

# PRESENTATION TO UNCTAD WORKSHOP

ALM RISK MANAGEMENT PRACTICES IN SOUTH AFRICA

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**national treasury**

Department:  
National Treasury  
REPUBLIC OF SOUTH AFRICA

# PURPOSE AND STRATEGIC MANDATE

# STRUCTURE OF PRESENTATION

1. Purpose and strategic focus
2. Mandate
3. Creation of a Risk Management Unit
4. ALM Risk Management Process

# Purpose and Strategic Focus

**The vision of Strategy and Risk Management within the ALM division is:**

*“To champion and instill a risk culture that underpins efficient decision making within ALM”*

*This means.....*

- To identify and manage the financial risks that have an impact on the objectives and goals of ALM (and on the National Budget) ;
- To put strategies in place to measure and mitigate these risks;
- To report on these risks.

# MANDATE

# PUBLIC FINANCE MANAGEMENT ACT (PFMA)

## Chapter 6 of the PFMA requires:

The National Treasury (public entities) to maintain a Financial and Risk Management System that is effective, efficient and transparent.

## Chapter 2 of the PFMA furthermore:

defines the scope of a Risk Management System to include the Revenue, Expenditure, Assets and Liabilities of Departments, Public Entities and Constitutional Institutions.

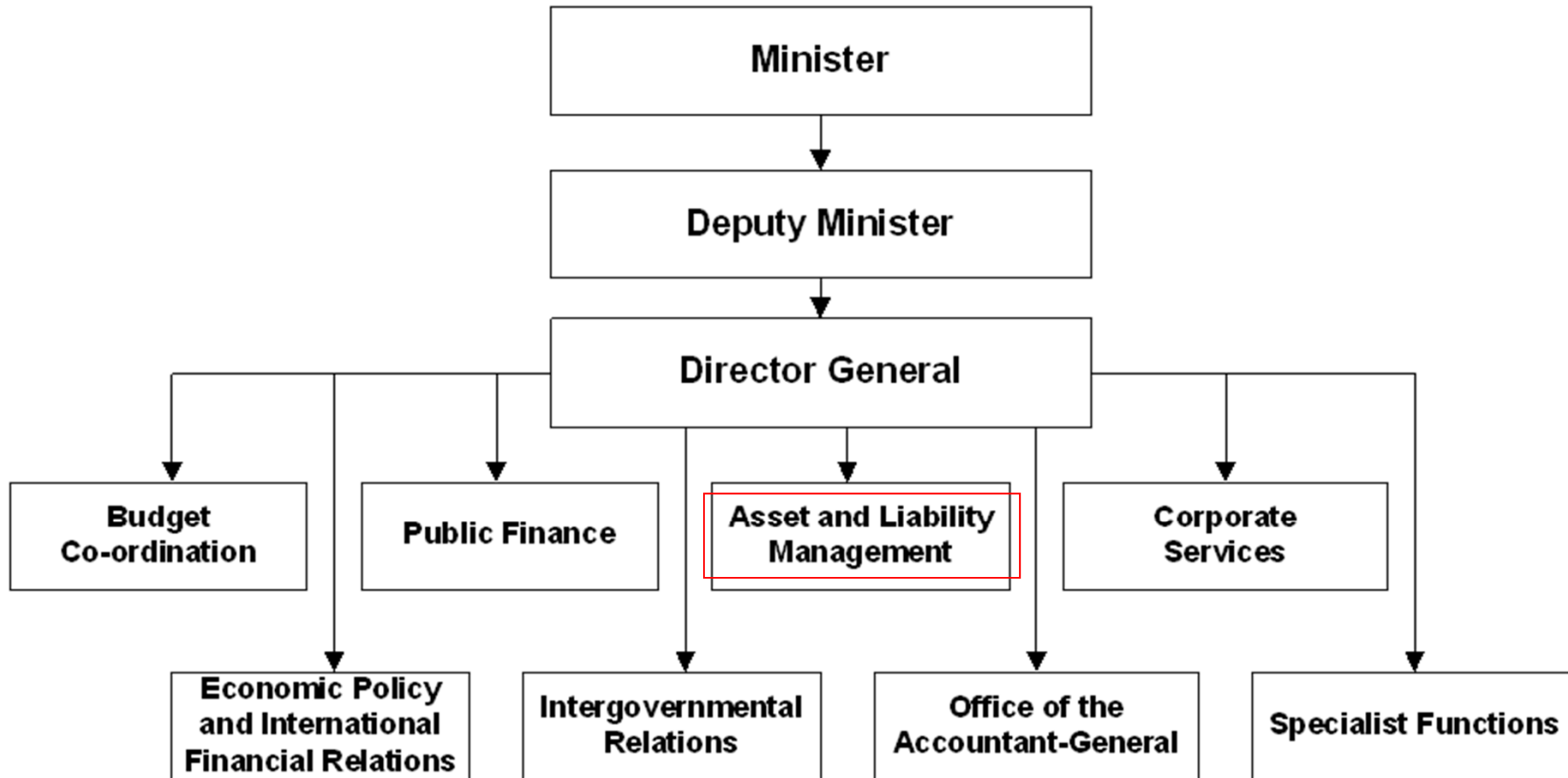
# CONSTITUTIONAL PROVISIONS

- The PFMA gives effect to sections of the Constitution of South Africa that requires national legislation:
  - *To introduce generally recognised accounting practices;*
  - *To introduce uniform treasury norms and standards;*
  - *To prescribe measures to ensure transparency and expenditure controls in all spheres of government;*
  - *To set the operational procedures for borrowing, guarantees, procurement and oversight over the various national and provincial revenue funds.*

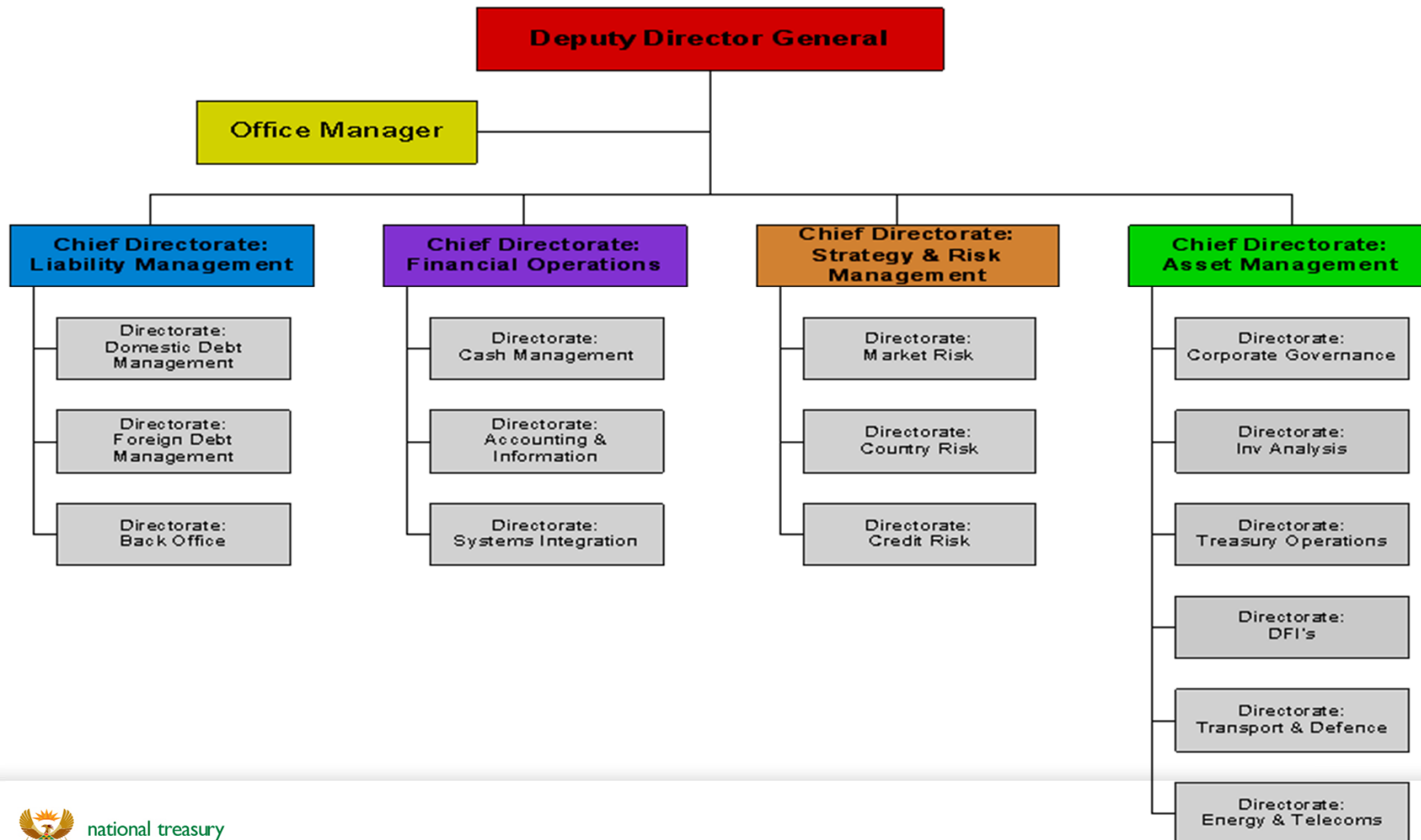
# THE CREATION OF A RISK MANAGEMENT UNIT



# NATIONAL TREASURY STRUCTURE



# ASSETS AND LIABILITY MANAGEMENT STRUCTRE



# LITERATURE REVIEW ON RISK MANAGEMENT WITHIN ALM FRAMEWORKS

- **ALM approach**
  - Duration of asset portfolio must equal debt portfolio (long duration)
  - Some assets sensitive to real interest rates (must issue ILBs)
  - Assets insensitive to exchange rate movements (little reason to hold foreign currency debt)
- **Portfolio Management approach**
  - To reduce the budgetary risk for government
  - Analyse the cost and risk trade-offs (efficient frontier)
- **Balance sheet approach**
  - Protecting government's net worth (i.e. ability to raise taxes)
  - Correlate debt service cost with revenue (positively) and expenditure (negatively)
  - Inclusive of contingent liabilities

# RISK MANAGEMENT PROCESS

*Risk identification*

*Risk prioritisation (ranking)*

*Risk rating analysis*

*Risk mitigation*

# FINANCIAL RISKS IDENTIFIED AND ACTIVELY TREATED WITHIN ALM

- **Financial Operations**
  - Surplus Cash held with the Banks (credit risk)
  - Foreign exchange deposits (market risk/credit risk)
- **Asset Management**
  - Contingent liabilities (credit risk)
  - Protecting shareholder value (credit risk)
- **Liability Management**
  - Debt portfolio (market risk)
  - Auction process (settlement risk)
- **International Sovereign Credit ratings**
  - Sovereign ratings (country risk)

# FINANCIAL RISK CATEGORIES

<b>Market Risk</b>	<b>Credit Risk</b>	<b>Country Risk</b>
Currency Risk Interest rate risk Liquidity Risk Inflation Risk Commodity Risk	Cash (Banks and SARB) Settlement Risk Explicit CL Systemic Risk	Sovereign Rating Implicit CL

# RANKING AND PRIORITISATION OF RISKS

Risk	(A) Strategic Importance  (1low, 5high)	(B) Risk Priority  (1 low, 5 high)	(C) Ease of Measure- ment  (1 difficult, 5 easy)	(D) Strategic Impact of Risk $D=A \times B \times C$
Risk 1	5	3	4	60
Risk 2	4	4	1	16
Risk 3	3	3	5	45

# RISK RATING SCALE

Risk Rating	Description	Risk class
1	Known loss	Very high risk
2	Doubtful	Very high risk
3	Substandard	Very high risk
4	Special attention	Very high risk
5	Marginal	High risk
6	Acceptable	High risk
7	Fair	Moderate risk
8	Good	Moderate risk
9	Strong	Low risk
10	Excellent	Very low risk



# MARKET RISK RATING CRITERIA

Currency Risk	Interest Rate Risk	Liquidity Risk	Commodity Risk	Inflation Risk
Size of Foreign debt as percent of total debt	Interest rate volatility	Smoothness of maturity profile	Volatility in gold price	Deviation from upper targeted band
Exchange rate volatility	Floating rate versus fixed rate debt	Cash flow matching of revenue to coupon and redemption	% drawdowns in gold	Cyclicality of inflation to GDP
Balance of Payments	Indexed versus nominal debt	Deviation from projected state debt service cost	% tax revenues from commodities	Volatility of oil price
Short-term foreign debt as percent of GDP	Foreign interest rate volatility	Deviation from funding strategy	gold reserves to gold liabilities	Slope of yield curve
Total reserves as percent of GDP	Impact of interest rate on tax revenues	Turnover of various fixed income instruments		Change in inflation expectations
Impact of exchange rate on government revenues	Matching interest rate term structure of assets and liabilities	Crowding out effect		
Change in market value of contingent liabilities				
Currency composition of foreign liabilities versus foreign assets				

# CREDIT RISK RATING CRITERIA

<b><i>Banks (for cash deposits and settlement risk)</i></b>	<b><i>SARB (deposits with the SARB)</i></b>	<b><i>SOEs (guarantees provided by the state)</i></b>	<b><i>Systemic risk (health of the banking sector)</i></b>
Capital Adequacy	Ownership structure	Adherence to the PFMA	Collective balance sheet size
Return on Equity	Role of the SARB	Management Quality	Concentration ratio
Debt to Equity	Monetary Policy performance	Diversification in core business	Collective capital adequacy ratio
Market position	Financial stability performance	Size relative to the market	Non-bank (retail) deposits as % of total liabilities
Management and track record	Financial markets performance	Profitability ratio	Return on net qualifying capital and reserves
Credit Rating	Payments and Settlement activities	Operating income as % of business (sales)	Efficiency ratio
	Banking supervision activities	Cost to income	Liquid Asset requirement
	Bank notes and coins	EBIT to sales	Non-performing loans
	Exchange control activities	Debt to assets ratio	Ownership structure: Corporate governance
		Debt to equity ratio (gearing)	IMF Article IV consultations (report on banking sector)
		Funds from operations to total debt	
		Interest cover ratio	
		Credit rating	

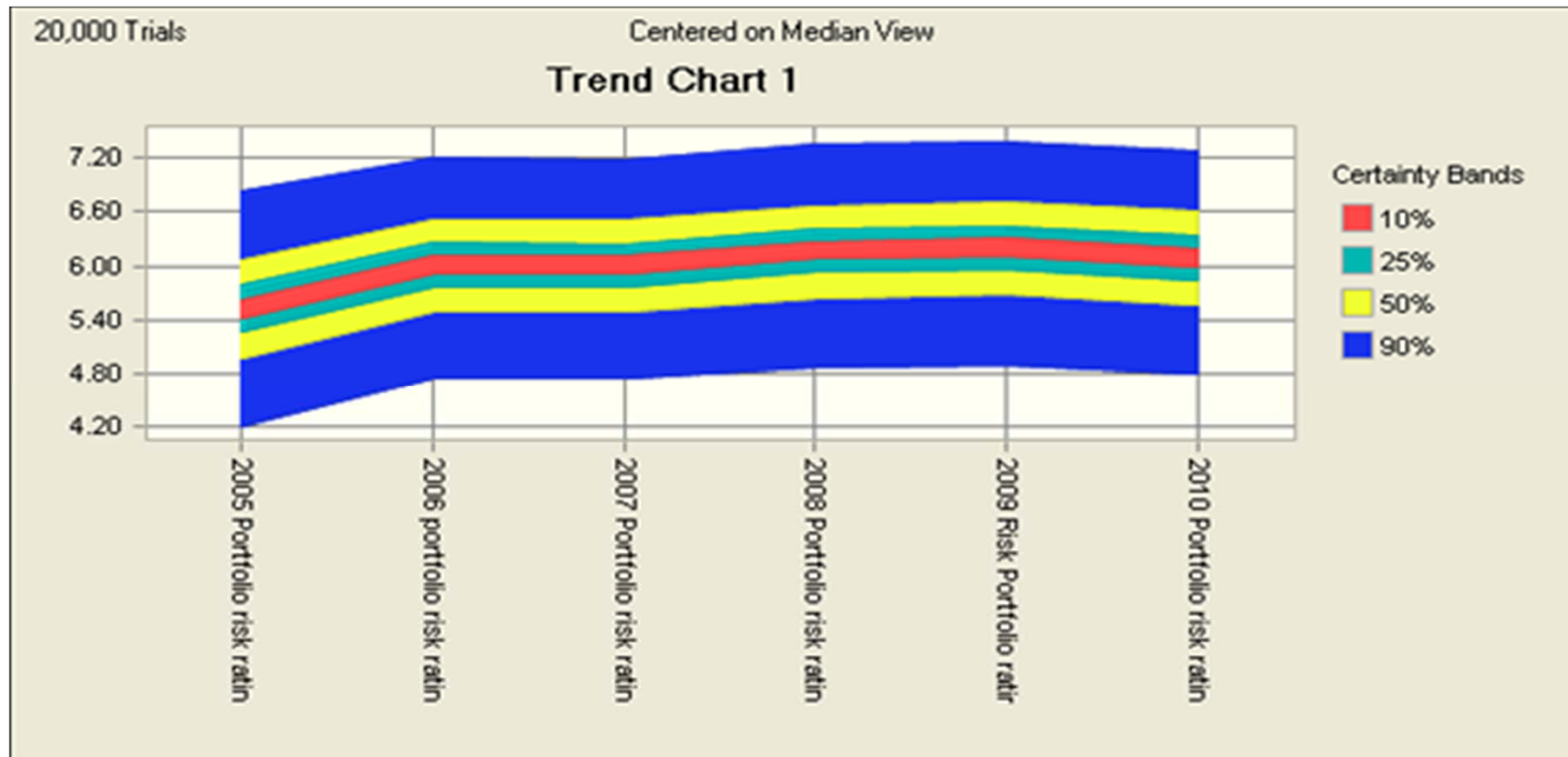
# COUNTRY RISK RATING CRITERIA

<i>Risks to Sovereign Rating</i>						<i>Implicit Contingent Liabilities</i>
<i>Economic Structure and performance</i>	<i>Government Finances</i>	<i>External payments and Debt</i>	<i>External vulnerability</i>	<i>Socio-economic environment</i>	<i>Political environment</i>	
Gross Domestic Savings to GDP	Government revenue to GDP	Current account balance to GDP	External vulnerability Indicator (EVI)	Unemployment	Free elections	Adherence to PFMA
Gross Investment to GDP	Government expenditure to GDP	External debt to GDP		HIV/AIDS	Institutional independence	Profitability ratio
Inflation	Government debt to GDP	Official foreign reserves		Income inequality	Leadership succession	Liquidity ratio
GDP growth				Skill development	Risk of War	Solvency ratio
						Cost to income
						Return on equity
						Liabilities to cash flows
						Loss ratio
						Investment yield

# FINANCIAL RISK PORTFOLIO OF GOVERNMENT

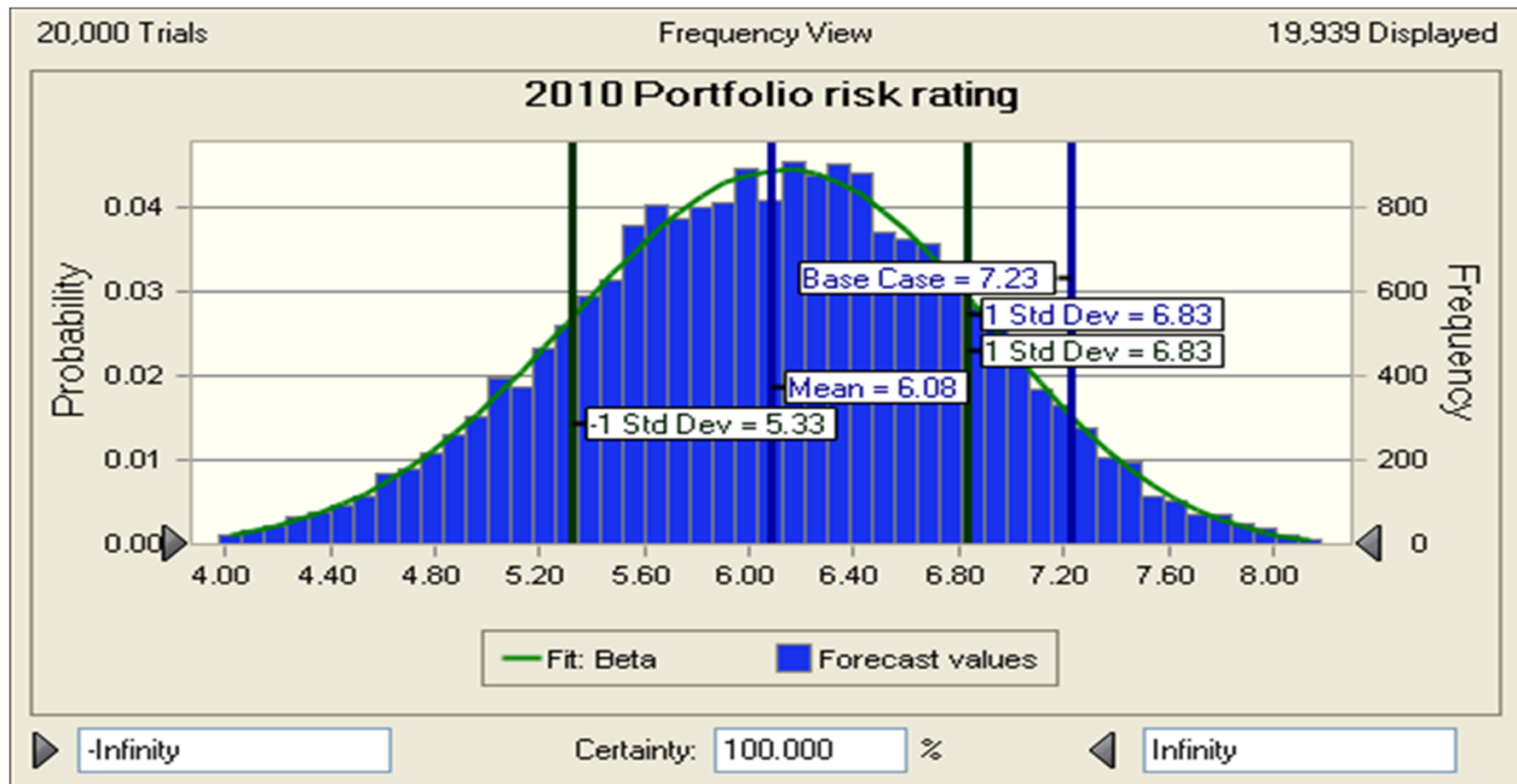
RISK PORTFOLIO OF GOVERNMENT ( by risk category)											
[excluding operational risk]											
risk prioritisation											
RISK CATEGORY	strategic importance	priority	ease of measure	strategic impact (weight)	weighting per risk category	weighting in total risk portfolio	risk rating 10 p scale 2005	risk rating 10 p scale 2006	weighted risk rating 2005	weighted risk rating 2006	
<b>MARKET RISK</b>											
Currency risk	4	5	5	100	0.2531646	0.1215067	6.23	7.3	0.756987	0.886999	
Interest rate risk	5	5	4	100	0.2531646	0.1215067	5.03	7.3	0.611179	0.886999	
Liquidity/re-financing risk	5	5	5	125	0.3164557	0.1518834	5.21	6.96	0.791312	1.057108	
Inflation risk	2	4	5	40	0.1012658	0.0486027	6.33	7.4	0.307655	0.35966	
Commodity risk	3	5	2	30	0.0759494	0.036452	6.4	8.4	0.233293	0.306197	
<b>CREDIT RISK</b>											
Counterparty: Cash	5	5	5	125	0.399361	0.1518834	7.08	7.6	1.075334	1.154313	
C. party: prime dealers	4	3	2	24	0.0766773	0.0291616	7.8	8.5	0.227461	0.247874	
C. party: SARB	4	3	4	48	0.1533546	0.0583232	7.5	8	0.437424	0.466586	
Gov explicit guarantees	5	5	4	100	0.3194888	0.1215067	5.2	6.2	0.631835	0.753341	
Systemic Risk	4	2	2	16	0.0511182	0.0194411	7.1	7.48	0.138032	0.145419	
<b>COUNTRY RISK</b>											
Risk to Sovgn rating	5	5	3	75	0.6521739	0.09113	6.02	6.3	0.548603	0.574119	
Impl. Cont. liabilities	4	5	2	40	0.3478261	0.0486027	4.91	4.7	0.238639	0.228433	
<b>Government risk portfolio rating</b>									<b>5.997752</b>	<b>7.067047</b>	

# PORTFOLIO RISK RATING TREND – 2005 TO 2010

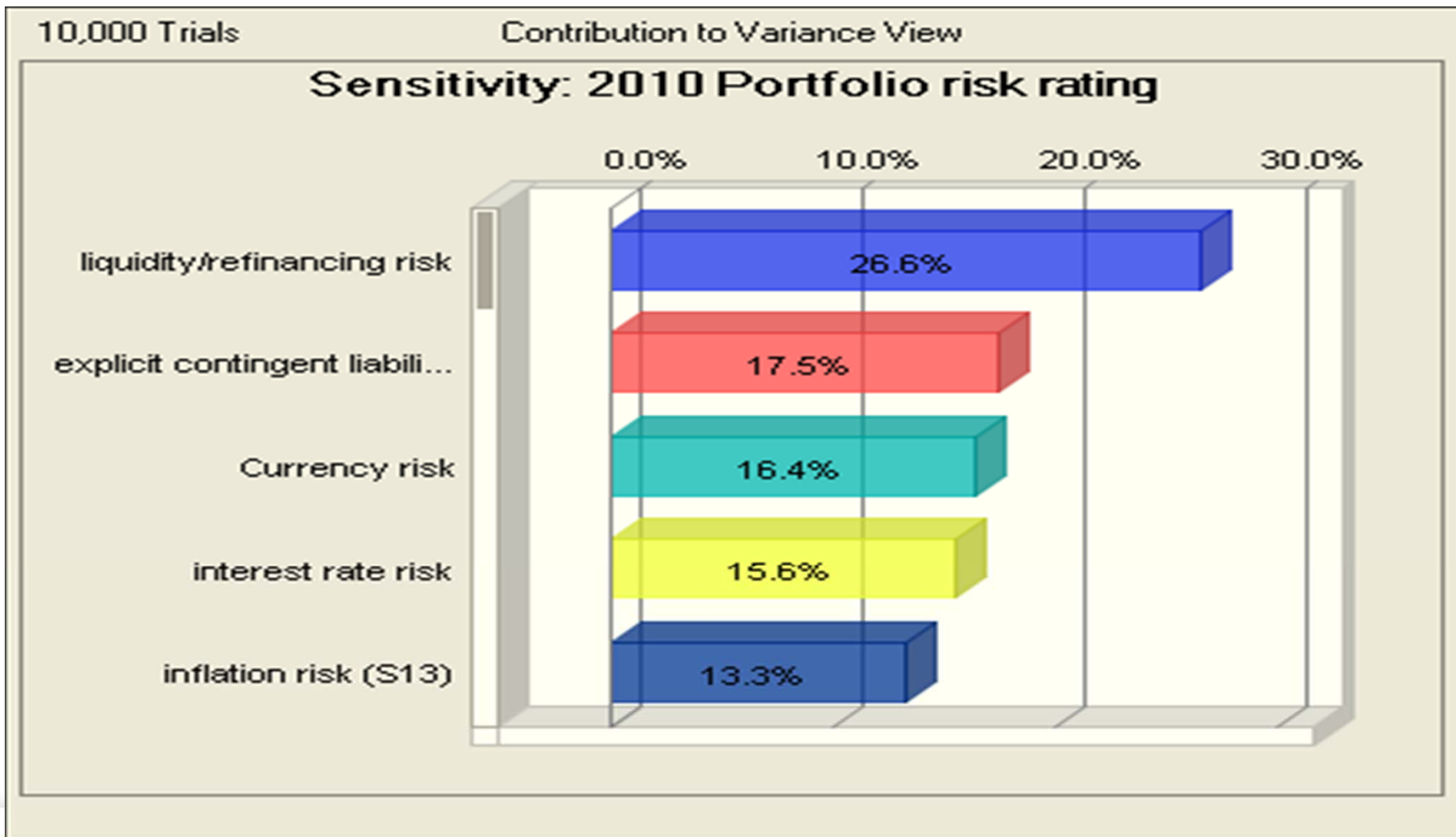


Improvement in risk rating through to 2009 and worsening thereafter

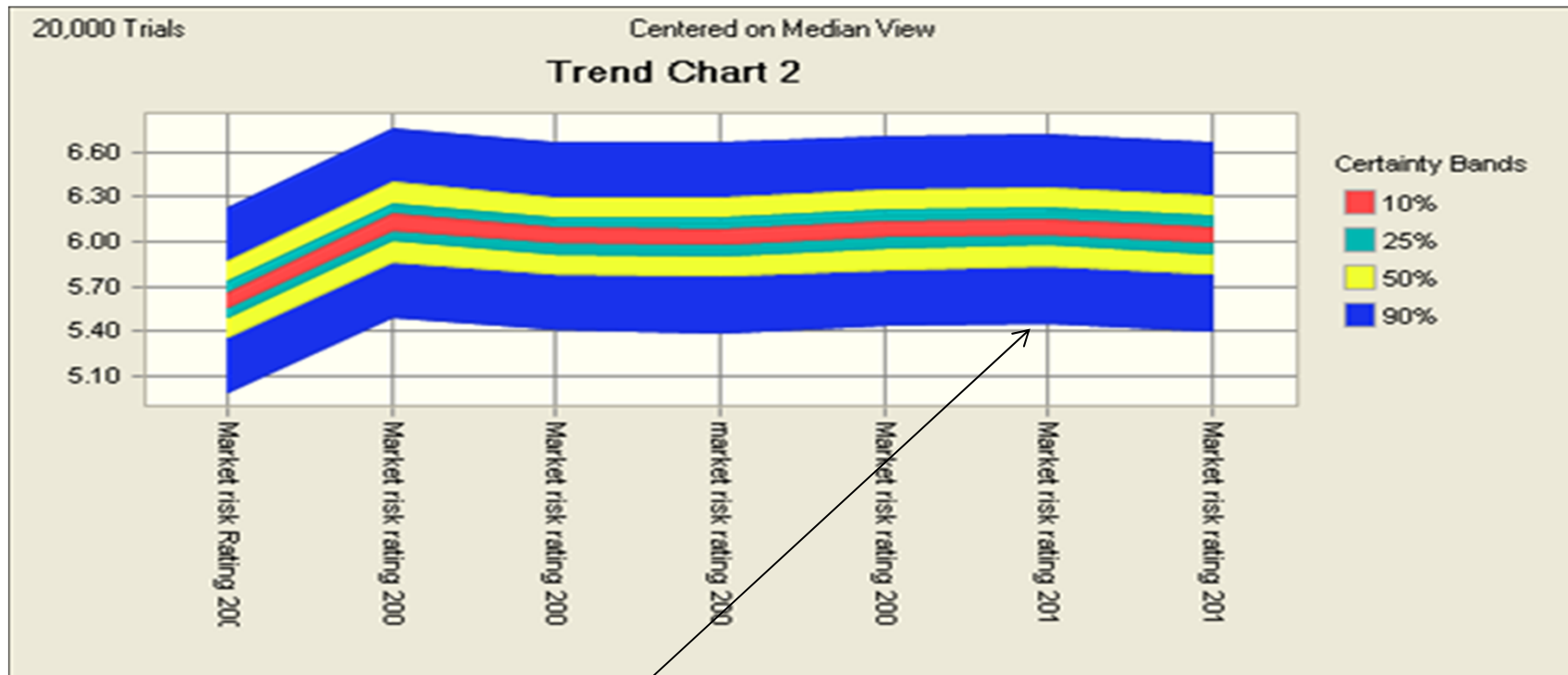
# 2010 PORTFOLIO RISK RATING DISTRIBUTION



# SENSITIVITY: 2010 PORTFOLIO RISK RATING



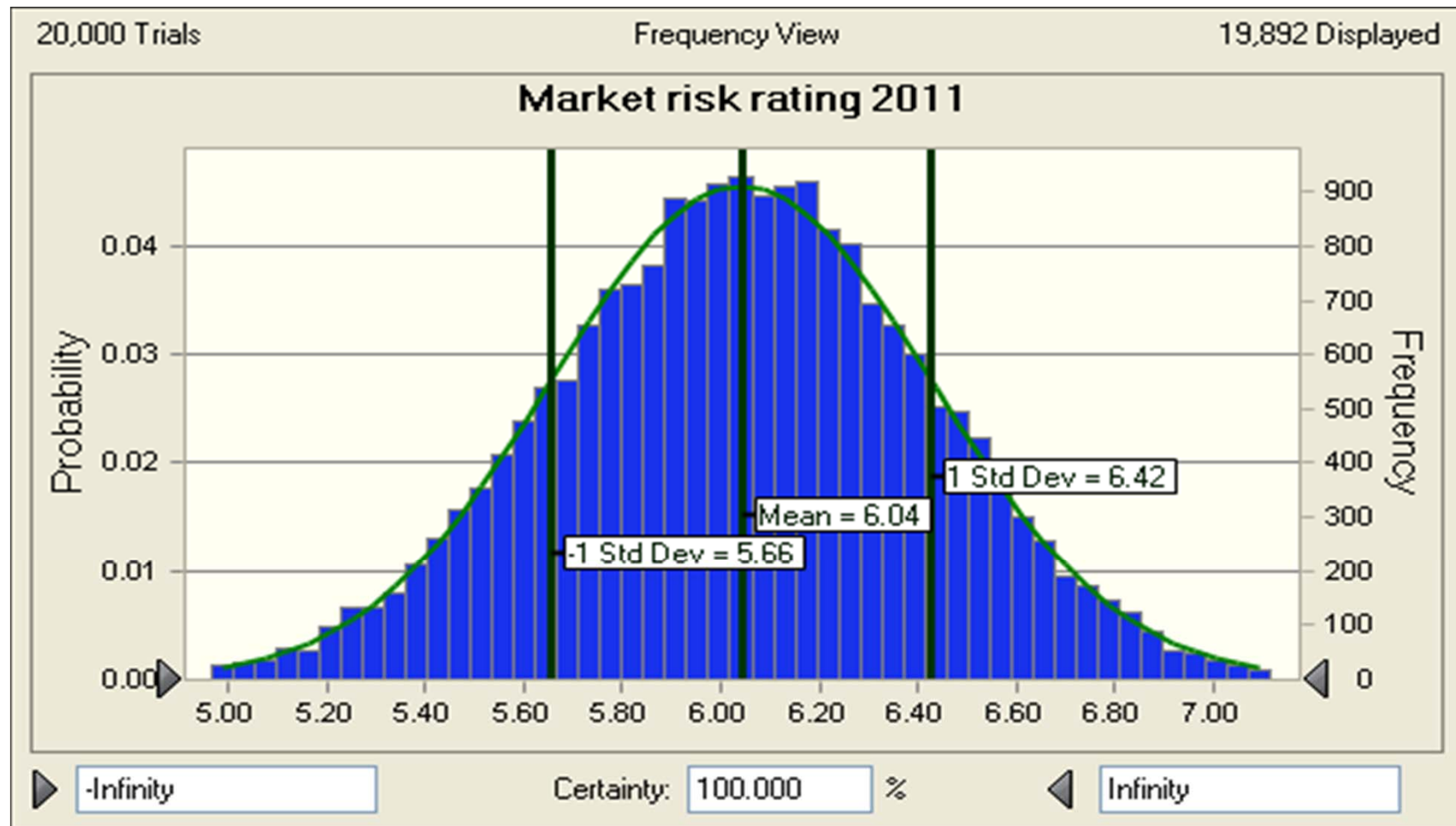
# MARKET RISK RATING TREND



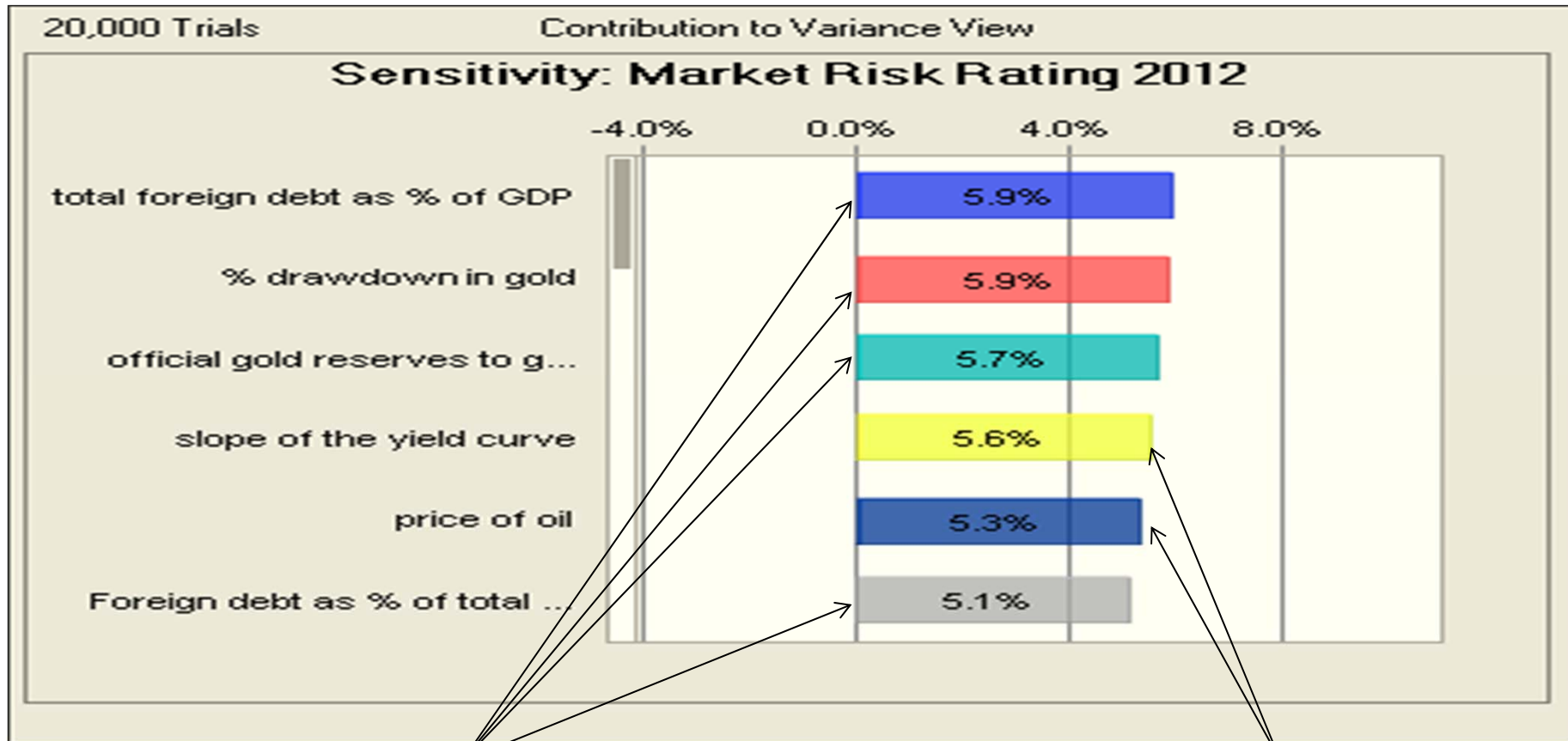
**LATEST WEAKENING FROM 2010 ONWARDS**



# 2011 MARKET RISK RATING DISTRIBUTION



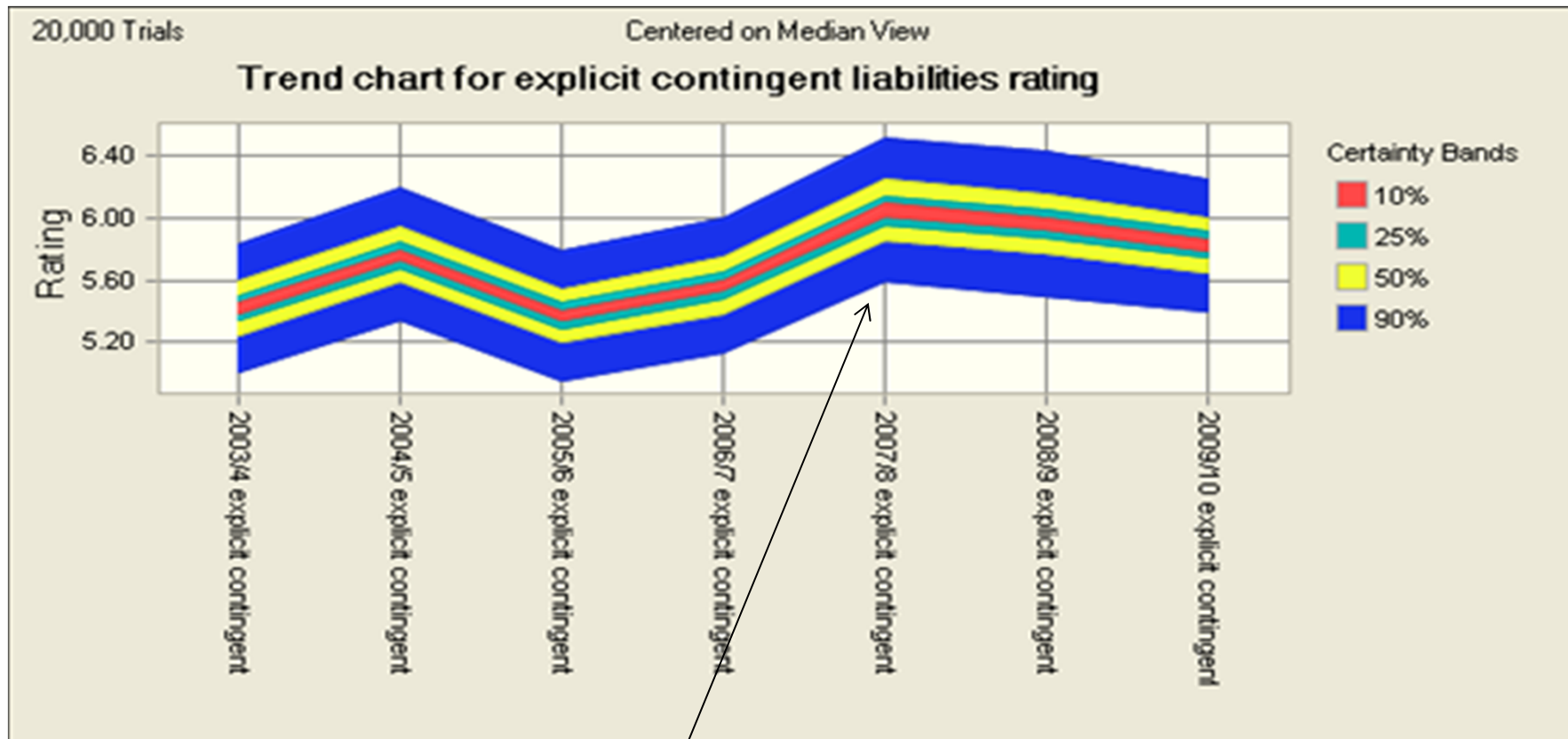
# MARKET RISK RATING SENSITIVITY



**POSITIVE ON THE RATINGS**

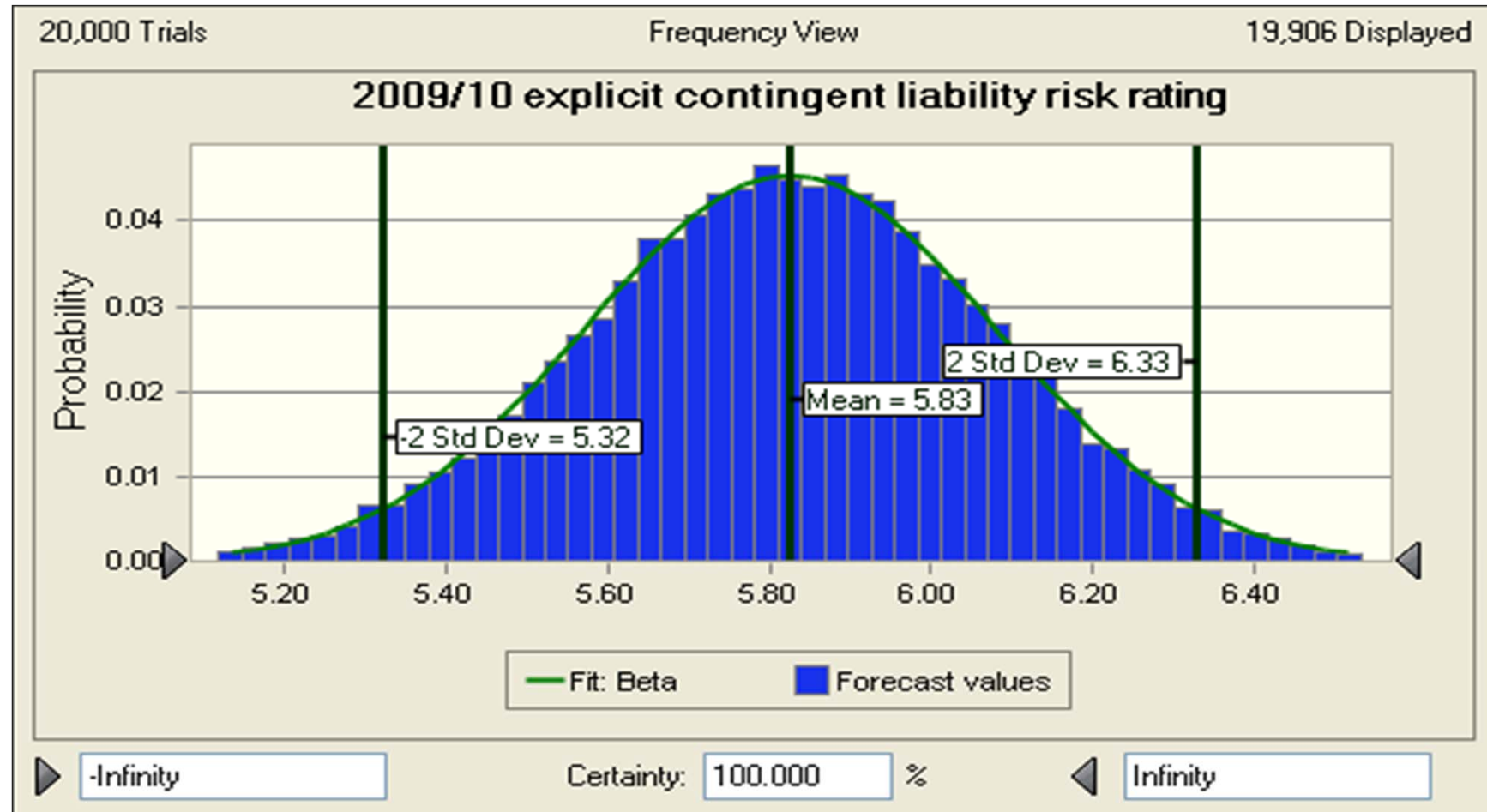
**NEGATIVE ON THE RATINGS**

# GUARANTEE RISK RATING TREND

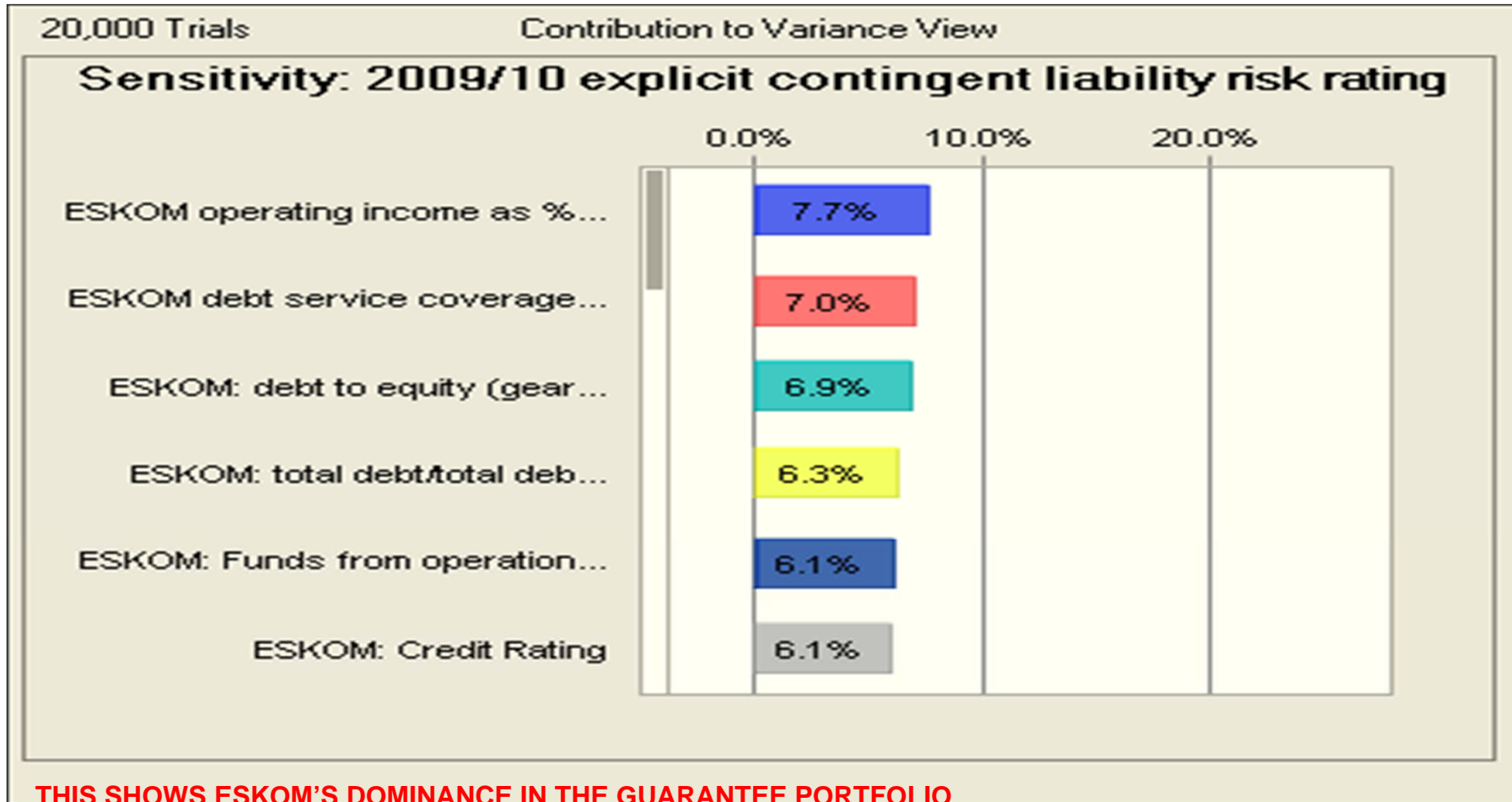


IMPACT OF THE CRISIS IN 2008

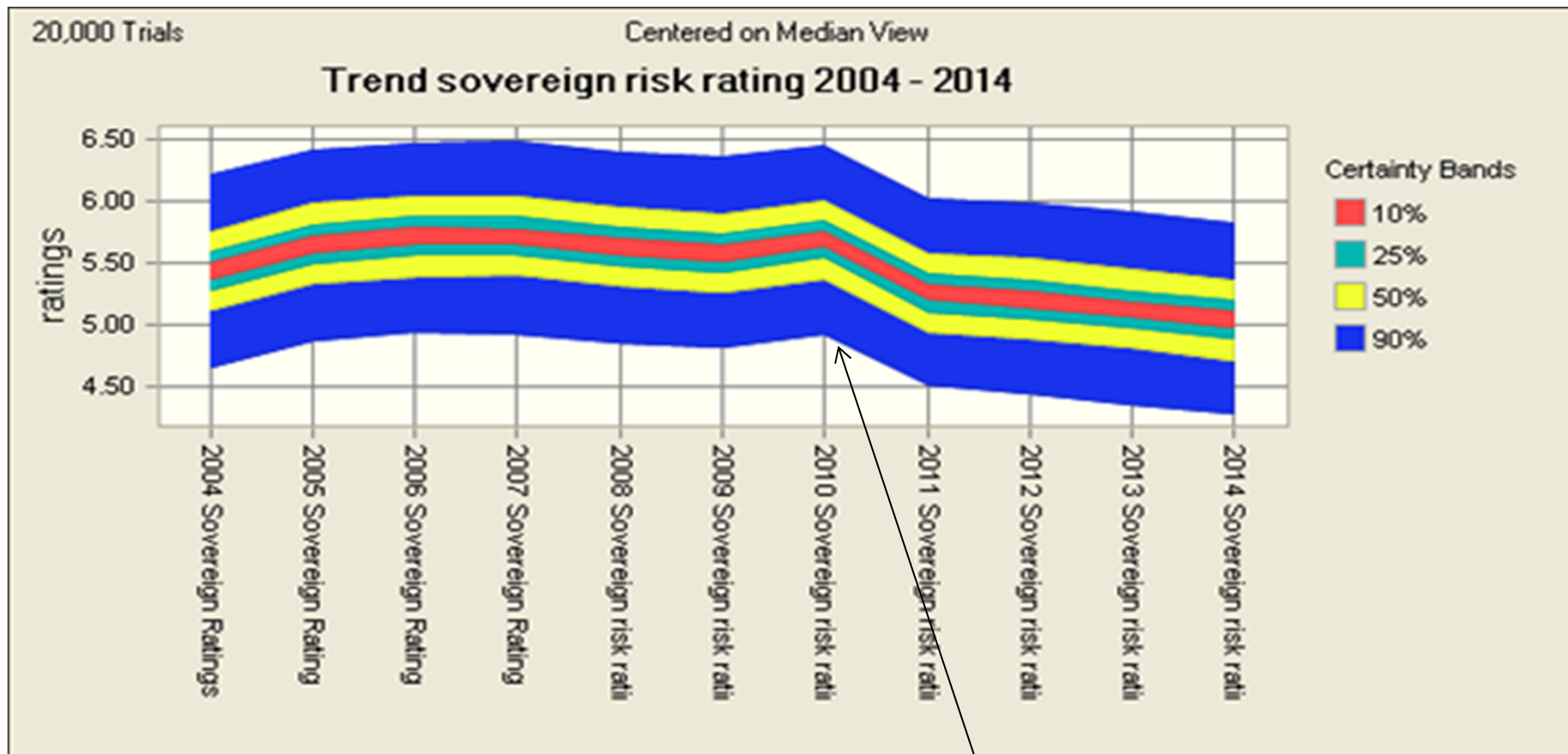
# GUARANTEE RISK RATING DISTRIBUTION



# GUARANTEE RISK RATING SENSITIVITY

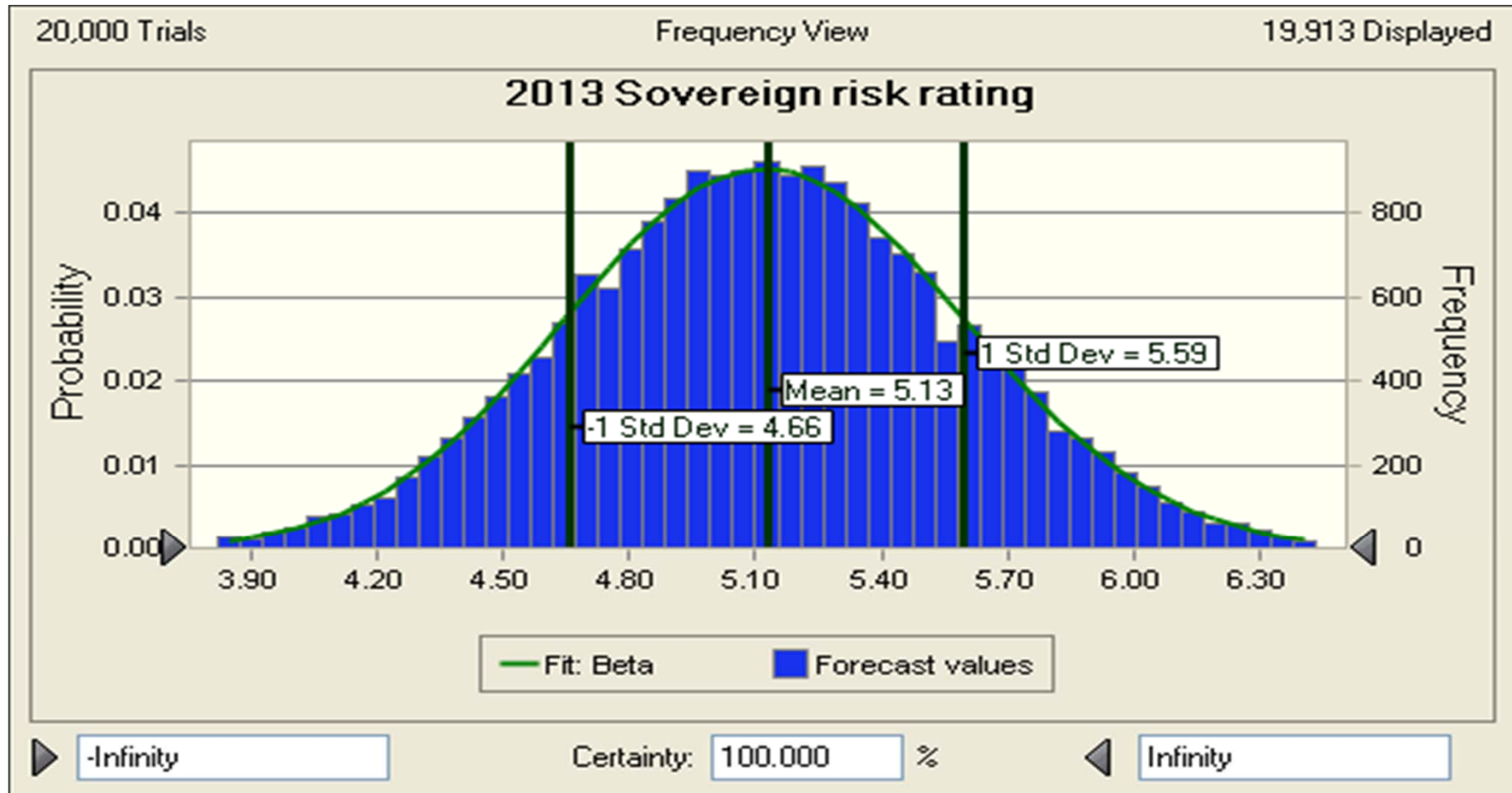


# SOVEREIGN RISK RATING TREND

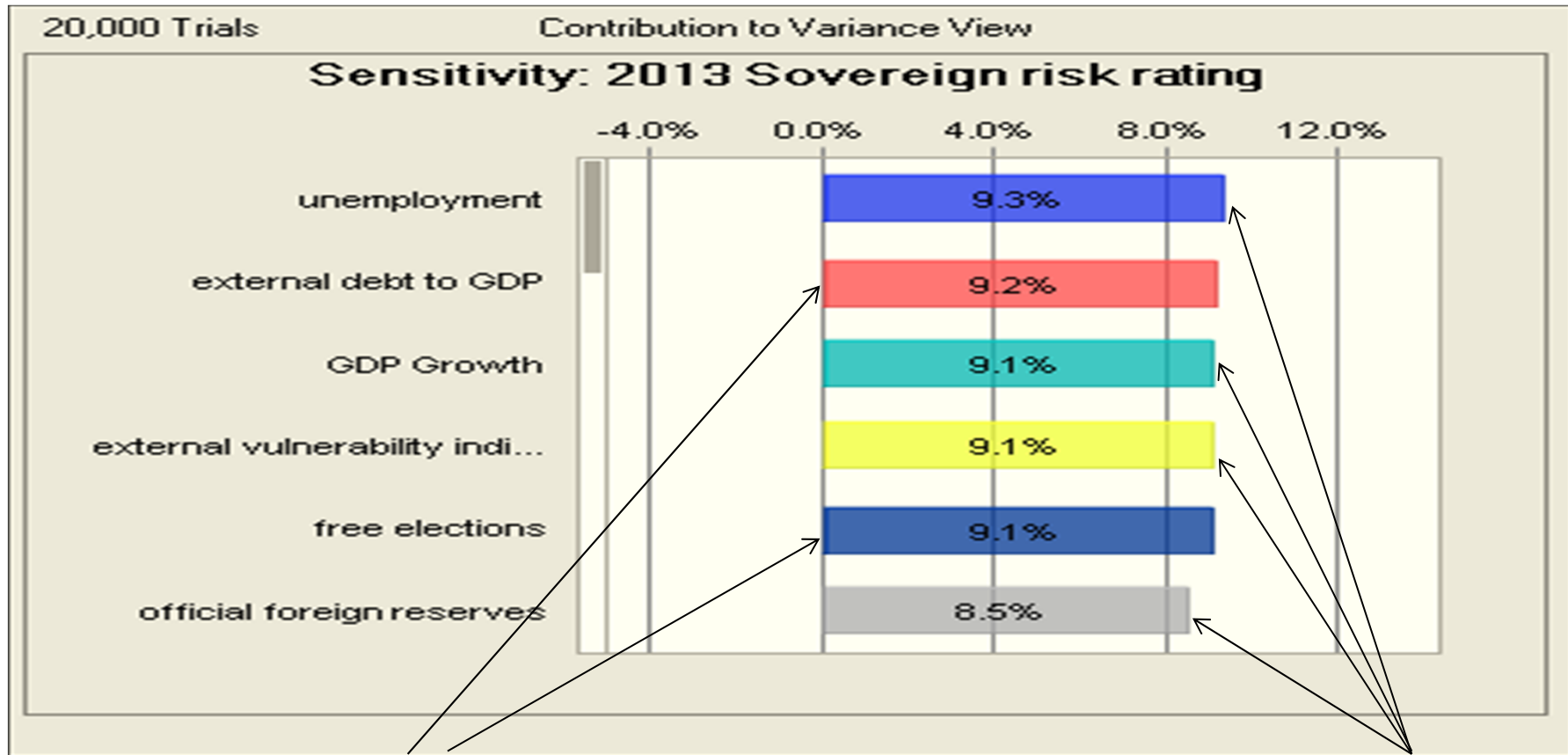


**DETERIORATION IN SOVEREIGN RISK RATING TREND FROM 2010 ONWARDS**

# SOVEREIGN RISK RATING DISTRIBUTION



# SOVEREIGN RISK RATING SENSITIVITY



Positive on rating

Negative on rating



# INTEREST RATE RISK AND CURRENCY RISK MITIGATION

Debt Composition & Selected Risk Indicators	March 2013	March 2014	March 2015	March 2016
<b>Fixed Rate Debt (%)</b>	<b>63.66</b>	<b>63.79</b>	<b>62.41</b>	<b>61.39</b>
Benchmark Bonds (%)	62.19	62.21	60.69	59.55
Retail Bonds (%)	1.47	1.59	1.72	1.84
<b>Non-Fixed Rate Debt (%)</b>	<b>36.34</b>	<b>36.21</b>	<b>37.59</b>	<b>38.61</b>
Short term loans (Outstanding T-bills)	13.46	14.48	14.31	14.20
Floating Rate Debt	0.00	0.00	0.00	0.00
Inflation Indexed	22.81	21.66	23.21	24.40
Other (Zero coupon bonds)	0.08	0.06	0.06	0.01
<b>Total Domestic Debt</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
Average Maturity excluding T-bills (years)	11.4	12.9	13.70	14.00
Modified Duration excluding T-bills (years)	7.30	7.60	7.80	7.70
Average Maturity including T-bills (years)	9.90	11.10	11.80	12.10
Modified Duration including T-bills (years)	6.40	6.60	6.70	6.70
<b>Foreign Debt (%)</b>	<b>8.00</b>	<b>7.10</b>	<b>6.90</b>	<b>6.50</b>

**INTEREST RATE RISK AND INFLATION RISK GUIDELINE:**

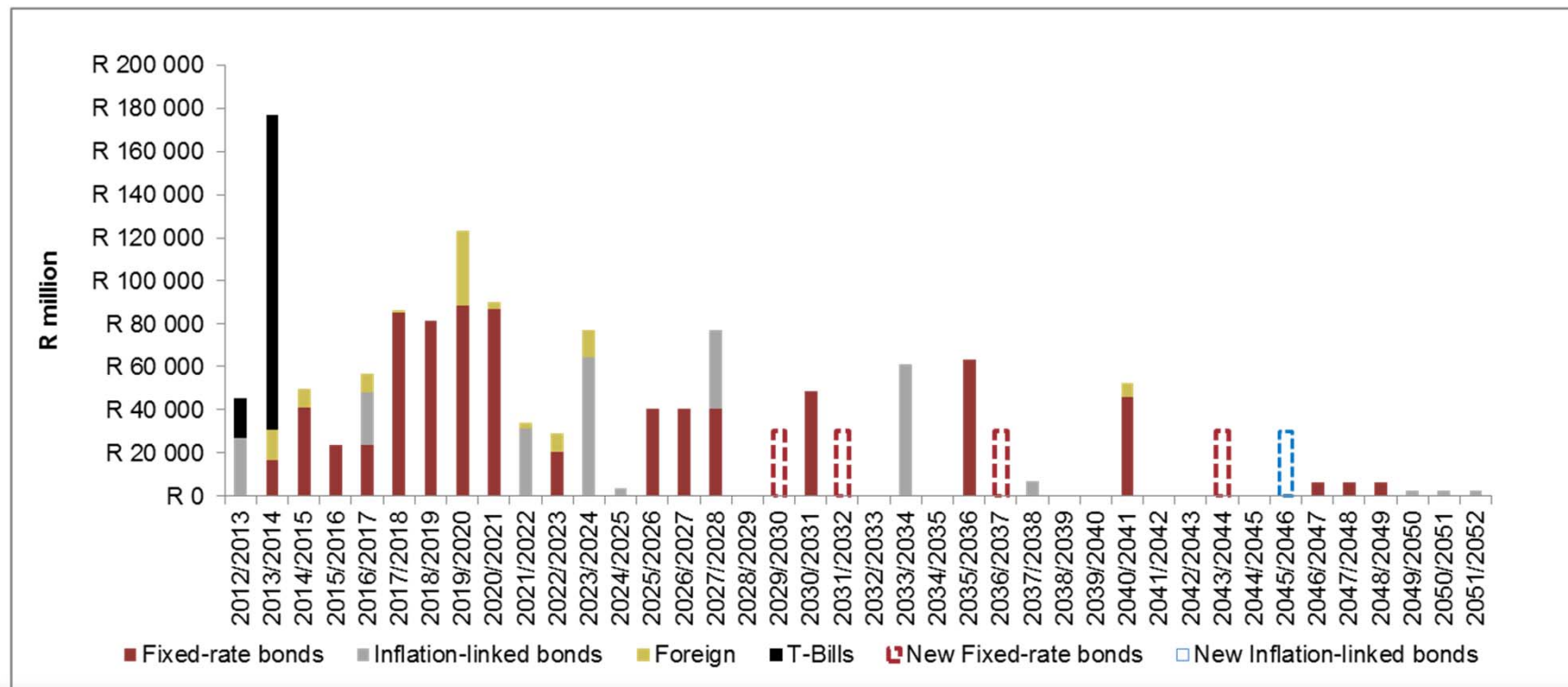
**70/30 FIXED RATE TO NON-FIXED RATE DEBT**

**CURRENCY RISK GUIDELINE:**

**FOREIGN DEBT TO TOTAL DEBT NOT TO EXCEED 20%**

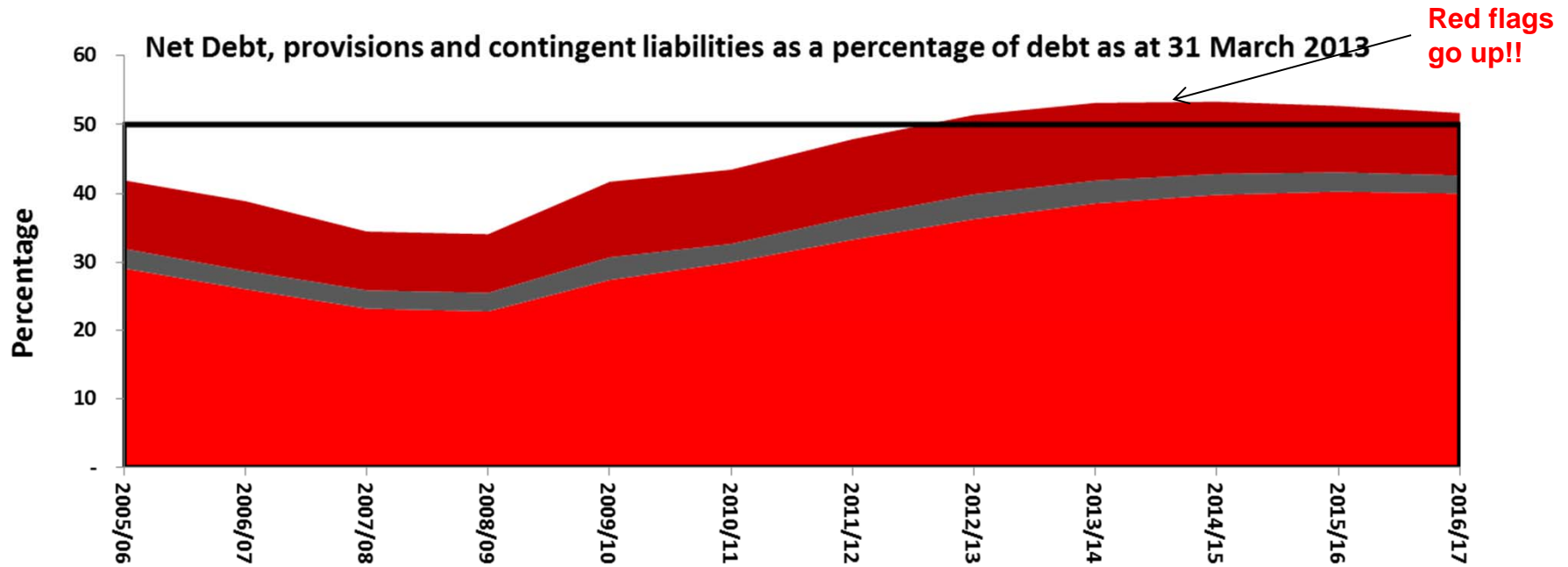
# REFINANCING/LIQUIDITY RISK MITIGATION

- Active management of refinancing risks
- Average term-to-maturity extended to 13 years



Source: SA National Treasury

# DEBT SUSTAINABILITY MEASURE



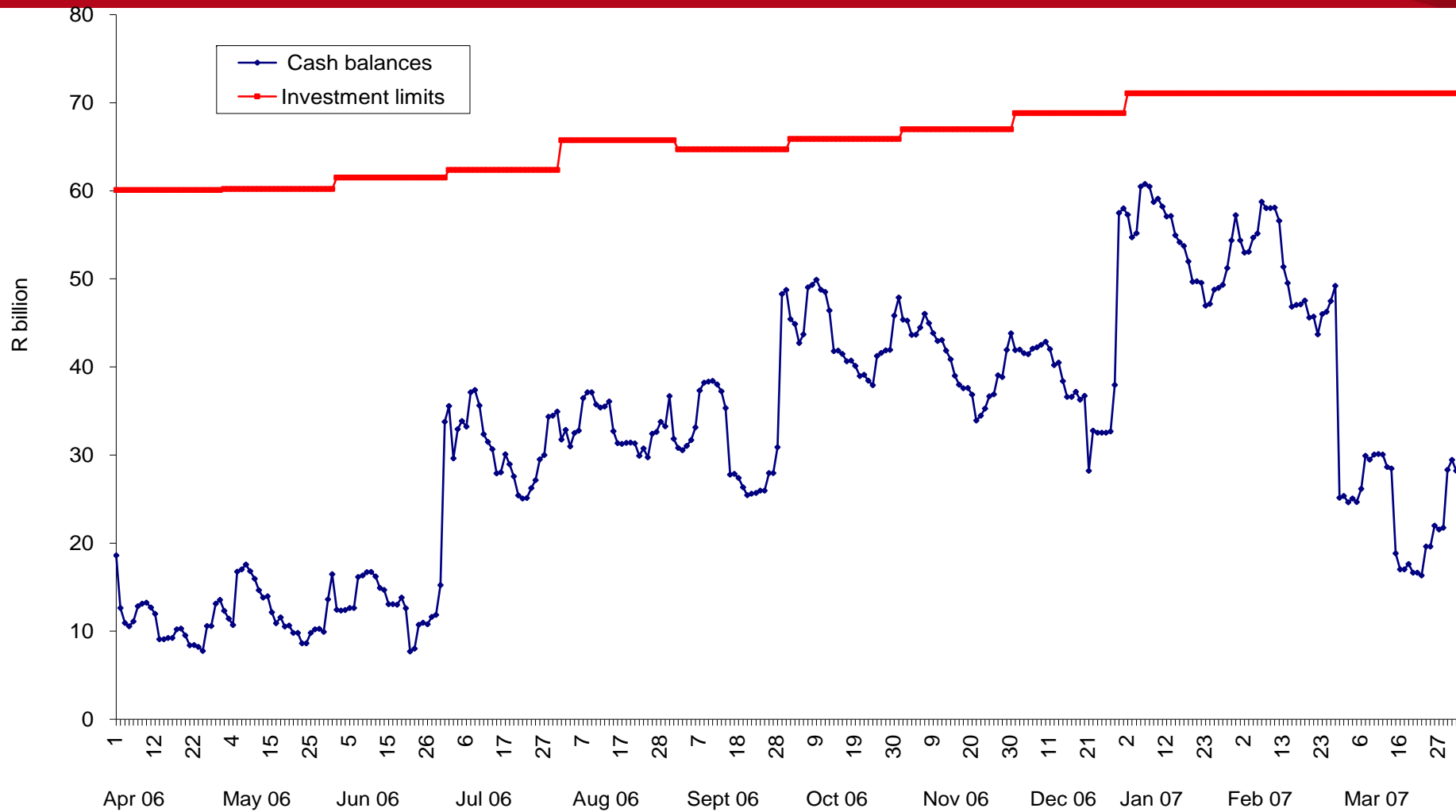
Component	■ Net Debt as % GDP		■ Provisions as % GDP		■ Contingent Liabilities as % GDP			
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Net Debt	27.44	29.99	33.29	36.28	38.56	39.80	40.27	40.00
Provisions	3.30	2.69	3.32	3.61	3.33	3.04	2.81	2.62
Contingent Liabilities	10.96	10.77	11.28	11.52	11.28	10.49	9.63	9.07
Total	41.71	43.46	47.89	51.41	53.16	53.33	52.71	51.69

Source: National Treasury

# GUARANTEE EXPOSURE

Guarantee amounts 2009/10 to 2012/13								
	2009/10		2010/11		2011/12		2012/13	
	Total Guaranteed Amount (R'million)	Total Exposure Amount (R'million)	Total Guaranteed Amount (R'million)	Total Exposure Amount (R'million)	Total Guaranteed Amount (R'million)	Total Exposure Amount (R'million)	Total Guaranteed Amount (R'million)	Total Exposure Amount (R'million)
<b>State Owned Entities</b>								
SANRAL	32,912	12,287	39,989	18,605	39,943	19,426	39,943	18,623
TCTA	25,446	20,721	25,434	18,490	25,461	19,886	25,530	20,460
CEF	368	19	0	0	0	0	0	0
Eskom	176,000	46,678	350,000	67,057	350,000	77,230	350,000	103,523
DBSA	29,341	26,560	28,349	25,867	28,931	25,692	29,366	25,497
IDC	2,247	951	1,662	740	1,824	647	2,146	575
LandBank	3,800	2,594	3,800	1,844	3,800	1,093	4,600	893
Denel	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850
PRASA	1,400	1,217	1,400	468	1,400	264	1,400	133
SAA	2,002	1,351	2,900	1,916	2,900	1,300	7,901	2,238
Transnet	11,424	11,620	9,500	9,887	3,500	3,757	3,500	3,757
SABC	1,400	1,000	1,000	1,000	1,000	889	1,000	167
Telkom	239	109	233	90	248	85	245	90
<b>Other Entities (Non-Analysed)</b>	<b>3,965</b>	<b>2,142</b>	<b>3,551</b>	<b>1,786</b>	<b>3,567</b>	<b>1,587</b>	<b>4,414</b>	<b>1,561</b>
<b>Total Guarantee Amount</b>	<b>292,394</b>	<b>129,099</b>	<b>469,668</b>	<b>149,600</b>	<b>464,424</b>	<b>153,706</b>	<b>471,895</b>	<b>179,367</b>

# INVESTMENT OF SURPLUS CASH MITIGATION



**THANK YOU  
FOR YOUR ATTENTION!!**