# SOUTH AFRICA'S APPROACH TO OPTIMAL MANAGEMENT AND RISK CONTROL OF ROLLOVER/REFINANCING RISKS

*CABRI POLICY DIALOGUE: MANAGING RISK IN THE DEBT PORTFOLIO, ABIDJAN, CÔTE D 'IVOIRE – SESSION 5*

**Presenter:** Jim Matsemela | Director: Market Risk, Asset & Liability Management, National Treasury | **3-4 October** 2017

national treasury
Department:
National Treasury
REPUBLIC OF SOUTH AFRICA

# Asset and Liability Management Division Structure

- **Deputy Director General**
  - Divisional Manager
  - Chief Directorate: Liability Management
    - Directorate: Retail Savings Bonds
    - Directorate: Debt Issuance and Management
    - Directorate: Debt Operations
  - Chief Directorate: Financial Operations
    - Directorate: Cash Management
    - Directorate: Accounting and Information
    - Directorate: Systems Integration
  - Chief Directorate: Strategy and Risk Management
    - Directorate: Market Risk
    - Directorate: Country Risk
    - Directorate: Credit Risk
  - Chief Directorate: Governance & Financial Analysis
    - Directorate: Corporate Governance
    - Directorate: Treasury Operations
    - Directorate: Investment Analysis
    - Directorate: DFI and Provincial DFI
  - Chief Directorate: Sectoral Oversight
    - Directorate: Water Sector
    - Directorate: General Sector
    - Directorate: Energy and Telecoms
    - Directorate: Transport and Defence
    - Directorate: Eskom

# Evolution of Rollover/Refinancing Risk Measures through Debt Reform Periods

Level of Sophistication

Debt/Funding Strategies underpinned by Risk Guidelines

**(Since 2005)**

*Integrated Risk Management Framework*

Evolving Debt Management Strategy Period

(**Since 1999)**

*Comprehensive Debt Management Framework*

Liability & Cash Management Period

(**1990-1998**)

*Proposed Framework of Philosophies & Principles of Debt, Cash & Risk Management*

*Macroeconomic Framework - GEAR*

Debt Issuance & Recording Period

(**Pre-1990**)

*De Kock Commission, Stals and Jacob's Reports identified need for Debt Capital Markets*

Evolution Phases

# Debt Issuance & Recording: Pre-1990

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# Highlights Pre-1990: Debt Issuance and Recording Period

- Focused on issuing debt given significant fiscal imbalance
- No clear debt management strategy
- Fragmentation and problems in coordinating debt management with monetary policy
- Problems in analysing and controlling the impact of debt servicing on the budget
- Debt management strategies focused on access to market and smoothing a fragmented maturity profile

# Domestic Debt Management Strategies

- State issued debt 3 or 4 times a year coinciding with redemptions
- Market making risk for account of Government
- Domestic debt instruments limited to TB's, fixed income bonds and zero coupon bonds
- De Kock Commission, Stals and Jacob's Reports identified the need for Debt Capital Markets

# Foreign Debt Management Strategies

- Focused on establishing country's name in the market
- Establish benchmarks for RSA financial institutions
- Foreign loan issues limited to 5 year maturity
- Foreign holdings limited to investors in UK, Germany, USA and Japan

# Liability & Cash Management Period: 1990-1998

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# Highlights 1990-1998: Liability & Cash Management Period

- Focus on integration of debt and cash management
- Reducing or eliminating foreign currency debt
- High level objective setting of financial risk management
- Identification and documentation of risks impacting government's cash flows and debt management

# Principles of Debt, Cash and Risk Management

- The "Proposed Framework of Philosophies & Principles of Debt, Cash and Risk Management" was developed following announcement in the budget review of 1996
- The macro stability envisaged through Growth, Employment & Redistribution (GEAR) Policy used as an anchor to implement debt capital market reforms and risk management framework

# 1st Proposed Optimal Risk Benchmarks

- Identified three components of the domestic maturity profile to achieve debt consolidation and smooth maturity profile
  - Long-term debt (10 to 30 years)
  - Medium-term debt (bond issuance out to 10 years)
  - Short-term debt (for cash/liquidity management and monetary policy purposes)

# 1st Proposed Optimal Risk Benchmarks – Con't

- Long-term debt (10 to 30 years):
  - Consistent with policies for regulating and encouraging long-term insurance and pension industries
- Medium-term debt (bond issuance out to 10 years):
  - Should comprise the bulk of the debt issuance
  - For smoothing the maturity profile 10% of debt should mature each year – new debt into on the run 10 year

# Challenges of implementing the 1st Proposed Optimal Risk Benchmarks

- Government's policy on the use of Derivative Instruments
  - Difficulties in getting political buy in to use derivatives in the management of public debt
- Development of RSA Debt Capital Markets
  - Market-making in government bonds started in 1998
  - Maturity structure of government debt was fragmented
  - The need to introduce benchmark debt instruments

# Evolving Debt Management Strategy Period: Since 1999

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# Highlights since 1999: Evolving Debt Management Strategy Period

- Internal research paper "Comprehensive Debt Management Framework", identified a number of policy gaps
  - Design and use of instruments
  - Use of derivatives
  - Maturities and change in the hierarchy of debt objectives
  - Proper coordination of funding activities of SOCs
  - Coordination of Debt Management and Monetary Policy

# Evolving Debt Management Strategy

- Advocated a shift from strategic to tactical debt management
- “Tactical debt management policies” means actively managing the outstanding stock of debt and its composition to reduce the cost of debt to within acceptable risk limits
- Government carried out debt consolidation (switches) and outright buy-backs as an operational mechanism to manage the refinancing profile and meet the cost objective

# Select Outcomes - Evolving Debt Management Strategy

- In 2001/02 fiscal year R52 billion switched into longer maturities to reduce fragmentation on the yield curve
- Switches from high coupon illiquid bonds into low coupon liquid bonds
- Managed to do outright buy-backs (R4.5 billion) of small illiquid bonds with outstanding amounts of less than R1 billion
- National Treasury used budget surpluses to buy back debt

# Debt Strategies underpinned by Risk Guidelines: Since 2005

Debt/Funding Strategies underpinned by Risk Guidelines

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# Highlights since 2005: Debt Strategies underpinned by Risk Guidelines

- In 2005/06 National Treasury completed review of the first (1999/2000) risk benchmarks
- To reduce refinancing risk - Optimal Debt Portfolio (historic simulation actual data dating back to 1980)
  - 3 Month Treasury Bill Rates
  - 5 year rate for Fixed Rate Debt & 10 year Fixed Rate Debt
  - 5 year rate USD Debt & 10 year USD Debt

# Strategies to reduce refinancing risk

- In 2009 following the 2007/08 global financial crisis which resulted in revenue underperformance and excessive borrowing requirements, ALM senior management posed a question, **"how much can government afford to redeem each year"**
- Country studies indicated various figures ranging from 10-30 per cent of total debt without specifying the methodology

# Strategies to reduce refinancing risk – con't

- National Treasury's proposed domestic refinancing guideline:
  - Used a portfolio-based approach combined with a time-based measure derived as (total domestic debt excluding T-bills divided by Weighted Average Term to Maturity or Modified Duration)
  - And then expressing the outcome as a percentage of total domestic debt – excluding T-bills

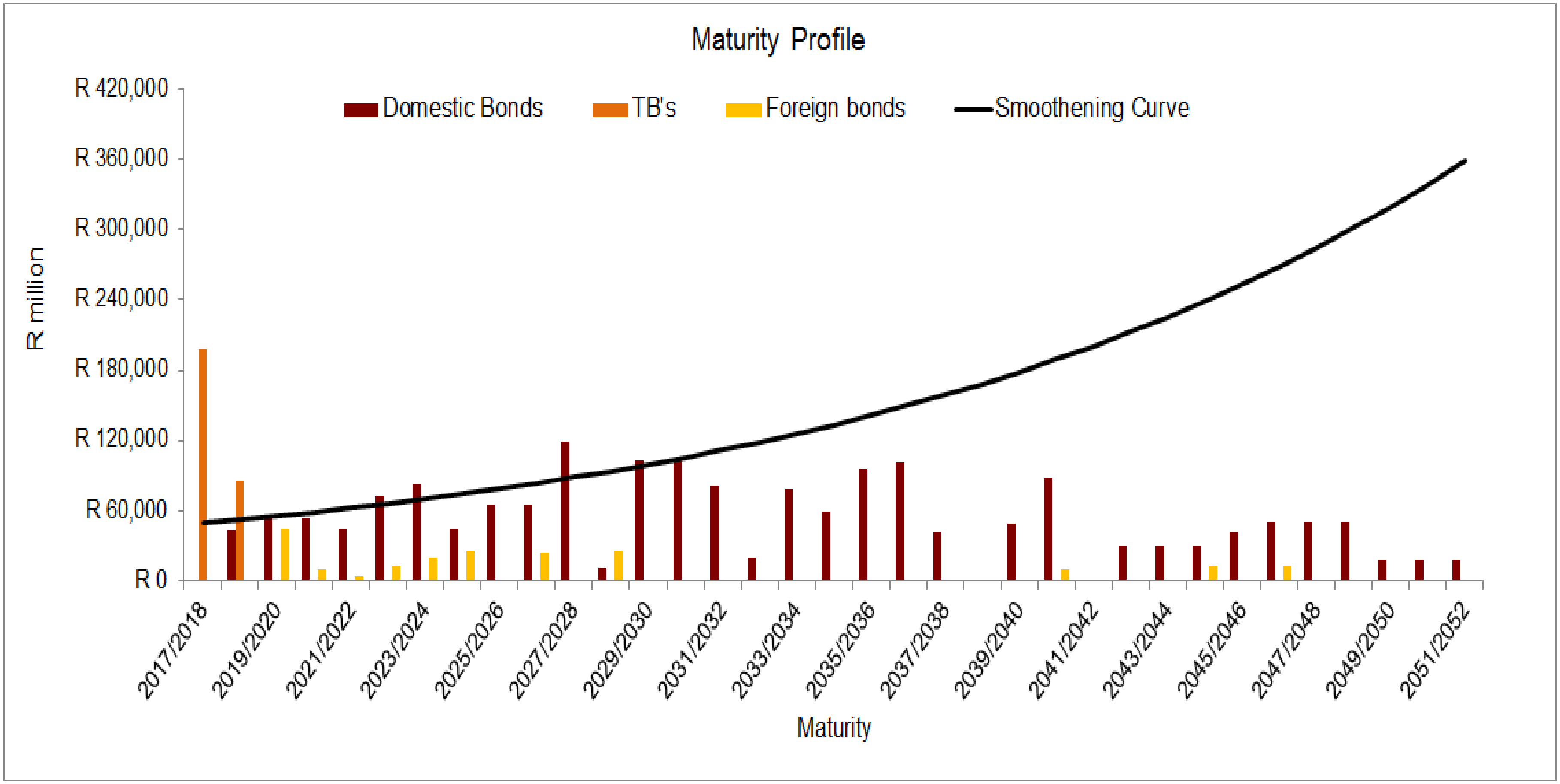
# Strategies to reduce refinancing risk – con't

- Based on the weighted average term to maturity of 10.2 years:
    - Government only needed to redeem 9.77 per cent of debt or R87.5 billion annually
- Based on the modified duration, which was shorter:
    - Government only needed to redeem 15.43 per cent of debt
- Redeeming R87.5 billion (which was a nominal guideline) seemed too high for cash management to raise in cash terms

# Smooth Maturity Profile (Affordable Cash Redemption Curve)

- Due to the need for a refinancing measure linked to the fiscal framework and cash flow cycle of government, National Treasury introduced a Smooth Maturity Profile (Affordable Cash Redemption Curve)
- This is the first for South Africa and is based on the growth rate of 6 per cent (can easily apply any growth rate), which is the upper band of the inflation target used by the SARB

# Smooth Maturity Profile (Affordable Cash Redemption Curve) con't

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# Refinancing Risk Benchmark Indicators

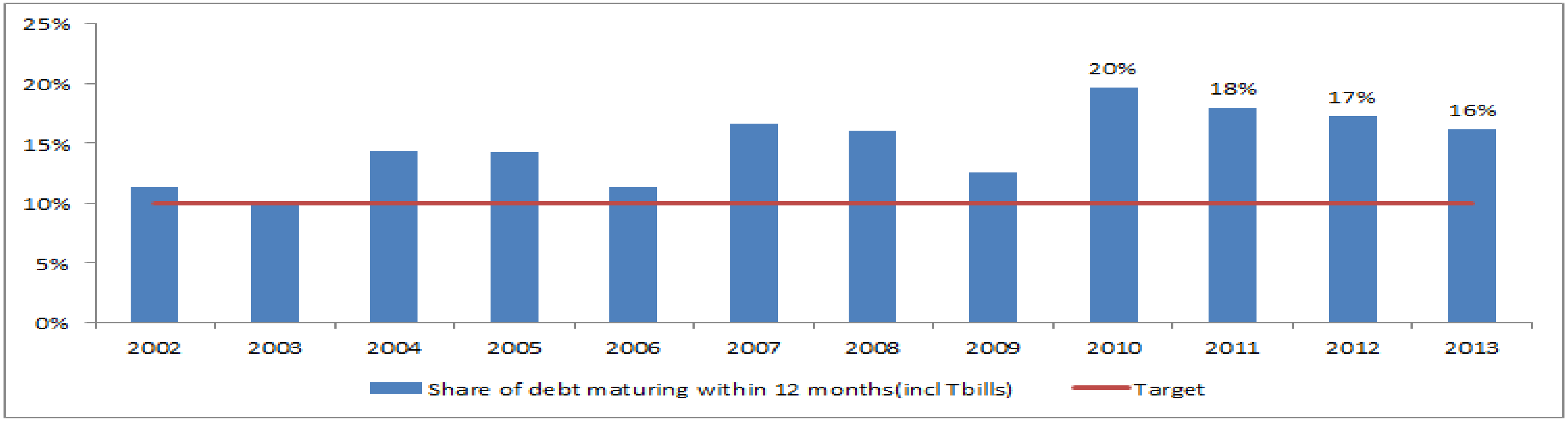
- In 2014/15 the Minister of Finance approved the implementation of the modified basket of strategic risk benchmarks to be operational for a 5 year period until 2018/19
- Of the 6 risk benchmark indicators introduced 4 relate to refinancing risk (short-term refinancing, medium-term refinancing and 2 weighted average term to maturity indicators)

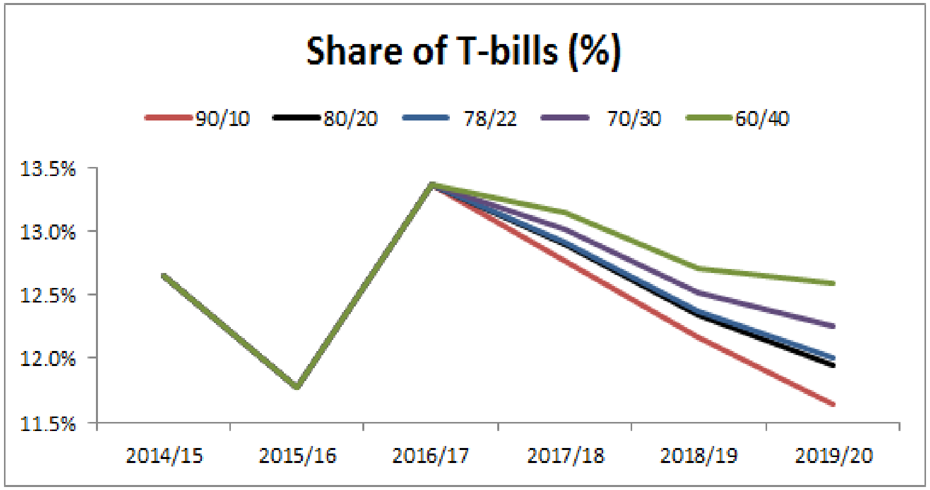
# New Risk Benchmarks – Implemented 2014-15 FY

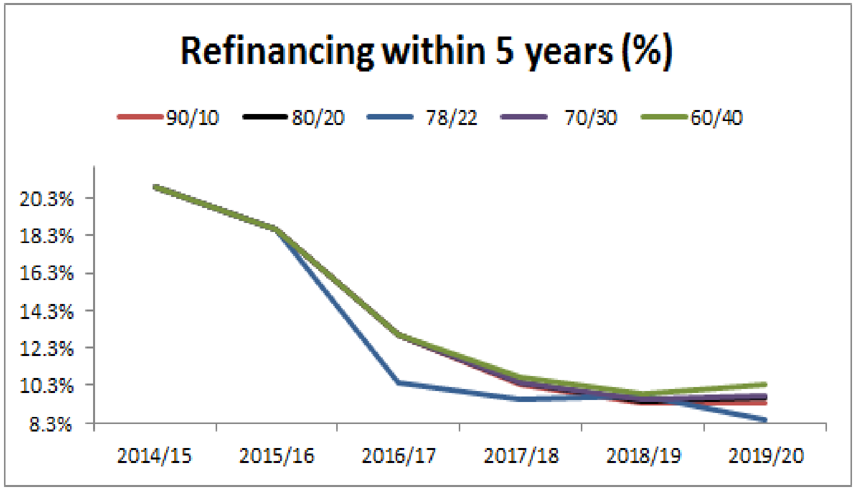
| New Risk Benchmark Indicator | Type of Risk Indicator | Numeric Risk Benchmark (Outcome) |
|---|---|---|
| 1. Share of debt maturing within a year (including T-bills) | Short-term Refinancing Risk - LIMIT | 15% of total domestic debt |
| 2. Share of debt maturing in 5 years (Fixed Rate Bonds and Inflation Linked Bonds) * | Refinancing Risk - LIMIT | 25% of total domestic debt |
| 3. ATM - (Fixed Rate Bonds + T-bills) | Refinancing Risk - RANGE | 10-14 years |
| 4. ATM - Inflation Linked Bonds (ILBs) | Refinancing Risk - RANGE | 14-17 years |
| 5. Share of ILBs as per cent of domestic debt | Inflation Risk - RANGE | 20-25% |
| 6. Share of Foreign Debt as per cent of Total Debt | Currency Risk - LIMIT | 15% |

*Cash tolerant redemption of R29 billion (2008) adjusted for 6% inflation rate annually (soft benchmark) to remain in place

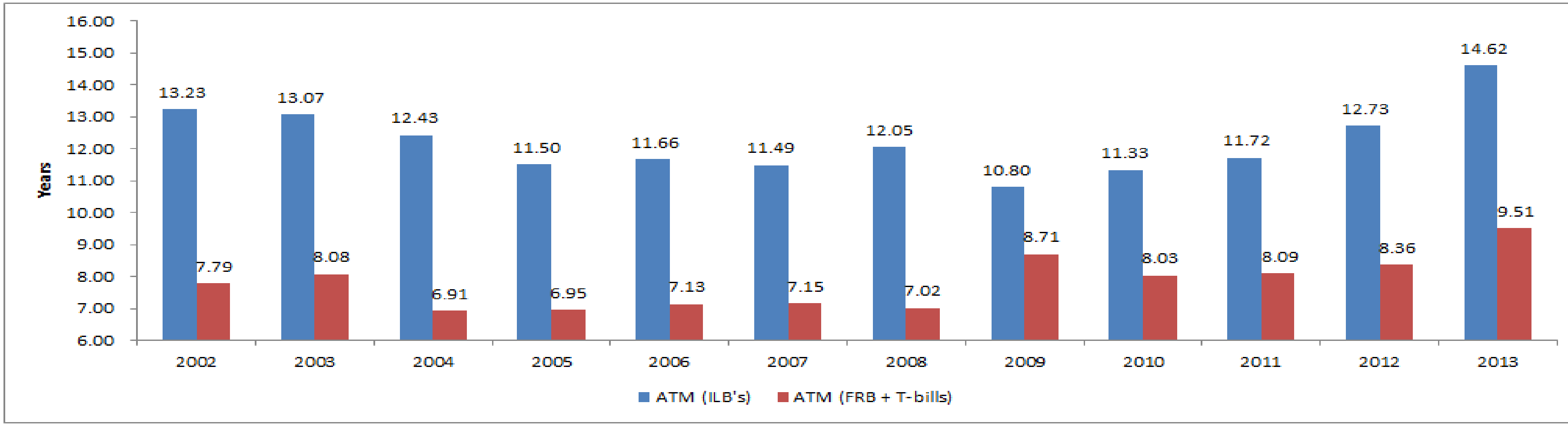
# Share of debt maturing in 12 months and 5 years

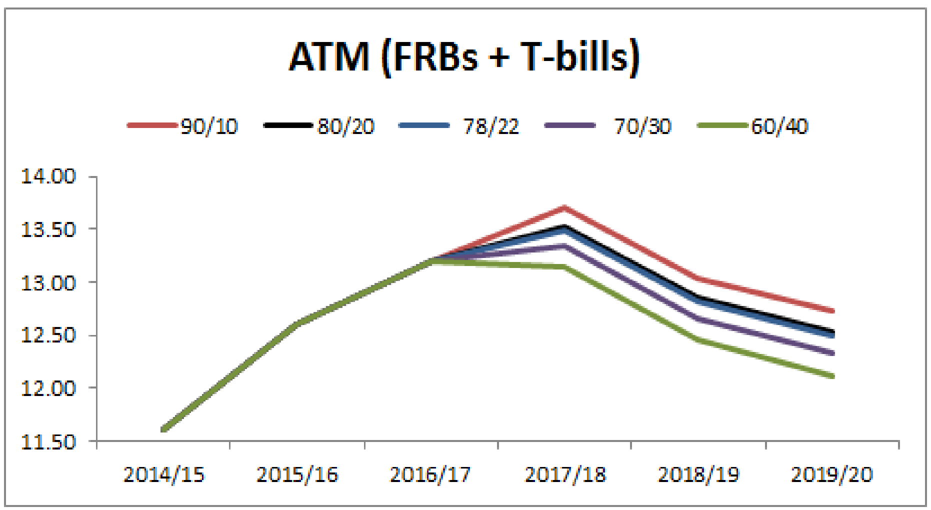


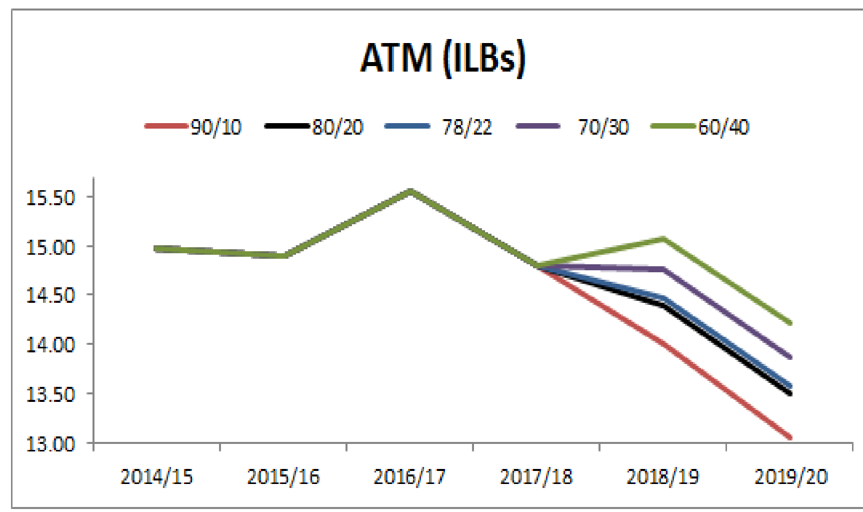



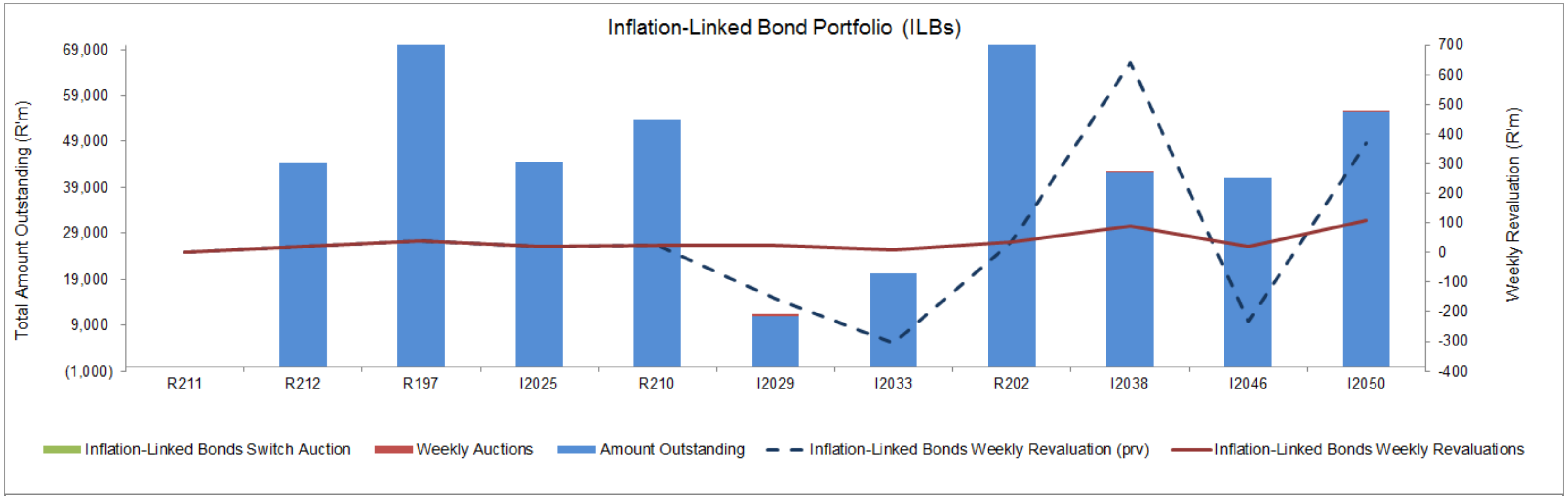
# Weighted Average Term to Maturities (ATMs)

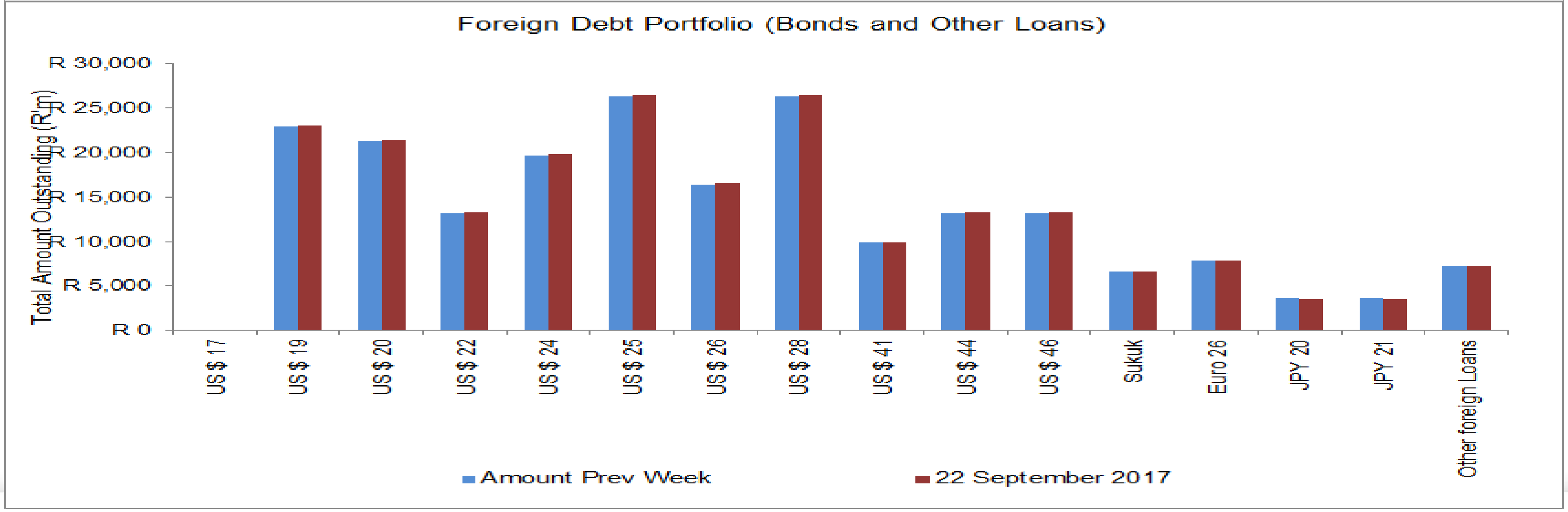


# Inflation Linked & FX Debt Revaluations Sep 2017



# Conclusion

- South Africa comes a long way in determining a suitable approach for rollover/refinancing risk that incorporates within the same framework:
  - ✓ The fiscal framework and impact of future issuances on refinancing profile
  - ✓ The cash flow cycle of government
  - ✓ Impact of switches and buybacks
  - ✓ Quantitatively deriving potential issuances
  - ✓ Deriving maximum issuance limits in each maturity across the curve
- South Africa has tried various measures of refinancing risk:
  - ✓ Portfolio or Nominal Based
  - ✓ Time-based
  - ✓ Cash-based
- A smooth maturity profile (affordable cash redemption curve) now anchors debt limits and debt consolidation or switches

# Thank You