



TREASURY RISK MANAGEMENT - A PRUDENTIAL PERSPECTIVE

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Introduction

Some 18 months ago, a rogue foreign exchange trading episode at a major Australian bank shone a strong spotlight on the market, operational and reputational risks inherent in sophisticated treasury operations. The light reached into every corner, highlighting the relevance of factors such as the robustness of internal pricing models and revaluation processes in thin markets. For all boards and senior management, the episode was a stark reminder, if one were needed, of the importance of getting right the balance between people, controls and organisational culture in the treasury risk management framework of their institutions.

The fall-out from this highly-publicised episode continues and the lessons for the industry will no doubt be reflected, explicitly or otherwise, in some of the topics of this conference, the FTA's 3rd Annual Advanced Risk Management Conference. I welcome the opportunity to give the opening address and to share with you the perspective of the prudential regulator on treasury risk management issues.

We are close allies! As corporate treasury and finance professionals, you will be acutely aware of the potential dangers posed by weaknesses within your treasury environment. As the chairman of APRA, it is my role to ensure that APRA has a supervisory approach, vigorously applied, which supports the prudent management of treasury risk within our regulated institutions.

The key word is “supports”, not “dictates”. APRA expects each institution to develop its own, appropriately tailored systems to identify, measure and manage its treasury risks in line with the risk appetite set for the institution by its board. APRA's task is to review the effectiveness of these risk management systems, ensuring that they meet our prudential standards and are in line with “good practice” both in Australia and internationally.

Our treasury risk reviews are, nonetheless, comprehensive. They form a critical input into our risk-rating of regulated institutions and the supervisory attention they receive. This morning, I would like to outline these review processes and summarise our expectations of the key participants in treasury risk management, from the board through to internal audit.

I would also like to bring you up-to-date with developments in the new global capital adequacy regime – the so-called Basel II Framework – which has implications for the capital held against treasury risks by banks and other authorised deposit-taking institutions (ADIs).

APRA's review of treasury risk management

APRA's supervision of treasury risk management has a specific focus – monitoring each institution to ensure that it holds adequate capital against market and other risks in treasury operations and that it complies with our prudential standards. It also has a general focus – reviewing changes to treasury business strategy and to the risk management framework.

On a regular basis, in line with the supervisory stance that APRA has determined for each institution, teams from our Specialist Risk Services area, in particular our Balance Sheet & Market Risk team and our Risk Models team, along with the responsible APRA frontline supervisors visit institutions to conduct detailed on-site

investigations of the suitability and effectiveness of their treasury risk management framework.

These on-site investigations help us form an assessment of the institution's risk appetite, its trading strategy and the inherent risks associated with the products traded. We need to know, for instance, the extent to which treasury revenues are derived from proprietary trading or are customer driven. Our goal is to ensure that the institution has in place a system of risk management controls and reports that is commensurate with the type and level of risk being assumed.

We do not turn up at the institution with a long check list of items which we simply tick off. We have to make judgment calls. These rely heavily on the skills and experience of our staff and are also guided by "practice notes" we have developed to ensure a consistent approach across our regulated institutions.

Our review of the risk management framework starts at the top – with the role of the board.

The board

APRA's prudential regime is based on the primacy of the board, which has ultimate responsibility for the sound and prudent management of our regulated institutions. In the treasury area, the board is responsible for the institution's operations and risk management and for ensuring that senior management is monitoring the effectiveness of risk controls.

Very importantly, it is the board which should set the institution's tolerance for risk or "risk appetite", through its approval of market risk policies, limits and business strategy. Market risk policies should cover matters such as delegations, reporting, escalation, revaluations and new products, and we would expect the board to review policies and strategy on at least an annual basis. The board should ensure that the institution's risk controls are effective, the agreed business strategy is being followed and that the board is being regularly informed on whether risk policies are being adhered to. The board should seek active responses to limit breaches.

APRA expects boards to have a good general understanding of the types of treasury products and trading strategies used by their institution and to review new products. This understanding should be reinforced by board information sessions which explain the inherent risks in, for example, derivative instruments. Unfortunately, not all boards take an active governance role in treasury risk management or are equipped to deal with the complexities of trading activities.

Does this mean that APRA now expects boards of regulated institutions to become instant experts in options trading? Do they need to have a command of the calculus required to construct a "volatility smile" or to calculate the time decay on a currency option?

Clearly not!

However, APRA does expect boards to be vigilant and effective in their oversight of risk. For example, we expect boards to understand the aggressive, competitive and at times frenzied environment in dealing rooms, and thus the crucial need to maintain clear and strong separation of front, middle and back offices. And we expect them to be able to assess from the reports they receive whether trading is

within the risk appetite it has approved and conforms to the agreed business strategy.

For ADIs which have approval from APRA to use an internal model to calculate market risk capital, the board should also regularly review stress tests and back testing results and should ensure, through the Board Audit Committee, that the internal model and the market risk management framework is regularly reviewed by the internal audit function.

Senior management

For its part, senior management is responsible for ensuring that risk-taking is done within a controlled environment which is in keeping with board-approved policies, limits and strategy. It is their responsibility to ensure that people, systems and processes are up to the task.

In the dealing area, senior management should have delegated trading authority from the board and should be accountable for the actions of dealers under their control. Senior management should ensure that trading desks are following the approved business strategy. For example, if a derivatives desk is meant to be mainly client-driven, trading with interbank counterparties should predominantly be for the purpose of reducing risk rather than for taking large directional positions. Treasury dealer remuneration policies should be consistent with the trading strategy and bonuses structured to encourage appropriate dealing behaviour. Leave policies should also include minimum consecutive days of leave each year, to ensure that a second set of eyes reviews dealers' activities.

In addition to day-to-day oversight by senior management, APRA would expect to see a senior management committee – whether called a market risk committee or ALCO – reviewing trading activities on a regular basis. The committee's charter should include reviews of performance and operational issues, usage of market risk capital, stress tests, back testing performance, trading strategy and the appropriateness of the risk management framework. New products and changes to limits and policies should also be agreed by the committee before being proposed to the board.

Senior management of trading activities should ensure that dealers comply with policies, limits and strategy on a continuous basis. Senior management should have an open and constructive working relationship with the market risk function of the institution and ensure proper segregation of responsibilities between the front office and middle/back office staff.

We also expect senior management to guard against a dealing culture – which we have identified in some on-site visits – that is biased towards short-term profitability. This culture results in budget targets stretched beyond dealers' competence and underinvestment in treasury risk management. Above all, we expect senior management to keep the board fully informed on emerging risk issues in the treasury portfolio. It should not be a crime to report “bad news” to the board! Such a culture is a recipe for turning small problems into big ones.

Treasury dealers

The front office is the first line of defence against risk in treasury operations. For this reason, we expect institutions to strive for the highest level of professionalism in this area, starting with recruitment and remuneration practices. In turn,

treasury dealers have responsibility for trading within their delegated mandate and for conducting their affairs, at all times, with integrity and honesty.

Treasury dealers should have appropriate systems on the desk for pricing and processing deals and for monitoring positions against limits. Front office systems should provide a secure and efficient platform for entering and pricing deals, checking credit availability pre-dealing, providing risk analytics and monitoring risk limit usage. Line management should also have access and the capability to view dealer positions and monitor dealer, desk and trading room limit usage. Integrated front office systems provide the ability to monitor limit usage on a real-time basis. Whatever systems are in place, dealers should be reporting their position and profit and loss on a daily basis to line managers and to finance personnel, whose task it is to reconcile dealer profit and loss estimates with independent financial accounts.

Treasury dealers should also have written dealing mandates that provide them with a clear understanding of their dealing authorities. A dealing mandate should specify the products, currencies, stop loss and position limits both within the day and at the end of day, as well as any other conditions such as practices when trading after hours. Limits should encompass all risks and should be set at levels where a breach clearly signals that trading has taken place outside the agreed trading strategy. We would expect breaches of limits to be reported immediately by the dealer to line management. The escalation process for reporting and managing limit excesses should be clear and effective.

The culture of the dealing room must be one in which dealers see risk management as a core competency, and this must be reinforced by senior management through its remuneration policies. Dealing rooms that adopt a “catch-me-if-you-can” approach to risk management are asking for trouble. Likewise, a management that allows such a culture to emerge, blinded by the lure of short-term profitability, does so at its peril.

Market risk management

Market risk management – the middle office – is responsible for ensuring treasury dealers are complying with board-approved policies and trading within risk limits. Being independent of the dealers, the middle office provides an objective view of front office activities and ensures that limits can be monitored at one remove from the business.

The market risk management system must be robust and include regular reconciliations to ensure its completeness and accuracy. An institution which calculates Value at Risk (VaR) using a model approved by APRA should regularly review the model assumptions and parameters, including stress testing scenarios. Back testing of the model should be performed regularly to ensure that the model remains valid.

The middle office should have staff with sufficient skills and standing in the institution to be an effective counterbalance to the front office and to ensure the integrity of reporting and oversight of trading activities. The area must have clear reporting lines, particularly in escalating limit breaches. Ideally, the area should also have the authority to require risk positions to be reduced when dealers are in breach of limits.

To be fully effective, it is essential that the middle office not be the “poor cousin” at budget time. We view with concern any evidence that the middle office is

lagging behind the front office in terms of investment in systems, people and processes to measure and manage the risks in existing and new trading activities. Likewise, we would be concerned if senior dealing management had a disproportionate influence over the budget of market risk and support areas, weakening the effectiveness of the risk management framework.

Quantitative support

A number of institutions maintain a quantitative support group to develop and/or independently validate complex models used by the front office for pricing and by the middle office for risk management. The group provides an assurance that model outputs can be relied upon.

Quantitative support should be actively involved in the development of new products and provide a sign-off before the products are recommended to the board for approval; they might also suggest conditions to be imposed on the pricing models involved. It is important that the conditions imposed on products be monitored on a regular basis by the middle office or the quantitative support group. There should also be a periodic review of pricing models.

Back office support

If the front office is the first line of defence against risk, the back office and finance areas are the battlements.

Back office support is responsible for ensuring the integrity of deal confirmation, settlement and payment functions and may also handle financial accounting and regulatory reporting. The back office ensures that the deal information reported by the middle office is complete and accurate. The back office should be alert to large and unusual trades as well as unusual amendments to trades and/or frequent cancellation of trades, particularly around the end of day and other key financial reporting periods. Any unusual activity should be escalated to senior management. There should be strict controls around deal amendment and cancellation. For example, dealers should not be able to change standard settlement instructions (SSI) nor advise the back office of changes to SSI.

Trading positions should be marked-to-market daily and revaluation rates must be provided independently of the front office. In addition, to ensure accuracy, there should be a daily validation of rates in the form of stale price checks and checks for large and unusual movements. For complex trading environments, we would expect to see a revaluation committee which continually reassesses the appropriateness of the source of revaluation rates and of assumptions and practices used.

On a daily basis, the finance area should calculate profit and loss for trading activities and compare the figures with dealers' estimates. Differences should be reconciled and unexplained differences highlighted to risk management and senior management, and resolved quickly.

On a regular basis, source systems should be reconciled with the general ledger and internal balance sheet and profit and loss accounts should be reconciled. Where there are trading activities across multiple branches, there should also be a reconciliation of internal and inter-company balance sheets and profit and loss accounts.

Though it should go without saying, both the back office and the finance function should be independent of the front office and be appropriately resourced.

Internal audit

Internal audit is responsible for reviewing the effectiveness of people, systems and processes which comprise the treasury risk management framework. By virtue of its independence from executive management and its direct reporting line to the Board Audit Committee, internal audit provides assurance to the board that the front office, market risk and back office support areas are functioning effectively and that senior management is active in its risk oversight.

The internal audit function should be adequately resourced, or have access to external qualified resources, to be able to undertake regular reviews of treasury operations. For internal model users, a review of the overall risk management process should take place at regular intervals.

Regulatory developments in treasury risk

Let me now take up my earlier promise to bring you up-to-date with global regulatory capital developments.

What I have described, thus far, is the processes by which institutions identify and manage their treasury risks, and how APRA assesses the effectiveness of treasury risk management.

It is inevitable that, on occasions, the risks in treasury activities will materialise and generate losses. For example, a bank undertaking a foreign exchange transaction with a corporate customer knows that the value of the resulting foreign exchange position, even if held only briefly, could decline if the market moves adversely. Under normal market conditions, any decline in value would fall within expected boundaries and the bank would have factored an amount for expected loss into its margins. In more volatile conditions, however, the bank may incur an unexpected loss, which it will rely on its capital to absorb.

The 1988 Basel Capital Accord established a global capital adequacy framework, but one that dealt only with credit risk. In 1996, the Accord was amended by the Basel Committee on Banking Supervision to apply capital charges as well to the market risks arising from banks' trading book positions, and APRA's capital requirements are based on this amendment. ADIs have a choice between measuring risks in a standardised manner or using risk measures derived from their own internal risk management models (based mainly on VaR methodology), provided they met a number of quantitative and qualitative criteria. In Australia, market risk capital for internal model users ranges between 0.5 and 4.5 per cent of total capital, although most fall within a narrow range of 0.5 to 1.5 per cent of total capital. The low levels of capital held against market risk do, of course, belie the potentially large operational and reputational losses that can result from ineffective treasury management and controls, as events last year demonstrated.

This reality is recognised in the new Basel II Framework, which will require ADIs to hold regulatory capital against operational risk as well. It will do so by one of two broad methods. For smaller ADIs, income will be used as a proxy for risk and a capital requirement will be calculated as a percentage of income. The large banks, however, will calculate a capital requirement using a combination of data

that is both internal and external to the bank, scenario analysis, forward-looking indicators of risk and assessments of internal controls.

The three risk types I have mentioned – credit, market and operational risk – form the basis of the Basel II Framework’s minimum capital requirements, which are also known as Pillar 1. As we know, there are other risks in treasury activities, such as liquidity, reputational and strategic risks. The Basel II Framework does not ignore such risks and, under Pillar 2, requires ADIs to have a process for assessing their overall capital adequacy.

Hence, the Basel II Framework will require ADIs, for the first time, to hold regulatory capital against the full gamut of risks to which they are exposed in their treasury activities. Last month, the Basel Committee issued a consultation paper on improvements to the current market risk capital regime under Basel II. The improvements involve refinement, rather than wholesale change, with a focus on better assessing those risks within the trading book that are currently not adequately captured. Under Pillar 1, the types of exposures that qualify for a trading book capital charge are clarified, further guidance is provided on valuation and stress testing and modelling standards are strengthened. Pillar 2 strengthens ADIs’ assessment of their internal capital modelling for market risk by requiring them, for example, to demonstrate that they hold sufficient capital to withstand a range of severe, but plausible, market shocks and to use stress tests for market risks that are not adequately captured in their VaR models. Finally, Pillar 3 improves the robustness of trading book disclosures.

Closing comments

Let me close with some further comments on culture, a term that has already intruded in several places in my address.

The culture within an institution is crucial to effective risk management. The best-laid plans for treasury risk management are wasted if the institution lacks a culture which emphasises the importance of risk management to the solvency, profitability and reputation of the institution. For this reason, it is critical that the board and senior management actively monitor the adequacy of the risk management framework and reinforce the norms of prudent behaviour by acting promptly when breakdowns or breaches occur. The sanctions for breaches of internal policy should be clear and strict.

The dealing room’s drive and bonus incentives to generate trading profits should not be allowed to override the need to control risk-taking. Hence, while it is important to have good risk management people close to the action in the dealing room, it is equally important to have risk management people outside the business line and with sufficient seniority to raise concerns and be heard when they need to be. The risk management function in financial services organisations has been growing in importance and it is now more common to see sizeable numbers of risk management staff outside the business line and reporting to a Chief Risk Officer, and through that position to the board. This structure is now viewed as “best practice” in sophisticated treasury operations.

On that note, I am happy to turn you over to the strong list of speakers that the FTA has marshalled for this conference. They, I am sure, will leave you with food for thought and even busier work agendas.