

P E R S P E C T I V E

The Treasurer's Triangle



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The core objectives of a bank's treasury are clear; to conduct the asset liability management process and in particular, to invest in creditworthy assets, to maintain sufficient liquidity and to maximise returns. The challenge is that these three objectives are not always mutually compatible; as a result the Treasurer and their team has a delicate balancing act, how to measure and manage these complex factors and to keep proper control of all the processes.

The events of the past three years have illustrated these difficulties in stark relief – the fallout from the subprime crisis rapidly cascaded across all the elements of finance, with previously sound credits suddenly in doubt or worse, market liquidity soon started to dry up and the pursuit of returns was quickly abandoned as many institutions had to concentrate on staying solvent and minimising credit risks. The credit crunch was in many ways a perfect storm for bank treasurers and so what are the lessons we can learn from the whole experience?

The Treasurer's Triangle

The triangular relationship between credit, liquidity and returns is of course not static. The three competing elements constantly flex around, and given individual institutional circumstances different ones will be in the forefront at any given time. In broad terms in a stable market, precedence is given to returns, creditworthiness is usually easily determined as results (both good and bad) seem to be broadly predictable within the usual credit models, and liquidity is not an issue as the environment is free of major shocks. In a disturbed or chaotic market, the order is often reversed, the immediate worry is liquidity, this is of course closely tied to credit (which is typically deteriorating and perhaps in sudden and unexpected ways) and returns become almost an afterthought (though of course maintaining profitability is still a requirement but not always achievable in such circumstances).

Credit Management

Examining each of the three factors in turn let's start by looking at credit in more depth. In the past twenty years more and more credit decisions have been effectively "outsourced" by lending institutions (whether banks or investors) to credit rating agencies. This worked well during the long benign credit period prior to the

collapse of sub-prime, and the subsequent global banking crisis – with the period from the dot com crash of 2000, being neat dubbed the NICE decade by Bank of England Governor Mervyn King, the period of "Non-Inflationary Consistent Expansion". During this period, attitudes towards lending and credit risk became more and more relaxed (as evidenced by greater lending multiples, easier credit criteria, and in wholesale markets the emergence of "covenant lite" loan agreements). Too many participants thought that ten or even five years data was sufficient to build accurate and sustainable credit models (either ignoring or forgetting that credit cycles are often twenty years or more in full duration). As a result evermore fine tuning allowed for ever greater amounts of credit to be granted – until just prior to the Credit Crunch, the markets were priced for perfection.

This is a common problem – and can be described as seeing risk issues as puzzles that can be solved outright, rather than as problems that have no definitive answer but a range of possible outcomes. This is an important distinction, and well understood in other risk areas such as air travel, nuclear power, continuous process industries etc. As risk ideas from industries outside finance are likely to become more important in the future the idea of modelling and addressing risks as problems rather than as puzzles will take on greater prominence.

The limitations of credit scoring and VaR based analysis were amply shown during the Credit Crunch; and it is likely that we will see much more use of scenario planning and more sophisticated use of stress tests; not to substitute existing techniques, but to enhance and develop them further. Furthermore the likely future demands from regulators will create new challenges for banking IT. We should look to expect further new software developments, where treasury systems can run multiple scenarios in multiple time frames to test and calculate the potential exposures from credit shocks, periods of low liquidity and alike.

Managing Liquidity Risk

Turning to liquidity, it can be defined simply as the probability that an asset can be converted into an expected amount of value within an

expected amount of time. The risks associated with liquidity usually come in two forms; market liquidity risk that arises when one cannot execute a transaction (usually a large amount) at the expected market rate, and funding liquidity risk when it becomes impossible to borrow funds to cover cash flow requirements. Both are serious from a Treasurer's perspective, but the latter can be fatal for banks and other financial institutions during times of financial instability. This was demonstrated particularly in the failure of banks such as Northern Rock, Bear Stearns and Lehman Brothers who all had great difficulty in maintaining their liquidity funding.

So far so good – but liquidity is a rather slippery topic – once wittily described as, always being available until one is really desperate for it. Paradoxically investment benchmarks, index tracking, credit ratings and fixings may well be adding to liquidity risk issues, as risk averse investors seek to trade at known ratings and prices, and within certain agency defined asset groups. This can have the effect of bunching up supply and demand and may well be adding to market inefficiencies rather than mitigating them. This can lead to a herd mentality, and this is not just a recent phenomenon, the Russian Bond Crisis of 1998 saw a large amount of subsequent market activity triggered by risk models all giving the same answer at the same time. Effectively everyone was trying to hit the market exit door at the same moment. This was an early case of pro-cyclicality where the overall market saw disturbances to liquidity caused by individual institutions' systems that seem sensible and appropriate at the firm level.

Currently much research is being done on liquidity (prompted by the extreme market conditions of autumn 2008) and some initial thoughts are possible. Clearly liquidity is not continuous, but can be subject to sudden white bubbles and black holes where the depth can accelerate or disappear rapidly. One observation is that increasing prices in a financial asset far from reducing demand can actually increase it. This seems counter-intuitive but many market players buy an asset precisely because it is rising in price. This means conventional economic thinking regarding market bubbles and liquidity crises will not be sufficient. Again finance will

have to turn to ideas in other industries in this case ideas around the “stick/slip” problem in engineering are being examined. In this situation engineers often have to model when some sticky part of system will suddenly shift and slide to a new equilibrium (an example might be getting the smooth running of hydraulic cylinders and modelling where sticking points may occur). The modelling of stable systems that can experience sudden and chaotic disturbances is an area of liquidity research and software development that will be important in the coming years.

Maximising Returns

Finally the subject of return should be straightforward – but whilst trying to maximise it there is the potential for failed credits and poor or even non-existent liquidity. In the past institutions have tried a mixture of hard rules and experience to judge adequate returns. Unfortunately returns are a function of macro-economic forces as well as individual lending or investment decisions. Typically in a credit boom lending margins are heavily squeezed and banks are faced with greater and greater competition; this is leading regulators to consider so called macro prudential rules to dampen such effects. For the individual treasurer the simple observation of it looks too good, it is! – will be a good rule of thumb. Experience and market knowledge will still be a vital human input into the risk assessment process.

Future Challenges

There is no perfect answer to the Treasurer's Triangle (in fact if we over fit for perfection we actually increase the chances of future problems) but here is a checklist of the issues and challenges that we feel could be coming into view in the coming years:

- New risk techniques will be imported from other industries (in particular the far greater use of scenario planning, complex stress tests, and modelling the cascading of risk through different asset classes, markets and instruments).
- Further work will be done on measures to counter pro-cyclicality in regulatory rules (the tendency for banking risk models to all signal red at the same time – which can

cause unforeseen correlations and market dislocations)

- Banking clients are going to demand higher standards of flexibility in their risk systems. Financial IT companies will respond and address this through more modular and scalable products.
- Increased and more complex regulation will put a greater burden on banks, and further investment in processes and people to meet these demands will be a constant feature in the next few years.

- Bubbles and crashes cannot be entirely eliminated in free markets – but treasurers will be armed with more tools to create buffers and fire breaks that can contain their potential risks.

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