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### Operational Risk and Internal Audit

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<td>• What is Operational Risk?</td>
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The Role of Treasury in 2017
How does Treasury Add Value?

How does treasury deliver value to the business and what are the enablers of a high performing treasury function?
**Operational Treasury:** Perform processes reflective of business transactions that create foundational inputs for Treasury and other stakeholders. Design and deliver these operational Treasury processes in the most effective and efficient way.

This model is considered the ‘traditional’ Treasury model – ensure there is adequate liquidity, safekeeping of cash resources and an appropriate governance and risk management framework in place.

| Cash & Liquidity Management | Long Term & Intercompany Funding | Accounting & Risk Reporting | Financial Risk Management |
**Value Add Treasury:** Perform strategic and catalytic Treasury processes to establish and realize business objectives across the organisation.

More than just the ‘traditional Treasury’ focused on efficient processes. Here there is additional testing and analysis which informs management decision throughout the organisation.
Strategic Treasury: Processes that are performed enterprise wide and require specialized expertise. Treasury’s role has expanded to areas that were traditionally outside Treasury’s. The Treasurer is a member of the Executive C-Suite and a key advisor on strategic decisions for the organisation.
The Role of Treasury

Capital/Debt Management
Liquidity & Cash Management
Treasury Risk Management
Governance
Processes & Controls

Treasury Operating Model
Talent & People
Technology & Integration
Data & Management Information
Treasury risk management strategies should be considered in the same way as other financial risks, from first principles:

- Risk management framework (including quantified risk appetite and risk limits)
- Consider risk management alternatives
- Hedge as a considered conclusion, not as a default
Policies and Procedures
Treasury Policy

- Reflects organisation’s objectives and the Board’s risk appetite
- Reviewed and approved by the board annually
- Governs financial risk management activities
  - Risk objective
  - Risk management
  - Risk measurement
  - Risk reporting
- Permitted instruments
- Delegated authority
- Overrides treasury procedures

Treasury Procedures

- Dealing
- Settlement
- Confirmations
- Reporting
- Accounting
- Bank portals & dealing platforms
- TMS – user access, versions etc.
- Static data amendments
Governance Framework

- Best Practice Policy Framework – FTA, Accounting Guidance, etc.
- Role of Treasury Function defined
- Code of Conduct – Professional bodies, CPD etc.
- Fraud Prevention – AML, procedures & controls
- Board Governance Process – approval, review, reporting, monitoring, ultimate responsibility
- Audit & Risk Committees - scrutiny
- Systems of Internal Control
- Regular Treasury Internal Audits
Role of the Treasury Policy

• Organisations are continually adapting to changes in regulation
• The GFC has created challenges in managing volatile financial markets
• A good Treasury Policy will weather these changes and volatility in markets
• The Policy should define permitted instruments and the Treasury strategy
• The Policy should be reviewed regularly (usually annually) to evaluate and refine the approach
• The Policy must be relevant and clearly aligned to objectives of the Board
Treasury Policy

Purpose
- Mechanism for management to delegate financial decisions
- Provides Treasury staff with written guidelines
Treasury Policy

Key Considerations

• Proactive management of **liquidity** (effective, efficient and orderly use of credit facilities in the short and long term)
• Ensure an acceptable level **pricing** certainty
• Investment and hedging transactions are undertaken in a **controlled environment** within **limits** and guidelines
• Provide accurate, reliable and relevant financial information to the Board and management in a timely manner
• Treasury is authorised to utilise an appropriate **diversity** of financial instruments (with diversification of counterparties) to meet risk management objectives in a cost effective and efficient manner
• Alignment of Treasury strategy with business objectives and place reasonable reliance on data received from Business Units to determine **optimal risk management strategies**
• Consider cross border transactions and ensure local authorities and **regulations** are properly considered
• Ensure risks identified by **Business units** are reported to Treasury in a timely manner
Treasury Policy

Approach

- What is the approach for adding new instruments?
- What information does the Board require?
- Risk Appetite

Examples of Permitted Instruments

- Bank loans
- USPP
- FX contracts
- Finance leases
- Interest rate swaps
- Cross currency interest rate swaps
- Term deposits
- Bank bills
Treasury Policy

Objectives for Treasury function
Permitted Hedging Instruments
KPIs

✓ Importance of key performance indications (KPIs) as measurement of Treasury function
✓ Must align with Treasury Policy objectives

Examples
• WACD
• WAL
• Liquidity buffer
• Fixed to floating ratio

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## Key Consideration points

- **Responsibility Structure**
- **The Board:** E.g. approvals and reviews of the Treasury Policy
- **Treasury Committee:** E.g. review and recommend funding plans and addressing maturity profiles
- **CFO:** E.g. implement all financial accommodations and financial arrangements as delegated by the Board.
- **Group Treasurer:** E.g. responsible for the daily management of borrowing, investment and hedging activities.
## Treasury Policy

<table>
<thead>
<tr>
<th>Objectives for Treasury function</th>
<th>Permitted Hedging Instruments</th>
<th>KPIs</th>
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</thead>
<tbody>
<tr>
<td>Roles and Responsibilities</td>
<td>Authorization of limits by instrument and risk type</td>
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</tbody>
</table>

### Key Consideration points

- Are limits in place? Have the limits been approved and authorised?
- Are the limits determined per instrument type and risk type?
- Delegation of authority
- Deal execution and entry
- Limits checks
- Internal deals/exposures/counterparties
- Counterparty mandates
- Out of hours dealing
- Deal concentration
- Code of conduct
- Dealer education/ experience
Treasury Policy

Key Consideration points

- A hedging strategy should:
  - Align with corporate goals
  - Align with risk appetite of the Board
  - Be based on preparedness, rather than predictions
  - Stand the test of time
  - Be transparent

- Rarely is there a generic strategy that is perfect; risks and benefits/ trade-offs between different strategies should be clearly articulated
# Treasury Policy

<table>
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<td>Authorization of limits by instrument and risk type</td>
<td>Treasury Strategy</td>
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**Detail of risks being managed**

**Key Consideration points**

- Are all risks addressed thoroughly in the Treasury Policy?
- Are the risks being managed? If yes, how?
- How are they being measured and monitored?
- What reports are prepared & on what frequency?
# Treasury Policy

<table>
<thead>
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</tr>
<tr>
<td>Detail of risks being managed</td>
<td>List of bank relationships</td>
<td></td>
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</tbody>
</table>

## Key Consideration points

- Approved counterparties for dealing
- Key relationship banks
- Process for adding new counterparties?
- Limits – tenor, ratings etc.
- What are the relationships determined by?
# Treasury Policy

<table>
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<tr>
<td>Detail of risks being managed</td>
<td>List of bank relationships</td>
<td>Settlement Procedures</td>
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## Key Consideration points

- Confirmations
- Segregation of duties
- Are SSIs updated in a timely manner?
- Does settlement require authorisation? If so, from how many people?
Hedging Strategy & Objectives

Risk Objectives:

- **No hedging**: Remain exposed to market risk
- **Passive hedging**: Reduce volatility of returns
- **Opportunistic hedging**: Protect Price
- **Active hedging**: Enhance Price
- **Full trading**: Initiate new market risk

Examples:

- No hedging: Interest rate hedging – lock in budgeted rate
- Passive hedging: Protect a target gold price
- Opportunistic hedging: Manage risk to outperform agreed benchmark
- Active hedging: Trade for profit
Treasury Policy Lifecycle

1. Identify risks
2. Develop strategies to manage risks
3. Create a Policy based on strategies
4. Execute & assess effectiveness of Policy
5. Monitor Policy compliance
6. Reassess results & Policy implications
7. Report results to Board
8. Compare to original benchmark

Share outcome with stakeholders
Various best practice guides to use
Report results to Board
Create a Policy based on strategies
Execute & assess effectiveness of Policy
Monitor Policy compliance
Reassess results & Policy implications
Identify risks
Treasury Policy – developing policy based on strategies

- Policy needs to consider conflicting objectives
- There are ongoing challenges in managing volatile financial markets
- A good Treasury Policy will weather these changes and volatility in markets
- Policy will define permitted investments, hedging instruments and hedging strategy
- Policy should be reviewed regularly (usually annual) to review and refine the approach
- Policy must be relevant and clearly aligned to objectives of the board.
Treasury Policy – what does a good Treasury policy include?

- Risk Management Objectives
- List of Permitted Hedging Instruments
- Hedging Strategy (including level of permitted hedging levels)
- Delegation of Authorities / Role & Responsibilities
- Reporting Requirements (around Treasury Risks)
- Accounting Policy – including the impact of accounting on decision making
- How to deal with Policy breaches
- Operational Risks (e.g. controls around Segregation of Duties)
<table>
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<td>• Bank Account Management</td>
<td>• Counterparty</td>
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<td>• Cash Forecasting/Budgeting</td>
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<td></td>
<td>• Short Term Funding</td>
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<td></td>
<td>• Interest Rate Forecasting</td>
<td>• Interest</td>
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<td>• Interest Risk Management</td>
<td>• Tax</td>
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<tr>
<td><strong>Market Risk (e.g. currency/interest rate</strong></td>
<td>• FX transactions</td>
<td>• Transaction</td>
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<tr>
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<td>• Currency Cash Flow</td>
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<td>• Documentation</td>
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<td>• Financial Distress</td>
<td>• Accounting &amp; Tax</td>
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<td>• Risk-Return Imbalance</td>
<td>• Legal &amp; Sovereign</td>
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<td>• Implementation of Gearing Policy</td>
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<td>• Acquisition/Disposal Valuation</td>
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<td>• Governance</td>
<td>• Limit breaches</td>
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</table>
Operational Risk
Operational Risk – what is operational risk?

“The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.”
_Basel Committee on Banking Supervision_

Operational Risk in Treasury usually includes the following which can lead to increased risk of loss:

- Criminal activity and people risk
- Regulatory/Legal risk
- External events and catastrophe/disaster risk
- Processing and systems failures:
  - Organisational risk (inappropriate Treasury structure)
  - Systems and business continuity risk (inadequate systems)
  - Procedural risk (inadequate procedures)
Operational Risk – key controls

**Delegation of Authority**
- Who are the authorised signatories?
- Appropriate framework is in place (aligned with the responsibility structure?)
- Considered in borrowing, investing and hedging within the constraints of the Treasury Policy
- Is it met for all financing arrangements?

**Segregation of Duties**
- Should be in place for dealing, settlement, accounting and reporting
- Essential in exposure reporting and risk monitoring from the Business Units

**Internal Audits**
- Risk assessment and risk based approach
- Adherence to the Treasury Policy is reviewed and performance is reported to the Treasury Committee and the Audit and Compliance Committee of the Board

**Breach Policy**
- Review the policy annually
- Integrated within the Treasury Policy?

**Automation**
- Straight through processing (STP)
- Bank vs GL vs TMS
Operational Risk – key controls

Key Operational Risk Controls

- Operational Risk Policy
- Systems operational controls
- Procedures documents – specifying procedural controls around deal processing
- Disaster recovery/ business continuity plan

Internal Control Framework - 3 lines of defence model

1. Operational Management
   - Establish effective controls
   - Develop & implement policies & procedures

2. Risk Management & Compliance Functions - monitor 1\textsuperscript{st} line of defence controls
   - Regularly report to management
   - Monitor compliance with policies

3. Internal Audit
   - Ensure effectiveness of governance and risk management processes
Operational Risk – legal, fraud and reputational risk

**Legal Risk Example**
- Many local charities and councils had Lehman CDOs in their investment portfolio
- CDOs are normally floating rate debt securities that pay a margin over the 90 day bank bill rate
- The performance of an investment in a CDO security is linked to the credit risk of an underlying portfolio of company debt
- Legal arguments around priority for distribution of collateral – UK vs US laws

**Preventing Fraud Risk**
- Strong Operational Risk Policy
- Design of Treasury controls
- Operating effectiveness of control environment
- Right culture

**Reputational Risk**
- Public money – capital preservation mandate
- Market perception
- Ultra vires
- Regulator or Government intervention
Operational Risk – disaster planning and business continuity planning

**Disaster planning** – Disaster recovery is the process by which you resume business after a disruptive event (i.e. power cut, earthquake)

**Credit Spread Risk** – Business continuity planning ensures you can keep making money in the event of small disruptions

Treasury should develop and maintain a disaster and business continuity plan, allowing the Treasury department to resume daily responsibilities. Planning involves threat assessment and impact analysis. The plan should encompass all key activities readily associated with contingency planning

The Treasury function should focus on protecting key elements that the continued operation of their department depends on - people, facilities and systems, and continued communication/relationships with third parties and other departments.
Effective Risk Management – three lines of defense

The three lines of defence model provides a simple and effective way to enhance communication on risk management and control by clarifying essential roles and duties.

1st Line of Defence
- Functions that own and manage risk

2nd Line of Defence
- Functions that oversee risk
  - Risk Control
  - Compliance oversight

3rd Line of Defence
- Functions that provide independent assurance
  - Internal Audit

Senior Management

Governing Body/ Board/ Audit Committee

External Audit

Regulator

All three lines should exist in some form at every organisation, regardless of size or complexity.
Internal Audit and Key Controls
Treasury Internal Audit – key treasury controls

- Segregation of duties between front, middle and back office
- Risk management (no speculation)
- Cash flow forecasting
- Transparency in Treasury activities & reporting
- Reconciliation
- Governance framework & Code of Conduct
- Delegation of Authority (DoA)
- Balance between system & manual controls through management oversight
- Audit trail for dealing, settlement & confirmation
- Skills & Competencies
Treasury Internal Audit – what would an Internal Auditor do?

Control Design & Operating Effectiveness

- Cash Management & Reconciliation
- Segregation of Duties & Organisational Structure
- Front Office, Middle Office and Back Office
- Treasury Compliance with Policy
- Board Reporting
- Systems
Treasury Internal Audit – what would an Internal Auditor do?

**Key Controls**

**Compliance with Policy**
- A Board approved Treasury Policy should be in place which covers all risks e.g. market, credit, liquidity, settlement and operational
- Adherence to Policy should be reviewed by the Board and independently audited

**Board Reporting**
- The Board should be regularly reported of all significant risks, hedges in place and significant exposures
- There should be assurance to the timeliness, accuracy and completeness of the information

**Systems**
- The systems should be reliable, secure and well backed up
- There should be an effective, up to date and practical disaster recovery plan
- The treasury transactions should be efficiently managed through the use of STP (Straight through processing) where possible

**Cash Management and Reconciliation**
- There should be an effective method for monitoring the daily cash position
- An up to date register for authorised bank signatories
- Bank Reconciliations should be undertaken on regular basis.

**Segregation of Duties**
- Those executing and recording transactions must not confirm or settle these transactions

**Front Office, Middle Office and Settlements**
- Front office should be responsible for undertaking all deals
- Back office is involved in confirmations and settlements

Refer next slide for more details on this section
Treasury Internal Audit – end to end deal process

Front Office
- Download bank balances
- Review cash flow forecast
- Get quotes from market participants
- Seek approval as per DoA/check credit limits
- Place deal
- Enter deal into TMS

Back Office
- Receive confirmation from the bank
- Check the confirmation
- Update the TMS
- Run accounting journals
- Prepare month end reports
Treasury Internal Audit – Dealing Process Walkthrough

Objective - gain an understanding of the daily duties of the Treasury team

Back Office
- Settlement
- Payments & Processing
- Accounting
- Back Office Reporting
- Confirmation

Front Office
- Dealing
- Scenario/Stress Testing
- Front Office Reporting
- Treasury Risk Management Strategy
Front Office Controls

- Exposure & Credit Limits
- Deal Execution
- Deal Entry into TMS
- Deal Amendments/Cancellations
- Dealer Mandates
- Static Data in TMS
- Counterparty Diversification
- Out of Hours Dealing & Orders
• **SOD** is a fundamental internal control

• High level of segregation between:
  - Deal Execution
  - Deal Confirmation
  - Deal Settlement
  - Accounting / Reconciliation
  - Compliance Monitoring

• Is there dual password controls on administrator rights for electronic banking?

• Are the policies and procedures documentation easily accessible to all staff?

• Are there sufficient resources for Treasury to operate effectively?
Treasury Internal Audit – Sample Testing

- **Deal Management**
  - SSI management
  - Permitted financial instruments
  - Integrity of data

- **Segregation of Duties**
  - Separation between front and back office
  - Procedures
  - Dealer mandates with banks

- **Approvals**
  - Approvals as per delegated authority
  - Within dealer limits

- **Limit Monitoring**
  - Interest rate risk
  - Counterparty credit risk
  - Liquidity and funding risk
  - Settlement risk
  - Commodity risk/ basis risk

- **Reporting**
  - Monthly Treasury board & management reports
  - Treasury FX reports
  - Cash flow forecasts
  - Annual & ad hoc Treasury strategy reviews
  - Financial instruments accounting
Treasury Internal Audit – Middle Office

Middle Office controls

Mark to Market Positions

A system that enables risk management reporting

Bank Account Reconciliation

Static Data (admin)

Audit log of changes to counterparty static data

Revaluation Data

Use of Spreadsheets

System User Access

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Treasury Reporting - Management Reporting

Reporting against Policy (all risks based on Inventory within Policy)

**Treasurer Comments**
Liquidity has been negatively impacted by recent buy back will be back to normal next month. Likewise, capital buffer will be back within acceptable levels next month.

**Performance**

- **P&L (Net Income)**
  - Original Budget: 196.00M
  - Estimate (Forecast): 148.22M
  - On Target?: No

- **Tornado Chart (Effect on Net Income)**
  - Range 95% Confidence: ±150M
  - Worst Case: -208M

- **Variability (M)**
  - Commodity: -100
  - FX: -55
  - Interest: -3

**Performance**

- **Facilities Utilisation**
  - Maturity Profile

- **Banking Commentary**
  - Funding has been arranged for debt maturing in the next 6 months.

**Risk Management**

- **Foreign Exchange**
  - Above Target: 63.08%
  - Benchmark: 80.00%

- **Commodity**
  - Above Target: 40.00%
  - Benchmark: 40.00%

- **Interest**
  - Above Target: 20.00%
  - Benchmark: 50.00%

- **Credit Risk**
  - Above Target: 60.00%
  - Benchmark: 57.00%

- **Liquidity Buffer**
  - Above Target: 80.00%
  - Benchmark: 40.00%

- **Capital Buffer**
  - Above Target: 23.00%
  - Benchmark: 44.00%

- **Target Credit Rating**
  - Above Target: 55.00%
  - Benchmark: 23.00%

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Treasury Internal Audit – Reporting Controls

• Reporting against Performance Criteria
• Exceptions – re All Risk and Performance Criteria positively reported
• Operational Reports
  – Responsibility/Preparation as per Procedures (tie into Segregation of Duties principles)
  – Deal Entry/Listings
  – Settlement
  – Payments/Receipts
  – Bank Accounts
  – Fair Value
  – Accounting
  – Audit Trails
Treasury Internal Audit – Cash Management Controls

- Do you have day-to-day visibility of bank account balances?
- Is the number of bank accounts appropriate?
- Do you have an efficient bank account structure (such as inter-company netting, cash pooling)?
- Are surplus funds or short-term borrowings being optimally invested or utilised?
- Does your organisation produce short-term, medium-term and long-term cash forecasts?
- Does Treasury use all the forecasts?
- Do the forecasts coincide with the cash management structure so that the actual cash in bank can be easily tied back to the forecast?
- Is liquidity risk assessed, by sensitivity or scenario analysis?

Example finding: There is no sensitivity analysis being performed to assess the worst case scenario.
Treasury Internal Audit - Reconciliations

- Is there a corporate reconciliation register or sign-off process?
- Are reconciliations undertaken by independent staff?
- Is the Treasury system reconciled to the general ledger?
- Are bank accounts reconciled on a regular basis?

Example finding: The Treasury system is not reconciled to the general ledger regularly. There is no set timeline or guidelines for reconciliations.
Treasury Internal Audit – People & Culture

• Internal controls are **people-dependent**; they are developed by people, guide people, provide people with a means of **accountability** and people carry them out

• Effective control is about **good implementation**, not just good design

• Control issues don’t normally arise due to the lack of Policy and Procedure documents or ineffective systems, it is usually due to:
  - People don’t review business strategies correctly
  - People aren’t **trained** to perform their role
  - Lack of relevant qualifications and experience
  - People do not carry out processes correctly
  - People don’t query a deal that looks **questionable**
  - People get greedy - poorly designed bonus schemes
  - **Risk-taking culture**
  - People don’t follow up or investigate
Internal Audit Function – Evaluation Criteria

The Right Policy

The Right People

The Right Culture

Strong Governance Framework

Risk Management Embedded in Day to Day Operations
## Sample Risk & Control Matrix

<table>
<thead>
<tr>
<th>Scope Area</th>
<th>Key Focus points</th>
<th>Work Area</th>
</tr>
</thead>
</table>
| **Treasury Policy and compliance to Policy** | Alignment of Treasury Policy against objectives and observed Treasury activities:  
- Treasury structures, including front, middle and back office, and governance arrangements.  
- Current Treasury activity - key risks and mitigation via risk mitigation strategies and control mechanisms, and the alignment of risk mitigation strategies to SGSPAA’s overall business objectives and risk appetite.  
- Compliance with the Treasury Policy for liquidity, funding, foreign exchange, interest rate and other operational risks. | Perform walkthroughs with each function  
Perform compliance to policy checklist |
| **Treasury Risk Management, focusing on key treasury risks including credit risk, interest rate risk, foreign exchange risk and liquidity risk** | Processes and controls for identifying, quantifying, management and reporting of exposures covered by the Treasury Policy (including external counterparty credit risks, e.g. investments and derivative exposures)  
- Short and Long Term Funding Management, including authorisation and recording of deals within the Treasury system, settlements and post processing checks  
- Foreign exchange risk management, focusing on pre-authorisation and recording of transactions, reconciliation of transactions to the counterparty confirmation, settlements and post processing approvals  
- Interest rate risk management, focusing on pre-authorisation and recording of transactions, reconciliation of transactions to the counterparty confirmation, settlements and post processing approvals  
- Liquidity and cash flow management including daily cash management activities, monitoring and review of settlements and recording of payments, interest rate resets, monitoring and recording of incoming funds, and forecasting procedures  
- Treasury reporting to key stakeholders and the coverage of key treasury risks | Review of Policy document to understand risk appetite  
Perform walkthroughs (checking pre-authorisation, recording, rate reset, settlement, valuation and closing out of deals)  
Review risk reporting  
Operating Effectiveness of deal recording in TMS  
Review user access rights in the TMS  
Perform walkthrough of daily cash management and LT forecasting  
Review monthly Treasury reports  
Review risk management process in line with best practice (stress testing, worst case scenario testing etc.) |
<table>
<thead>
<tr>
<th>Scope Area</th>
<th>Key Focus points</th>
<th>Work Area</th>
</tr>
</thead>
</table>
| Procedures in place to capture, record, settle, account, report and monitor each type of treasury transaction; authorisation. | Processes and controls to execute, record, confirm, settle, account, report and monitor Treasury transactions, including manual processes and controls to complement system controls  
- Back office processes focusing on daily cash management, monitoring of settlements and approval and recording of payments, input of interest rates, and review of settlement diary and rate reset and monitoring and recording of incoming funds.  
- Month end accounting and reporting processes focusing on: review and authorisation of the interest accrual calculations and journals processed; reconciliation of treasury accounts and management’s review over the monthly Treasury Report and management accounts prepared;  
- Review of MTM valuations against Counterparty Bank MTM confirmations. | Operating Effectiveness of deal recording in TMS  
Review user access rights in the TMS  
Perform walkthroughs (checking pre-authorisation, recording, rate reset, settlement, valuation and closing out of deals)  
Operating Effectiveness of settlement process  
Review the user access rights to banking systems  
Perform walkthroughs with accounting including general ledger system  
Review the user access right to general ledger system |
| Investment / Idle funds / debt / exposure management, including setting and adherence to risk limits and parameters | Debt funding and financing, including exposure and rating compliance, covenant compliance and monitoring, and process for the identification and escalation of Policy compliance issues which may arise. | Perform walkthrough with middle office  
Review risk reporting for compliance with Policy  
Review breach register and process for escalation |
<table>
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</tr>
</thead>
</table>
| Foreign currency gains and losses| 5 Processes and controls in place for foreign exchange risk management activities, including the systems and process in place for recording, monitoring and reporting of FX gains and losses (including unrealised gains / losses)  
   o Month end accounting and reporting focusing on:  
     ▪ Review and authorisation of the interest accrual calculations and journals processed to update SAP  
     ▪ Reconciliation of Quantum to SAP Treasury accounts and management’s review over the management accounts prepared  
   o Review of MTM valuations in Quantum against Counterparty bank MTM confirmations, development of MTM valuation report and processing of MTM valuation journals in SAP | Perform walkthroughs with middle office for risk monitoring  
Perform walkthroughs with front office for FX deal execution  
Perform walkthroughs with accounting including general ledge system  
Review the user access right to general ledger system |
| Segregation of duties (dealing, settlement and accounting) | 6 Roles and responsibilities are not incompatible for key Treasury activities (front, middle, back office processing), authorisation, monitoring and reporting, and user access controls in place to support segregation of duties  
   o In particular, to focus on the segregation of duties for financial instrument transaction execution, confirmation and settlement, as well as in the areas of dealing, settlement and accounting | Review segregation of duties per market practise focusing on deal execution and operations |
| Treasury systems controls       | 7 Systems access focusing on review of user access controls and privileges within Quantum, Westpac Corporate Online and Bloomberg dealing platform (FXGO).  
   o Systems access focusing on review of user profiles and segregation of duties within Quantum and FXGO (including Treasury fraud control);  
   o User access and review of user profiles in the bank payment systems (Westpac Corporate Online). | Review of user access lists for TMS, Banking and General Ledger System to ensure segregation of duties report |
Internal Controls Breakdown
What can go wrong in Treasury functions?

What can go wrong?

- Fraud
- Poor Contingency Planning
- GFC
- Conflicts of Interest
- Error
- Corruption
- Sovereign & Bank Failure
- Market Turbulence
Potential Breakdown in Controls

- Lack of adequate management oversight
  - Inadequate assessment of risk
  - Inadequate or ineffective audit programs

- Lack of accountability
  - Inadequate or ineffective audit programs
  - Inadequate or ineffective monitoring activities

- Failure to develop a strong internal control culture
  - Inadequate communication on information
  - Lack of review of operating performance
Examples of Breakdowns in Controls

<table>
<thead>
<tr>
<th>Company</th>
<th>Year</th>
<th>Loss</th>
<th>What happened?</th>
</tr>
</thead>
</table>
| Barings | Feb 1995   | GBP £843m | • Nikkei Index Futures - Barings bank collapsed  
• unauthorised trading and speculative investing (primarily futures contracts).  
• Traders settling own transactions. |
| Daiwa   | July 1995  | USD $1,100m | US Treasury Bonds - Over 30,000 unauthorised trades over a period of 11 years by a former bond trader. |
| AIB     | Feb 2002   | USD $691m | FX Forwards/Options - A rogue trader hid $691m in currency losses over the course of 5 years.                                              |
| NAB     | Jan 2004   | AUD $360m | FX Spot/Options - Unauthorised spot trades on foreign currency options desk. Result of a failed speculative position where traders (globally) falsified profits to trigger bonuses over a number of years. |
| SocGen  | Jan 2008   | EUR €4.9b | (Stock Futures). Fraudulent transactions created by a trader - engaged in unauthorized trades totalling as much as €49.9 billion.            |
Case Study - Breakdowns in Controls

NAB Currency Options Trading Desk 1999 to 2004
Total Losses AUD $360m

Mechanisms employed by NAB Traders to conceal losses:
1. Using incorrect dealing rates for genuine transactions to shift P/L from one day to another (they called this ‘smoothing’)
2. Processed false spot and option trades to conceal losses
3. Using one sided internal deals
4. Traders supplied (incorrect) revaluation rates
5. There were ongoing limit breaches

What were the internal controls that were not designed or operating effectively?
Examples of Breakdowns in Controls

NAB Currency Options Trading Desk

• Breakdown in Controls:
  − **Design** of Back Office checking and reconciliation procedures
    ▪ Timing
    ▪ Checking of internal deals
  − Market risk reporting
  − Limit breaches not escalated
  − **Segregation of duties** – Traders supplied revaluation rates
  − External counterparties/ APRA/ Internal Audit – adverse findings / warnings

• The absence of a **culture** that valued risk management and compliance allowed the trades to be concealed (notwithstanding inappropriate design of back office procedures)
Internal Control Breakdowns – The Role of Culture

• Purely prescriptive and process orientated can not / does not cater for every contingency
• The following weren’t addressed:
  o Continual limit breaches
  o Unexplainable VaR results
  o Conflicting information – VaR and reconciliations
  o 3rd Party representations (APRA and other banks)
• Traders did not behave in honest manner by “smoothing results” (not thoroughly “analysed” by middle/back office) and concealing losses on the assumption that one day profits would be earned to reverse the losses
Current Hot Topics
Issues and How they’re related
Deloitte Global Treasury Survey

- FX volatility: 52%
- Visibility into global operations, cash, and financial risk exposures: 43%
- Cash repatriation: 40%
- Liquidity: 39%
- Entering/managing within restricted markets: 31%
- Inadequate treasury systems infrastructure: 30%
- Global tax reform impacts: 24%
- Leverage: 22%
- Other: 12%
- Treasury operation cost: 12%
- Lack of understanding Board/Exec Management: 10%
- Ability to respond to the board/ad hoc requests: 9%

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How do Strategic Challenges play out in reality?
Recurring IA Findings

Hedging Strategy and Market Volatility
- Is there a strategy in place and is this aligned to organisational strategy?
- What process was undertaken to assess the right strategy?
- Is there ongoing re-assessment of strategy?

Payment Fraud Risk
- What is the process in amending standard settlement instructions?
- Are payment folders secure?

Policy Framework
- Is the Policy documented, current and Board approved?
- Are objectives aligned with the organisation’s objectives?
- Is the approach and parameters for all Treasury risks well defined?

Monitoring & Governance
- Is Treasury Reporting transparent and complete?
- Is there a compliance monitoring program in place?
- Breach Reporting?
FX Volatility – What is the Problem?

AUD/USD Spot

2014/15
Average rate 0.8334
High/Low 0.9402/0.7050

2015/16
Average rate 0.7322
High/Low 0.7835/0.6827
A Hedging Strategy Should:

- Align with corporate goals
- Align with risk appetite of the Board
- Be based on preparedness, rather than predictions
- Stand the test of time
- Be transparent

Rarely is there a generic strategy that is perfect so that risks and benefits/trade-offs between different strategies should be clearly articulated.
Recurring IA Findings – lack of payment controls

Current Environment

- Manual Payments
- Multiple levels of approvals
- Non-standardised processes
- Paper everything
- No system integration
- Paper based environment
- Spreadsheets

Typical control issues

- No static data control
- Meaningless authorisations
- Single person processing
- Manual payment rekeying
- No reconciliation controls
- Duplication in processes
- Spreadsheets

“73% of finance participants were victims to payment fraud in 2015”
- AFP Payments Fraud & Control Survey
Recurring IA Findings – lack of payment controls

Enterprise Resource Planning (ERP)  Payment  Accounting

Supplier Master Data Management  3-way matching  Approval  Payment  Reconciliation

Straight-through processing (STP)

Examples of key processes within the P2P Function

• Vendor set up  • Purchase order  • Delegation of authorities  • Use of payment system such as Austraclear, host-to-host, online banking, or SWIFT
• Standard Settlement Instructions  • Goods received note  • Approvers  • Cash reconciliations
• Payment terms  • Invoice  • Segregation of duties  • General Ledger accounts reconciliation

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Recurring IA Findings – treasury policy

Treasury Policy

- Is Treasury Policy aligned with the strategy and the approach to risk?
- Is Treasury Policy approved by the Board and reviewed at least annually?
- Does the Treasury Policy set limits for each financial risk?
- Is adherence to treasury policies reviewed by the Board and independently audited?
- Does the Policy specify organisational structure for the management of financial risks including the authority and role of each body/individual?
- Does the Policy detail formal escalation procedures for breaches?
Recurring IA Findings – monitoring and governance

Utilise Existing Policy and Procedures

Create Inventory of Guidelines and Parameters

Link Inventory to Individuals / Committees

Develop Risk Weighting and Frequency

Document Compliance Report by Individual

Integrate with Policy and Procedures

Policy and Procedures incorporate Compliance

- Is there a Policy compliance (and monitoring) program in place?
- Is there a prudent mechanism in place for ongoing monitoring?
- Is there positive attestation to policy compliance?
- Is Treasury Reporting transparent, accurate & complete?
- Is Breach Reporting appropriate (e.g. passive vs active breaches highlighted)
- Monitoring counterparty credit risk – concentration limits; forward looking approach to monitoring credit ratings
## Treasury Operations and Control – Framework for Controls

### Management oversight of the control culture
- Board is responsible for approving and reviewing strategies, policies and organisational structure AND in promoting high ethical and integrity standards

### Risk Reconciliation & Assessment
- Risks which could adversely affect an organisation's achievements of goals need to be continually assessed
- Ongoing evaluation – what risks can be controlled, which can’t?

### Control Activities
- Establish policies & procedures
- Verify policies and procedures are being complied with

### Information & Communication
- Information must be reliable, timely, accessible and provided in a consistent format
- Systems cover all significant activities
- Systems must be secure, monitored independently and supported by adequate contingency plans

### Segregation of Duties
- No conflicting responsibilities
- Potential conflicts need to be identified, minimised and subject to independent monitoring

### Monitoring Activities & Correcting Deficiencies
- May include use of Audit Committee to assist Board
- Internal audit must be effective, comprehensive and carried out by independent and competent staff
Current Challenges for Treasury teams

- **Economic Uncertainty**
  - Low growth
  - Low IRs
  - FX volatility
  - Efficiency

- **Technology**
  - Mobile
  - Cloud
  - Robotics
  - Blockchain
  - Fraud

- **Social**
  - People
  - Tech need
  - Shortage of skills

- **Regulation**
  - Basel 3
  - DF, EMIR
  - AML, KYC
  - IFRS 9, 16
  - Tax / BEPS

**Funding**
- Capital Management
  - External
  - Internal
- Deleveraging
- Alternative Sources
- Block-chain
- BEPS

**Cash**
- Visibility
- Accessibility
- Forecasting
- Supply Chain Finance
- Procure to Pay
- Expenditure Channels
- Pay - Collect
- Technology

**Operations**
- Governance and Policy
- Technology
  - Integration
  - Robotics
  - Analytics
  - eBAM, IHB
  - Experience
  - Cybercrime

**Risk Management**
- Visibility
- Forecasting
- Reporting
- Technology
- IFRS 9 – new products
- Policy Review
- Counter party risk
Questions?
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