed. If you want a handle on whether operational risk is properly managed I suggest asking questions about fraud risk, which I see as being the acid test for operational risk. If your company gets operational risk management wrong you can probably correct things quickly by reacting very fast to adverse events – but if your company gets fraud risk management wrong it may not survive long enough to recover! Either one large, carefully planned hit can render a company insolvent or a carefully concealed 'death by a thousand cuts' type pattern of theft can have the same effect, once it accumulates to a level that can no longer be hidden.

The more useful and well analysed the information reported, the easier it will be for the Financial Services Authority and other regulators to supervise insurers efficiently. If we get this wrong there may be a heavy price to pay and the same goes in the form of pressure building up from analysts and investors, all of which gets reflected in the share price and cost of capital.

In Conclusion

There is a lot to do and the way forward is not yet clear. Just to cheer everybody up I sought out the published views of others about what is to be done. I found that the Society of Lloyd's said *"Solvency II is often thought of as best left to the experts. And there's no doubt that if you delve too deeply Solvency II can be mindboggling."* ****

I have frequently posed the question at seminars and presentations, *"is this all something to take an interest in but with the luxury of over two years quiet contemplation ahead of implementation in November 2012 /Q1 2013?"* I have yet to get the answer *"yes."* Look at those ROGUES to see they are handled proportionately and properly reported!

If the actuaries and 'quants' have done a thorough job with Pillar 1 quantitative requirements and your group has sound enterprise wide risk management involvement at Pillar 2, please consider whether your greatest project risk is quality of data and completeness of documentation. In my opinion, data risk is, in practice, the greatest threat to successful implementation and Solvency II compliance thereafter, because if data is missing or significantly deficient, all other forms of control including model integrity will be ineffective.

John Webb welcomes feedback and comments. Email him at JGW@riskrewardlimited.com

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REASSESSING AND UPDATING CREDIT ANALYSIS AND MODELS

After a financial crisis, there is always room for improvement in corporate credit-risk analysis. Tracy E. Williams, former managing director at JPMorgan, makes recommendations for model updates and shows how analysis can be forward-looking and anticipate unforeseen risks. The second article of three parts examines financial ratios and profit margins and assesses how companies withstand business stress with strong balance sheets and sufficient liquidity.

Financial Ratios: Flexibility, Creativity

Financial ratios are usually the core of financial analysis—or at least the heart of analysis based on past information. Conventional ratios that help explain profitability, liquidity, leverage and other efficiencies work and can show why a company's balance sheet is susceptible to risk or why a company's earnings are sagging.

Sometimes, however, the favorite, conventional ratios overlook new risks and issues. They may not be granular enough to show balance-sheet problems or issues that plague profitability. Risk managers and analysts, hence, should try new metrics or ratios that might tell a better story.

They could be metrics that assess whether a company is deploying capital properly, matching assets and liabilities to avert liquidity problems, or managing costs efficiently to revenue growth. A new metric or ratio could show cash flow depleting more rapidly than what earnings suggest or the company not having sufficient reserves to meet upcoming principal payments.

> Risk managers and analysts, hence, should try new metrics or ratios that might tell a better story

In the months before Lehman Brothers' collapse, some analysts zoomed in on a metric, "net cash capital" (a variation of working capital) and showed how its steady decline would doom the firm eventually. Lehman declared it had ample amounts capital, liquid assets and cash reserves. It survived the summer, although creditors grew wary. It didn't survive September, 2008. The declining amounts of "net cash capital" showed that it couldn't pledge more liquid collateral to keep creditors comfortable after they requested more.

If risk analysts suspect a company faces a specific risk, then they a new ratio or metric could demonstrate if the company is prepared. The metric might show a trend in cost management; it might highlight the growing importance of a far-away segment. Or it might show balance-sheet leverage doesn't reflect true leverage (especially if contingent liabilities are assumed). It might prove that a company is insolvent even if it reports large amounts of cash reserves.

Sustainable Profit Margins

When analysts assess profitability, they focus on revenues, cost trends, cost structures (variable and fixed) and profit margins. Analysts should focus, too, on "sustainability." Based on cost structures, trends, and efficiencies, what profit margins can the company sustain in the long term—through business cycles, downturns, and unexpected events? How can that sustainable, stable margin be measured? And is that margin sufficient to withstand declines, generate cash, meet debt payments and provide a return for investors?

Determining a sustainable margin is an art, not necessarily a derivation from past ratios. It requires examining the company's track record and assessing the company's ability to maintain efficiencies, while confronting new variables and risks. It means analyzing closely the major contributors to costs and the company's management of them in the past.

It also means understanding how management would encounter the unforeseen arising from any of the following: (a) the sudden closing of a business line or operation, (b) rampant fluctuation in currency rates, (c) surging costs related to a reputation issue or damage control after an isolated event, (d) unplanned compliance or legal costs, or (e) that new acquisition or investment that spiraled out of control. Such factors could undermine profit margins overnight. How would the company manage through them?

Balance Sheet: Can It Withstand Stress?

As many analysts or companies will attest, stable cash flow is critical; however, sturdy, sound balance sheets get companies through a crisis. The events of the past few years (especially for financial institutions) proved that when revenues decline and cash flow ebbs, strong balance sheets help companies ward off market risks, anxious creditors, tardy receivables, or mismatches in cash inflow and outflow.

After they identify an array of risks, financial analysts must determine whether the balance sheet can stand up to risks of all kinds. Never underestimate the importance of having a strong balance sheet. Sometimes in the past, risk managers might have tolerated fragile balance sheets (high leverage, dwindling cash reserves, minimal amounts of working capital, or low tangible net worth), if cash flow from operations continued at a steady pace.

The analyst should understand:
1. What factors and qualities contribute to strong balance sheets,
2. How to measure those qualities, and
3. How to assess whether they help a company survive a crisis or sudden downturn without much pain.

Those qualities include (a) asset content, quality and proportions, (b) liquidity (including cash reserves), (c) reasonable and sensible capital structure and (d) capital as a cushion when the going gets rough.

Asset quality depends on the company's industry. A financial institution's balance sheet will differ significantly from that of an Internet start-up or that of large-scale manufacturer or retailer. But certain characteristics that apply to most companies. To measure it, the analyst will need to examine some of the following:
1. Asset concentration and diversity,
2. Efficiencies in deploying and using cash,
3. Effectiveness in managing financial assets,
4. Optimal inventory levels
5. Default histories of accounts receivable
6. "Asset conversion" cycles—the cycle from raw material to sold product
7. Depreciation, and replacement costs of fixed assets
8. Foreign-exchange translations, and
9. Intangibles (including whether they are amortized or not)

Liquidity: Beyond Just Cash Reserves

Liquidity, or lack thereof, in a sudden downturn can make or break companies—even those that have streaks of strong performance. A company might survive a decline or confront a barrage of unfortunate events, as long as reported earnings are positive. But if it mismanages liquidity, then credit and insolvency concerns will drown out most any earnings statement.

Risk managers sometimes assess liquidity in superficial ways, by looking cursorily at "current ratios" (current assets/current liabilities) on an outdated statement or by accepting the company's disclosure that it has sufficient cash reserves. Crisis events remind analysts they must scrutinize the company's liquidity profiles in every way possible. A company may claim that 10 percent of its asset total is cash. It may not tell you or may not realize itself that the cash may not be readily accessible. In problem situations, cash may exist, but may be trapped in unconsolidated subsidiaries, may not easily be repatriated to parent companies, may be restricted because of new requirements imposed by regulators or because of crushing demands from short-term creditors.

There is no one ratio that tells a comprehensive liquidity story. Analysts, therefore, should assess liquidity as a whole—sizing up cash reserves, funding sources, liquidity profiles, and management's strategies, its contingencies for emergencies or lenders disappearing. The conventional "current ratio" is a start, but the analyst should seek a broader assessment by attempting to:
1. Understand all short-term cash sources: the balance sheet, committed or reliable lenders, asset sales, etc.
2. Evaluate trends in cash reserves maintained
3. Assess cash, if available, for immediate obligations, business needs, and emergencies
4. Measure cash available for unexpected obligations
5. Allow for cash set aside for necessary investments or technology upgrades
6. Understand the importance, purpose and use of working capital, and
7. Determine management's preparation to endure a liquidity crisis.

To evaluate whether a company is ready for unforeseen risks is to measure how liquidity is impaired in some of the following scenarios:
1. Business declines
2. Falling asset values (including or marketable securities)
3. Short-term lenders declining to lend or refinance
4. Short-term lenders demanding full payout, even if they have no right
5. Short-term lenders requesting more collateral
6. Unexpected payouts from legal action
7. Inability to sell assets the company thought it could

Working Capital: Coming to Grips with It

Working capital (current assets minus current liabilities) can be tricky. It's part of the liquidity story. But its purpose may differ according to the industry. Depending on the company, sometimes it shouldn't be too high (signaling aging inventory and receivables); it shouldn't be too low (suggesting there may be insufficient resources to meet short-term obligations).

Analysts, who might have relied on one or two ratios to evaluate working capital, should pay more attention to whether it is:
1. Managed at optimal or efficiency levels: not too high, not too low
2. Managed adequately relative to growth and expansion
3. Managed properly relative to asset-conversion cycles
4. Managed sufficiently relative to cash needs, regulatory requirements, or financial covenants and
5. Funded in a way that permits it to increase to higher levels when necessary.

Optimal levels of working capital depend on numerous factors: business growth, contraction, and stability. If it's too high, the company may have unnecessary funding requirements; if it's too low, the company has insufficient cash reserves or may not be in compliance of regulators or creditors that have cash requirements.

Financial institutions can never have enough working capital, since they rely on much higher amounts of short-term debt and require excess amounts of liquid assets to ensure they meet the demands of creditors and requirements of regulators.

Tracy E. Williams welcomes feedback and comments.
Email him at Editor@riskrewardlimited.com

OPERATIONAL RISK – HERE ARE THE NEW RULES, SAME AS THE OLD RULES

In December 2010 the Bank for International Settlements (BIS) turned its attention back to operational risk. As you know operational risk was clearly at the heart of the financial crisis so changes had to be made. OK so operational risk is really nothing whatsoever to do with the crisis – but nonetheless the BIS have chosen now when there is so much other change going on, to make changes. Two papers have been produced, one setting out principles for sound practice and the other providing guidance for banks using the Advanced Measurement Approach (AMA). In this article key elements are set out, although for more information you will still need to make reference to the original papers, the links for which appear on the Risk Reward Global Risk Forum, a closed group on Linkedin.

The Sound Practice for the Management and Supervision of Operational Risk

This was issued by the BIS in December 2010 for comment by 25 February 2011. Remember that the original sound practices paper was issued in 2003, so the question is whether there is anything really new in this paper.

This consultative document incorporates the evolution of sound practice and details eleven principles of sound operational risk management covering:

(1) governance,
(2) risk management environment and
(3) the role of disclosure.

By publishing an updated paper, the Committee enhances the 2003 sound practices framework with specific and updated principles and guidelines for the management of operational risk that are consistent with sound industry practice. It is claimed that these enhanced guidelines have been developed through the ongoing exchange of ideas between supervisors and industry since 2003 and becomes the document that is referenced in paragraph 651 of Basel II.

So here are the principles:

Fundamental principle of operational risk management

Principle 1: The board of directors should take the lead in establishing the "tone at the top" which promotes a strong risk management culture. The board of directors and senior management7 should establish a corporate culture that is guided by strong risk managementand that supports and provides appropriate standards and incentives for professional and responsible behaviour. In this regard, it is the responsibility of the board of directors8 to ensure that a strong operational risk management culture exists throughout the whole business.

There are requirement for the board to establish a code of conduct or an ethics policy and clear expectations that bank staff should understand their roles and responsibilities for risk, as well as their authority to act. In common with the current tone of regulation, compensation policies should be aligned to the bank's statement of risk appetite and tolerance, long-term strategic direction, financial goals and overall safety and soundness. They should also appropriately balance risk and reward.

There is a welcome focus again on training with an appropriate level of operational risk training being required at all levels throughout the organisation.

Principle 2: Banks should develop, implement and maintain a Framework that is fully integrated into the bank's overall risk management processes. The Framework for operational risk management chosen by an individual bank will depend on a range of factors, including its nature, size, complexity and risk profile.

The policies defining the Framework should clearly:

(a) identify the governance structures used to manage operational risk, including reporting lines and accountabilities;
(b) describe the risk assessment tools and how they are used;
(c) describe the bank's accepted

OPERATIONAL RISK – HERE ARE THE NEW RULES, SAME AS THE OLD RULES

operational risk profile, permissible thresholds or tolerances for inherent and residual risk, and approved risk mitigation strategies and instruments;

(d) describe the bank's approach to establishing and monitoring thresholds or tolerances for inherent and residual risk exposure;

(e) establish risk reporting and Management Information System (MIS)

(f) provide for a common taxonomy of operational risk terms to ensure consistency of risk identification, exposure rating and risk management objectives;

(g) provide for appropriate independent review and assessment of operational risk; and

(h) require the policies to be revised whenever a material change in the operational risk profile of the bank occurs.

Of these it is perhaps that in balance they are indicating that additional quantification is required, with a common language (or taxonomy) being at the heart of the issue.

Governance9
The Board of Directors

Principle 3: The board of directors should establish, approve and periodically review the Framework. The board of directors should oversee senior management to ensure that the policies, processes and systems are implemented effectively at all decision levels.

There is an expectation that there should be dynamic oversight by the board of directors, which suggests a level of reporting to the board which frequently does not currently exist. Recognise that this is in the sound practices paper and therefore applies to all banks regardless of size, so for many smaller firms this will be quite a challenge.

There is also focus on division of duties with the control environment being required to provide appropriate independence/separation of duties between operational risk control functions, business lines and support functions.

Principle 4: The board of directors should approve and review a risk appetite and tolerance statement10 for operational risk that articulates the nature, types, and levels of operational risk that the bank is willing to assume.

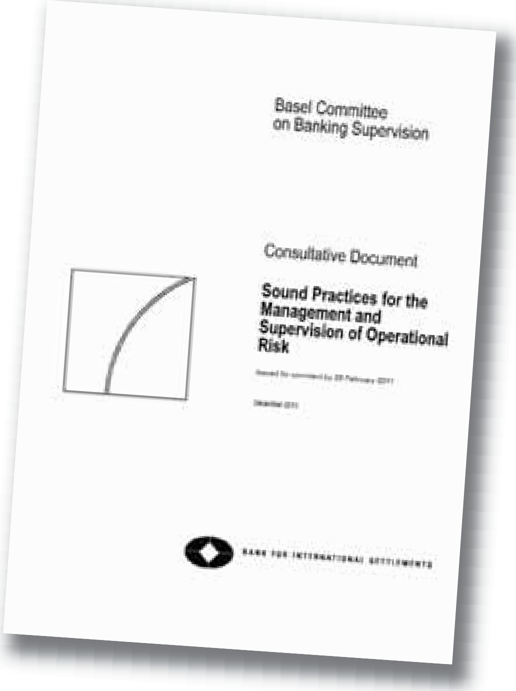
The objective here is for the risk appetite to be consistent between operational risk types to enable consistent reporting. In our view this requires a single metric to be translated into different metrics depending on the nature of the risk. Many firms are still challenged by risk appetite and have failed to grasp its significance in developing a risk management framework, so this additional clarification in the paper is welcomed.

Senior Management

Principle 5: Senior management should develop for approval by the board of directors a clear, effective and robust governance structure with well defined, transparent and consistent lines of responsibility. Senior management is responsible for consistently implementing and maintaining throughout the organisation policies, processes and systems for managing operational risk in all of the bank's material products, services and activities, consistent with the risk appetite and tolerance.

The paper is clearly trying to raise the profile of operational risk management to make it consistent with all of the other areas of risk management. There is additional focus on the governance structure, making it clear that combined enterprise risk management is required. The rules proposed state thatrnance structure should be commensurate with the nature, size, complexity and risk profile of its activities. When designing the operational risk governance structure, a bank should take the following into consideration:

(a) Committee structure – Sound industry practice for larger and more complex organisations with a central group function and separate business units is to utilise a board-created enterprise level risk committee for overseeing all risks, to which a management level operational risk committee reports. Depending on the nature, size and complexity of the bank, the enterprise level risk committee may receive input from operational risk committees by country,


Basel Committee
on Banking Supervision

Consultative Document

Sound Practices for the Management and Supervision of Operational Risk

BANK FOR INTERNATIONAL SETTLEMENTS

business or functional area. Smaller and less complex organisations may utilise a flatter organisational structure that oversees operational risk directly within the board's risk management committee;

(b) Committee composition – Sound industry practice is for operational risk committees (or the risk committee in smaller banks) to include a combination of members with expertise in business activities, financial or risk management expertise and independent non-executive board members; and

(c) Committee operation – Committee meetings should be held at appropriate frequencies with adequate time and resources to permit productive discussion and decision-making. Records of committee operations should be adequate to permit review and evaluation of committee effectiveness.

So it will no longer be appropriate for boards to consider the operational risk data as the last thing before lunch, perhaps noting the contents. Proper discussion will need to take place and to be minuted.

Risk Management Environment
Identification and Assessment

Principle 6: Senior management should ensure the identification and assessment of the operational risk inherent in all material products, activities, processes and systems to ensure the inherent risks and incentives are well understood.

The guidance sets out the variety

OPERATIONAL RISK – HERE ARE THE NEW RULES, SAME AS THE OLD RULES

of tools available from internal and external loss data to scenario modelling. The focus on the scenario modelling with recognition that the science is not precise is important and welcomed. A robust scenario modelling framework is required. The remaining requirement of indicators, risk control self assessment, mapping, modelling, measurement and identification are all much as before.

Risk Management

Principle 7: Senior management should ensure that there is an approval process for all new products, activities, processes and systems that fully assesses operational risk.

Here there is a focus on inherent risk within new products, an area that perhaps has not been thoroughly addressed to date. Identifying mitigating controls, considering residual risk and seeking out unexpected outcomes are all part of the requirements here.

Monitoring and Reporting

Principle 8: Senior management should implement a process to regularly monitor operational risk profiles and material exposures to losses. Appropriate reporting mechanisms should be in place at the board, senior management, and business line levels that support proactive management of operational risk.

The reporting requirements are in both normal and stressed environments. Too many firms have undertaken stress testing for credit, market and liquidity risk – but only scenario modelling for operational risk. This is therefore clearly a change for many firms to understand how their systems and controls would operate were, for example, business volumes to double.

Control and Mitigation

Principle 9: Banks should have a strong control environment that utilises: policies, processes and systems; appropriate internal controls; and appropriate risk mitigation and/or transfer strategies.

Examples of policy elements and controls are included in the paper, including a suggestion of a two week holiday policy. The implementation of risk tolerances to manage risk are recommended, indicating that a cascade of risk appetite (or tolerance) to the level of the control is required.

There is a concern at systems robustness under periods of stress and also fragmented systems caused by merger and acquisition activity. Clearly this will represent a challenge to many firms who are dealing with the changing circumstances of the financial market by aligning or combining their operations. The outsourcing proposals within the paper again highlight that the outsourced operation is part of the bank's control structure, although there is little new here.

Business Resiliency and Continuity

Principle 10: Banks should have business resiliency and continuity plans in place to ensure an ability to operate on an ongoing basis and limit losses in the event of severe business disruption.

This is really just a restatement of the existing rules.

Role of Disclosure

Principle 11: A bank's public disclosures should allow market participants to assess its approach to operational risk management.

Excited by any of this? I suspect not since it really is little more than a restatement of the rules we have been familiar with since 2003. There are a few minor changes, but nothing of real importance and I doubt that many firms will respond to the BIS on the paper.

So a general welcome to the proposed new sound practices, but the BIS as previously mentioned also produced:

Supervisory Guidelines for the Advanced Measurement Approaches

Again issued in December 2010 for comment by 25 February 2011, there are some interesting matters hidden away in what is to some extent an interesting if incompmlete 59 page paper.

Gross Loss Amount

The statement says a bank may either use gross loss amount or gross loss amount after recoveries except insurance. as input for its AMA models. The bank should demonstrate to its relevant supervisors that its choice is appropriate and should not use "net loss" (gross loss net of insurance) as an input for AMA models. Well that is what para 24 states. I expect this to be revised – it is better for the gross amount alone to be used and the mitigation to be recorded since the mitigation may not exist next time. Remember that the whole point about the loss database is to estimate next year's losses, not just to do the accounting – so mitigation should surely be separate.

In defining what gross loss actually is, the following is proposed:

Gross loss should include costs incurred as a consequence of the event that should include internal and external expenses with a direct link to the operational risk event and costs of repair or replacement, to restore the position that was prevailing before the operational risk event (eg legal expenses directly related to the event and fees paid to advisors, attorneys or suppliers).

My concern is what do they mean by internal costs? If a member of staff is moved from one function to deal with the matter, does their salary become a loss? I have always taken the view that the loss needed to be incurred (ie in addition to normal costs) rather than being added into the database. The wording here requires some clarification to make sure that it is not misunderstood.

They have also bought in a proposal that if a loss is incurred but quickly recovered as might be the case with erroneous payments, then this could be treated as a near miss. Again I believe this misses the point – just because there was a prompt recovery this time does not mean it will occur next time. I would have preferred that this requirement was not allowed.

Event Date

The statement has again tried to confuse itself, requiring a variety of dates to be recorded but then stating that the occurrence date should be used for the capital calculation. That must be the case since the scaling will be based upon the original date, not the date that the event was identified.

OPERATIONAL RISK – HERE ARE THE NEW RULES, SAME AS THE OLD RULES

Successful Implementation
The following key issues have been identified that are crucial to the successful implementation of an AMA:

(a) Internal Loss Data (ILD)
The Committee expects that the inputs to the AMA model are based on data that represent or reflect the bank's business risk profile and risk management practices. It expects ILD to be used in the ORMS to assist in the estimation of loss frequencies, to inform the severity distribution(s) to the extent possible and to serve as an input into scenario analysis.

(b) External Data (ED)
The Committee expects ED to be used in the estimation of loss severity as such data contain valuable information to inform the tail of the loss distribution(s). ED is also an essential input into scenario analysis.

(c) Scenario Analysis
A robust scenario analysis framework is an important part of the Operational Risk Management Framework (ORMF) in order to produce reliable scenario outputs which form part of the input into the AMA model. The Committee acknowledges that the scenario process is subjective and that the output from a scenario process necessarily contains significant uncertainties. This uncertainty, together with the uncertainty from the other elements, should be reflected in the output of the model producing a range for the capital estimate. The Committee recognises that quantifying the uncertainty arising from scenario biases poses significant challenge and is an area requiring further research.

(d) Business Environment and Internal Control Factors (BEICFS)
Incorporating BEICFs directly into the capital model poses challenges given the subjectivity and structure of BEICF tools. The Committee has observed that BEICFs are widely used as an indirect input into the quantification framework and as an ex post adjustment to model output.

Validation
There is a welcome focus on validation The validation activity is designed to provide a reasoned and well-informed opinion of whether AMA models work as predicted, and whether their results (capital requirement estimates and other information produced by the ORMS) are suitable for their various internal and supervisory purposes. Validation activities should:

(a) Have a broad scope, evaluating all relevant items of the ORMS, such as:
- Distributional assumptions;
- Correlation assumptions;
- Documentation;
- The four elements of the AMA (including observed/actual data, constructed data, figures generated by scenario analysis and business environment and internal control factors);
- Qualitative aspects (including the internal controls, use test, reporting, role of senior management and organisational aspects);
- Technological environment relating to the computational processes; and
- Procedures for the approval and use of new and modified estimation models or methodologies (such procedures should seek explicit opinion from the validation function in the approval process);

(b) Review qualitative aspects (including the internal controls, use test, reporting, role of senior management and organisational aspects);

c) Evaluate the bank's processes for escalating issues identified during validation reviews to ensure that:

- Escalating processes are sufficiently comprehensive;
- All significant ORMS concerns are appropriately considered and acted upon by senior management; and
- All significant ORMS concerns are escalated to appropriate governance committees;

(d) Evaluate the conceptual soundness – including benchmarking and outcome analysis – of the ORMS and of the modelling output;

(e) Reflect policies and procedures to ensure that model validation efforts are consistent with board and senior management expectations.

(f) Ensure that policies and procedures are sufficiently comprehensive to address critical elements of the validation process. These include independent review; clearly defined responsibilities for model development and validation; model documentation; validation procedures and frequency; and audit oversight; and

(g) Confirm that the relationship between the model's inputs and outputs are stable and that the techniques underlying the model are transparent and intuitive.

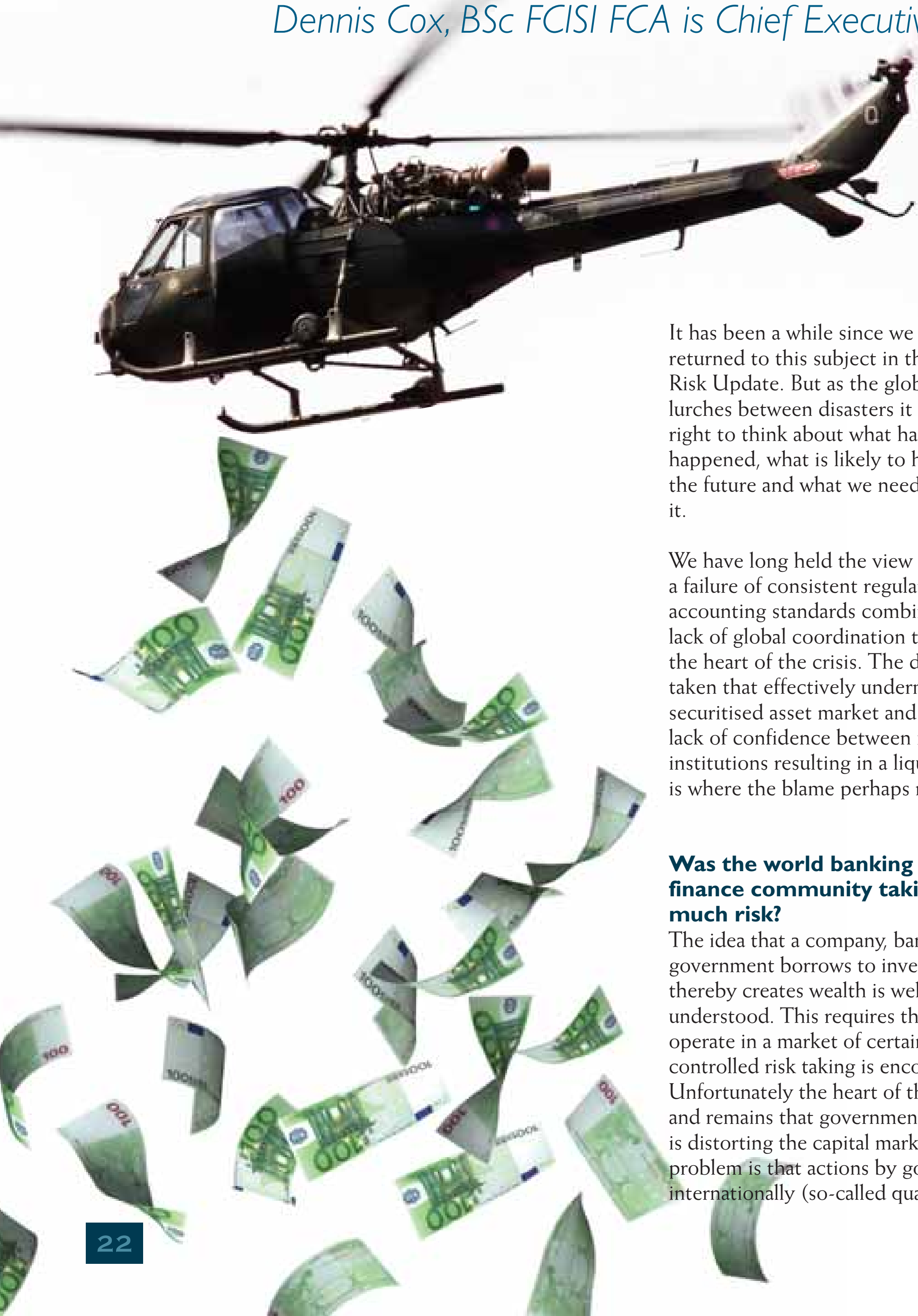
This is extending the validation requirements. Too often I find that firms are so pleased to have managed to develop appropriate data that they do not really have the time to properly validate the outputs from their systems. This focus on the importance of verification that the modelling and data are appropriate and complete is welcomed.

So two papers at the same time on operational risk – both have interesting bits within them, neither are really surprising but both will require firms to review their operational risk management programmes and conduct a gap analysis against this minor changes.

DWC@riskrewardlimited.com

HELICOPTERS DROPPING MONEY OR THE NEED FOR A NEW WORLD ORDER

Dennis Cox, BSc FCISI FCA is Chief Executive, Risk Reward Ltd.



It has been a while since we have returned to this subject in the Global Risk Update. But as the global market lurches between disasters it is only right to think about what has happened, what is likely to happen in the future and what we need to prevent it.

We have long held the view that it was a failure of consistent regulation and accounting standards combined with a lack of global coordination that was at the heart of the crisis. The decision taken that effectively undermined the securitised asset market and led to the lack of confidence between financial institutions resulting in a liquidity crisis is where the blame perhaps really lies.

Was the world banking and finance community taking too much risk?

The idea that a company, bank or government borrows to invest and thereby creates wealth is well understood. This requires the banks to operate in a market of certainty where controlled risk taking is encouraged. Unfortunately the heart of the issue was and remains that government borrowing is distorting the capital markets. The problem is that actions by governments internationally (so-called quantitative easing) will eventually exacerbate a really problematic situation.

For every $10 that is taken off the balance sheet of a bank the government borrowing increases by between $50 and $100 depending on the credit quality of the borrowing party. With some of the most indebted countries in the world having some of the best credit ratings we end up with a ludicrous international business model. Basically the profligate submerging economies are receiving assets from the emerging economies. Worse than that rather than using this for investment that creates wealth, the funds are disappearing into the general taxation pot.

The Next Crisis

There will continue to be financial crisis until such time as the underlying cause – global economic imbalances, are actually dealt with, together with the reigning in of profligate countries. Another issue is actually the new regulation, referred to as Basel III, but actually being implemented through amending sections with Basel II. Of course Basel II had not been fully internationally implemented prior to the commencement of the crisis, so we have no real idea whether it would have made a difference or not. Our suspicion is that it would not have done so, but it is nowhere near as dangerous as the new proposed changes.

What the requirements will do for the internationally recognised banks is enforce an asset reduction on them. This will occur for a number of reasons, but estimates on the growth in risk weighted assets that will occur do vary considerably. We expect that increases will be between 30% and 70%. While it is difficult to estimate what this will mean for certain two responses can be anticipated.

1. Many banks will be seeking to raise significant amounts of new equity capital at the same time

2. Global GDP will probably decline by between 5% and 10%

In coming to this estimate we take into account of the information presented by the BIS itself. But matters are worse than that. Not only do the banks need to raise large amounts of capital but they will be doing so exactly when a large number of governments either have to raise new capital or refinance existing capital. In the absence of global coordination it will all end in tears with someone, somewhere defaulting – possibly an AAA rated government.

The Problem of Global Coordination

Capital is global. It moves between institutions, countries and continents and can go anywhere. In terms of international bodies we have the following:

- The Bank for International Settlements

  BANK FOR INTERNATIONAL SETTLEMENTS

  This is a committee of central bank supervisors who are designing international rules. They do not represent anyone other than central bankers. There are no representatives of banks, customers, society or politicians on the group. Accordingly they are limited in their outlook and approach.

- The Committee of European Banking Supervisors

  Another interesting group of supervisors who produce a range of interesting papers. They also have the same problems of the BIS.

- The United Nations

  A governmental body where everyone is – but not the banks, regulators, customers or society.

- The World Bank

  Another political body that fulfils certain international requirements but does not involve itself with economics.

- The International Accounting Standards Board

  International Accounting Standards Committee Foundation®

  An essentially unaccountable accounting standards setting body

So there is no body that has the strength or role of coordinating global liquidity or looking towards global systemic risk. Some national supervisors have attempted to win this ground, but they are unsuitable. So what do we need?

The Solution

We need a new world order for financial services and the global economy. Such leadership requires new structures and formats to meet legitimate challenges.

We propose the following:

1. A new International Capital Coordination Body be formed to develop the responses required by the global community
2. They should set up a global liquidity programme which is available to all licensed institutions in member countries
3. There should be 0.5% capital for each bank in a member country transferred to the ICCB to provide future liquidity
4. These funds should be available to global banks at a margin above their normal cost of funding – perhaps 75 basis points
5. Banks should receive a nominal interest charge on their deposits
6. All actions of the ICCB should be secret
7. The ICCB should also have responsibility for the coordination of capital issuance of its member countries
8. The ICCB should finally have responsibility for ensuring that international rules are:
   a. Coordinated
   b. Consistent
   c. Add value to the global community
   d. Improve systemic risk control

It is only by developing such a solution that we will be able to make real progress in these areas.

DWC@riskrewardlimited.com

RISK REWARD

RISK REWARD RESULTS

60 Moorgate
1st Floor
London EC2R 6EL
United Kingdom

Office hours: London (GMT)
09.00am – 19.00pm Monday – Friday

telephone: +44 (0)20 7638 5558
fax: +44 (0)20 7638 5571
email: info@riskrewardlimited.com
website: www.riskrewardlimited.com

For further information please contact:

Dennis Cox – CEO
telephone: +44 (0)20 7638 5558
email: DWC@riskrewardlimited.com

Lisette Mermod – New York
telephone: 1-914-619-5410
email: LM@riskrewardlimited.com

Joanna Kraska – Public Relations
telephone: +44 (0)20 7638 5558
email: JK@riskrewardlimited.com