Risk based capital update

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Verne Baker

Watson Wyatt
Worldwide

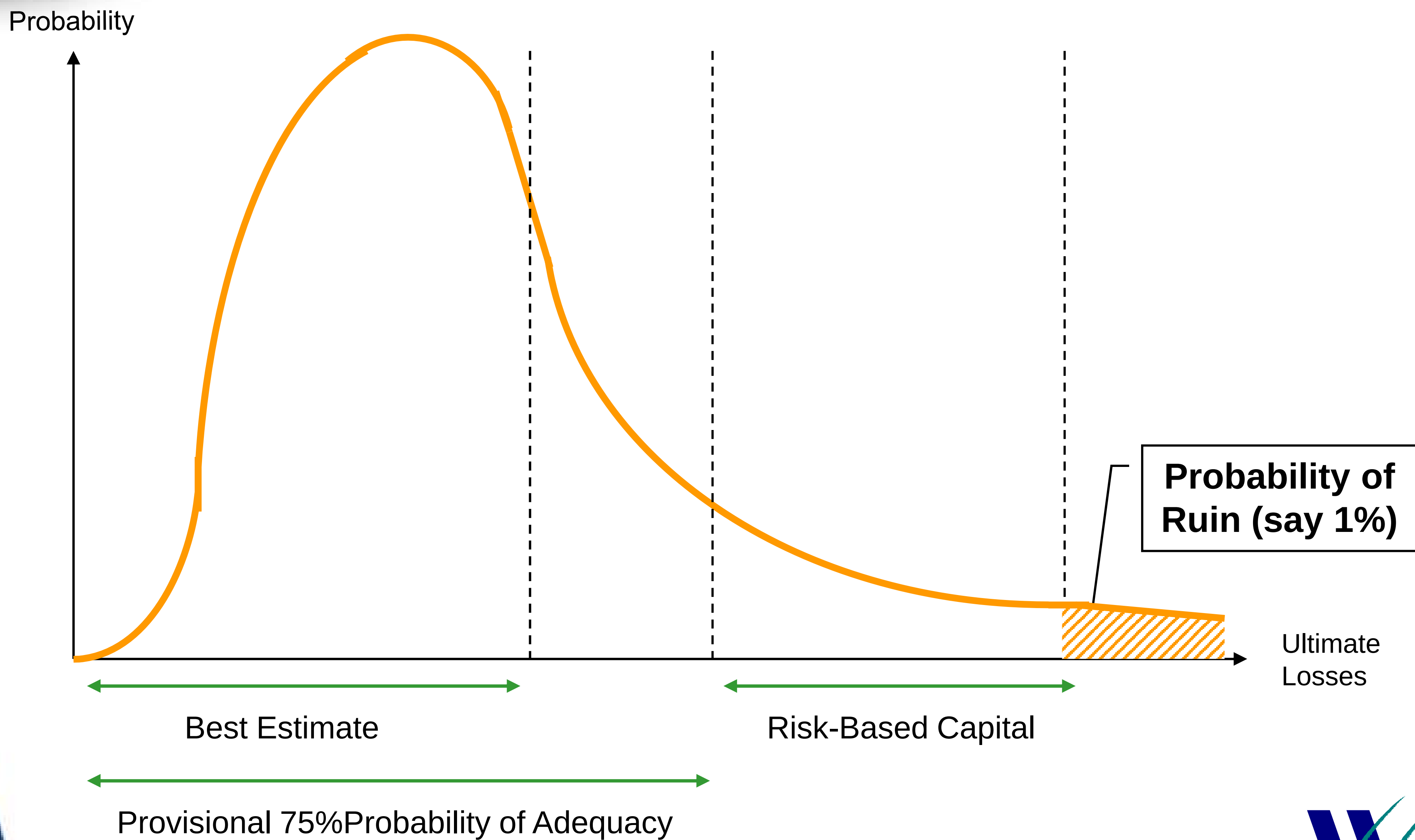
Risk Based Capital Update

- Introduction
- Regulatory updates with focus on
  - Singapore, Australia, and Malaysia
- Benefits from adopting internal RBC

What is Risk Based Capital

- Capital determined for a non life insurer based upon the risks that the insurer is subject to:
- Distinction between regulators view and shareholders view
- Regulator concerned about the company not meeting its policyholder obligations
- Shareholder concerned about under-performance of investment.

Illustration of Conceptual Framework of RBC



Why is RBC important from a business management viewpoint?

- In this presentation we illustrate the difficult business environment that non life insurers are facing in this region
- With reducing profit margins, due to reasons including competition, uncertain investment markets, economic downturn, companies are struggling to produce adequate returns on their shareholders' capital
- Adoption of a risk based capital approach offers opportunities to enhance profitability whilst applying a methodical and prudent approach to risk management

Desirable features of regulatory RBC *Risk Based Capital in General Insurance, N Hooker et al JIA 1996*

- Comprehensive
  - covers quantifiable risks
- Conceptual Framework
  - based on probability of ruin, expected policy deficit etc
- Understandable and simple to calculate
- Robust
- Based upon readily available information
- Not easily manipulated

Nature of Insurance Risks

- Uncertainty of Outstanding Claim reserves
- Uncertainty of Unexpired Premiums
  - line of business;
- Catastrophe risk
- Trends and cycles
- Asset risk
- Operational Risk

Regulatory Updates

- Current State of Regional Countries
- Focus on regulation:
  - Australia
  - Singapore
  - Malaysia

Regional position

Country	Current position
Australia	RBC Standard in place from 1 July 2002
Japan	Early Warning System introduced 1999
Singapore	MAS working party report Dec 2002
Malaysia	Working parties in progress
Thailand	Solvency based on premium formula
Indonesia	Standard introduced 1999
Philippines	Solvency based on premium formula
India	Solvency based on premium and claim formula

Australia

- New regulations in place from 1 July 2002
- New Capital Adequacy standard introduced alongside standards for
  - Valuation of liabilities
  - Risk Management
  - Reinsurance
- Established reserving standard
  - mandatory actuarial sign off
  - 75% probability of adequacy of reserves for both outstanding claim and premium liabilities
- Companies can use own internal risk based models

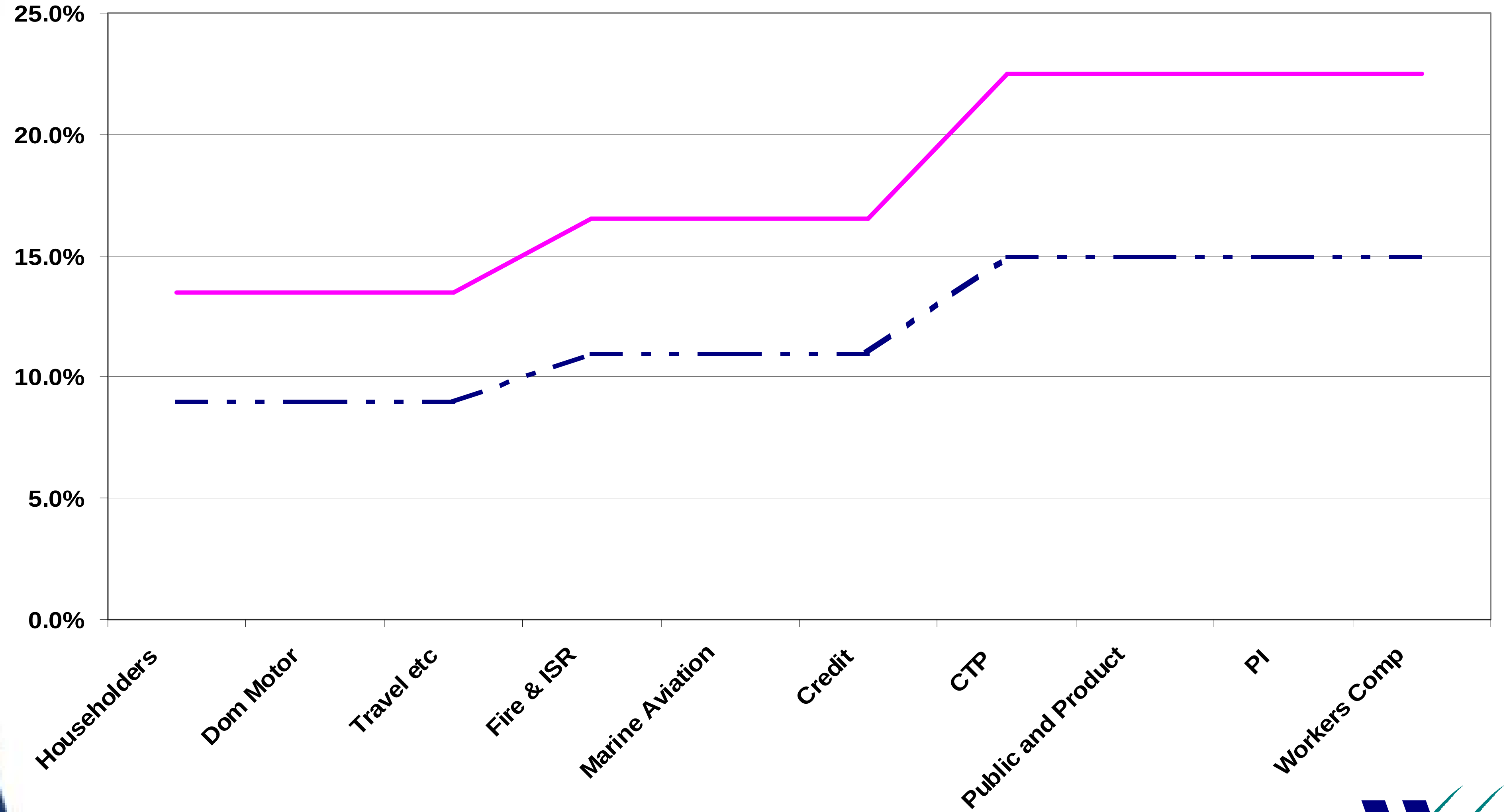
Australia

- Insurers must determine their Minimum Capital Requirement (MCR). Have option of
  - developing in- house capital measurement model or
  - adopting prescribed method
- MCR determined having regard to 3 broad risk factors
  - Insurance risk
  - investment risk
  - concentration risk
- For prescribed method issued factors applied to outstanding claim provision and premium liability to estimate insurance risk capital

Australia - Capital

- Tier 1 and Tier 2 capital
- Tier 1
  - high quality
  - paid up capital, retained earnings, excess reserves etc
- Tier 2
  - lower quality
  - subordinated debt
- Must deduct intangibles, goodwill from capital base
- Tier 1 must be 50% of capital base

Australia. Prescribed risk factors for OS claim and premium liabilities direct insurers

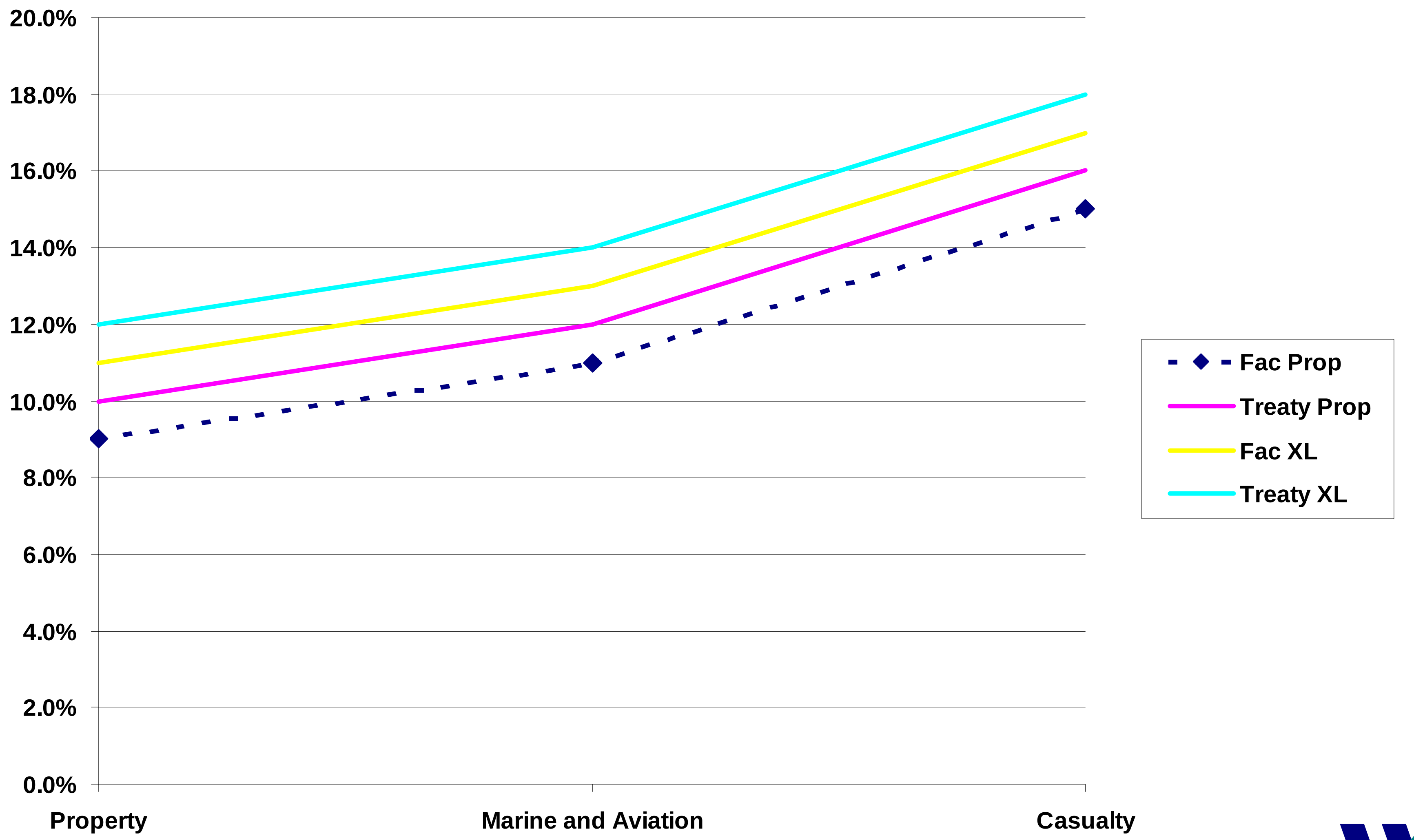


Australia. Prescribed method insurance risk capital factors for direct insurers

Table 1: Direct Insurance

Class of business	Outstanding claims risk capital factor	Premiums liability risk capital factor
Householders	9%	13.5%
Commercial motor		
Domestic motor		
Travel		
Fire and ISR	11%	16.5%
Marine and aviation		
Consumer credit		
Mortgage		
Other accident		
Other		
CTP	15%	22.5%
Public and product liability		
Professional indemnity		
Employers' liability		

Australia. Prescribed risk factors for OS claims - reinsurers.



Australia. Prescribed method insurance risk capital factors for reinsurers

Table 2: Inwards Reinsurance

Class of business	Outstanding claims risk capital factor	Premiums liability risk capital factor
Property		
- Facultative proportional	9.0%	13.5%
- Treaty proportional	10.0%	15.0%
- Facultative excess of loss	11.0%	16.5%
- Treaty excess of loss	12.0%	18.0%
Marine and aviation		
- Facultative proportional	11.0%	16.5%
- Treaty proportional	12.0%	18.0%
- Facultative excess of loss	13.0%	19.5%
- Treaty excess of loss	14.0%	21.0%
Casualty		
- Facultative proportional	15.0%	22.5%
- Treaty proportional	16.0%	24.0%
- Facultative excess of loss	17.0%	25.5%
- Treaty excess of loss	18.0%	27.0%

Australia. Investment Factors

- Investment Risk from a number of sources
  - credit risk
  - mismatch risk
  - liquidity risk
- Capital charge based on table

Australia. Investment capital factors

Asset	S&P Rating	Investment capital factor
Cash, Australian government bonds	AAA	0.5%
Grade 1 or 2 debt less than 1 year	AA^+ AA AA^-	1%
Grade 1 or 2 debt one year or more Grade 1 or 2 R/I recoveries		2%
Unpaid premiums less than 6 months Grade 3 debt Grade 3 R/I recoveries	A^+ A A^-	4%
Grade 4 debt Grade 4 R/I recoveries	BBB^+ BBB BBB^-	6%
Grade 5 debt Grade 5 R/I recoveries Unpaid premiums more than 6 months Listed equities	BB^+ or below	8%
Direct property Unlisted shares		10%
Loans to Directors		100%

Australia. Concentration Charge

- Charge for exposure to single cat event
- Charge set at maximum event retention

Australia. Internal Model

- Requires APRA and the Treasurer's approval
- must be integrated into Company's risk management program
- provide sufficient capital to reduce insurers probability of default over 1 year to be 0.5% or less
- must address the risks scheduled
- should be used with stress testing

Singapore

- Current Basis provides for a Solvency Margin, calculated as the higher of
  - 50% Loss Reserve, and
  - 50% Net Premium Liability
- Liquid Assets must be 30% or more of total
- From Dec 2001 mandatory actuarial valuation of claim and premium liabilities
- Provisions are to include allowance for 75% probability of adequacy

Singapore Reserving

- Actuary determines best estimate and PAD (provision for adverse development) for both OS claims and unexpired premiums
- In calculating premium liability the minimum amount on a lob basis is the UPR
- Singapore typically has profitable Fire and Marine Cargo and unprofitable Workers' Comp and Motor
- Conservative since additional liability is created for unprofitable classes and no offset by profitable classes
- Various approaches adopted by actuaries in estimating PADs

Singapore RBC

- Discussion paper issued 20th December
- Call for industry responses by 14th February
- Will be period of testing impact on industry during 2003

Singapore

- Two levels at which capital must satisfy, Company level and Fund level.
- At Company level insurer must show a Capital Adequacy Requirement (CAR) ratio greater than a factor. Proposed factor to be 120%.
- CAR ratio *is*:
  - Available Capital (Tier 1 and Tier 2) *divided by*
  - Required Capital
- *Tier 1 - highest quality irredeemable assets (eg retained earnings etc)*
- *Tier 2 - lower quality (eg subordinated debt)*
- *Required Capital is Required Fund Solvency plus risk charges on Shareholders' Funds*

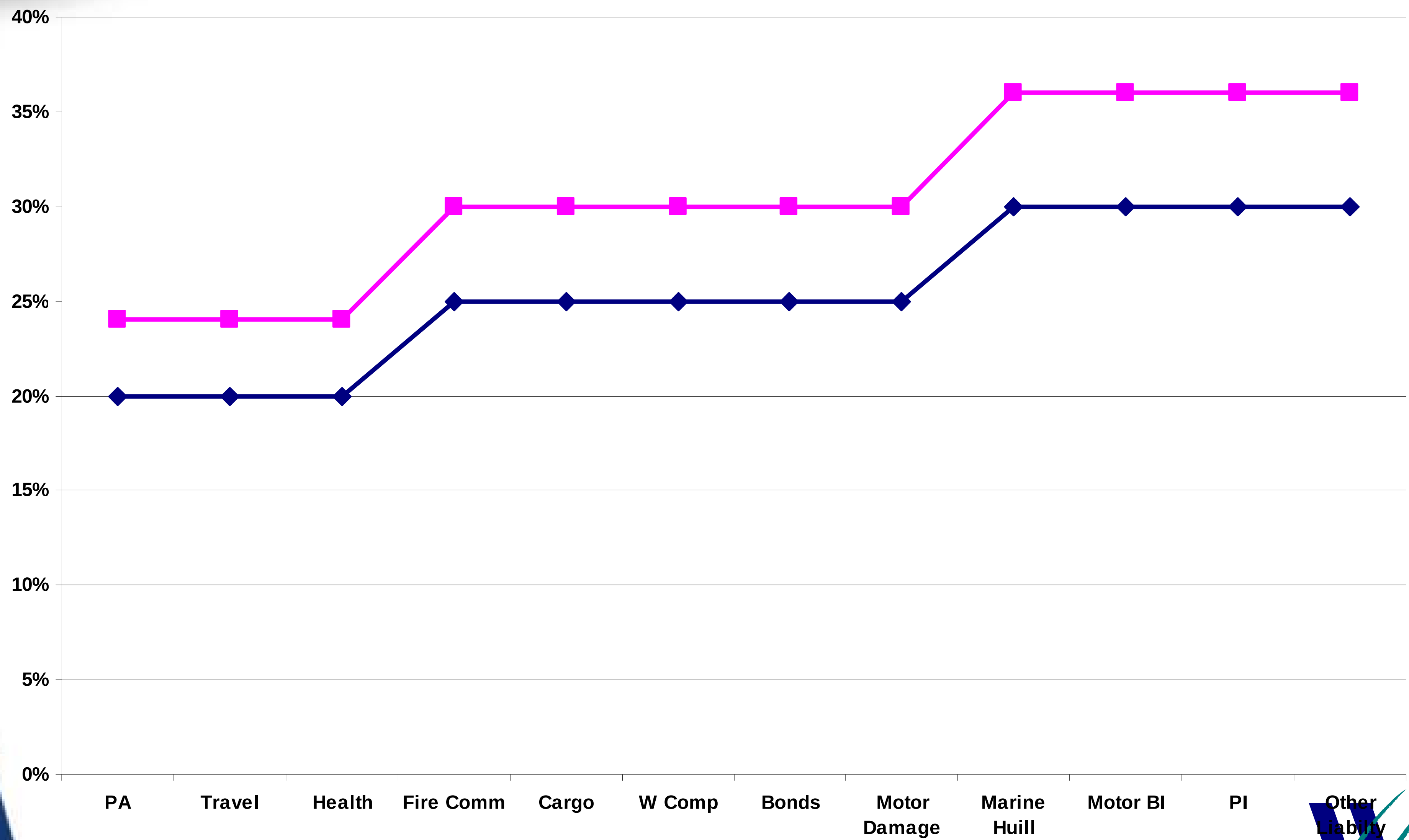
Singapore

- At Fund Level insurer must meet Fund Solvency Requirement (FSR). Means Available Assets must exceed Required Fund Solvency (RFS)
- Available Assets = Net Assets less intangibles
- Assets valued on a Fair value approach
- RFS is the addition of three items
  - GC1 Liability Risk Charge
  - GC2 Market/ Credit Risk Charges
  - GC3 Concentration Risk Charges

Liability Risk Charges GC1

- These charges are intended to address risks of volatility in the outstanding claims and unexpired premium liabilities
- X% of Claim liability + Y% Premium liability
- X, Y Vary by line of business.
- line of business grouped into high medium and low volatility
- Factors applied to provisions at 75% probability of adequacy (after allowing for diversification credits)

Risk Charges for Claims and Premium liabilities CG1



Market and Credit Risk Charges GC2

- These charges are intended to cover default risk and adverse market movement risks
- They are referred to as Specific and General Risk charges respectively
- Specific charges depend upon the asset's security whilst General charges are affected by the asset's maturity term

Market and Credit Risk Charges. GC2

	Specific Risk Charge	General Risk Charge
Equities	8% gross exposure	8% net exposure
Properties	8% property exposure	8% property exposure
Cash	0%	0%
Govt Debt	0.0%	
Qualifying Corp Debt 6<24 months	1.0%	varies .7% to 1.25%
Qualifying Corp Debt>24 months	1.6%	1.75% to 4.5% (10yrs)
Outstanding Premium less than 90 days	8.0%	n/a
Outstanding Premium over 90 days	50.0%	n/a

Market and Credit Risk Charges. GC2

Reinsurer's S&P Rating	Specific Risk Charge
AA- or above	1.60%
A- to A+	4%
B- to BBB+	8%
Under B-	12.0%
Not rated	8.0%
Not appoved by MAS	8.0%

Concentration Risk Charges GC3

- Relate to large holdings of particular asset
- No charges in respect of potential aggregations of liabilities eg exposure to natural hazards or economic factors

Malaysia

- Current Minimum Capital greater of
  - RM100m
  - 25% of the first RM50m of NWP and 20% of remaining NWP
  - 26% of the first RM25m of NIC plus 23% of remaining NIC
- Specified assets not admitted
  - Fixed Assets (excluding owner occupied property)
  - Outstanding Premiums over 60 days

Malaysia - Possible Framework

- Liability Risk
  - Currently no uniform reserving standards
  - Factors different according to reserving strength of companies?
  - How to do in practice?
- Asset Charges to address volatility of risk

Implications for Company Management

- Context of regional markets
- Additional capital requirements
- Greater awareness of capital needs by lob
- Opportunities

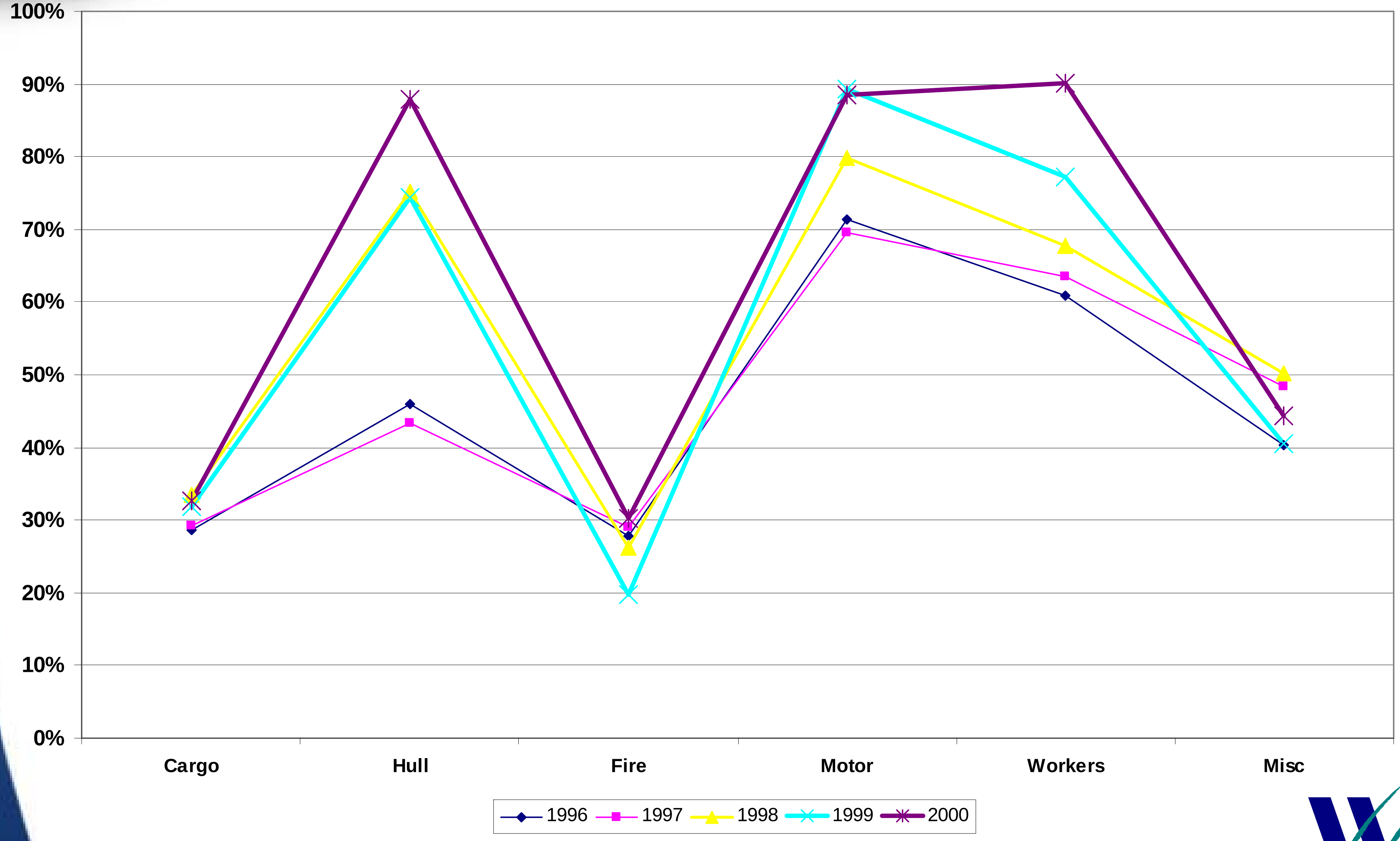
Regional Issues - Australia

- Consolidation
- Competition
- Lack of profitability
- Insurance highly visible
  - HIH failure directly affected the public
  - Three reinsurer failures didn't have such affect
- Difficulties in getting coverage for some long tail classes - med mal, public liability etc
- In this environment Regulator able to put through significant changes with little resistance

Singapore

- Losses on motor, workers' compensation, and some of the miscellaneous classes
- Concentrated and highly competitive market.
  - Companies adopting high growth strategy have suffered heavy losses in personal lines
  - Hard to get good corporate business from brokers
- Difficult to get market shares with profitable business to cover expenses
- Reinsurance costs increasing
- Companies now having to increase reserves to meet new reserving requirements (esp Premium liabilities)
- How can acceptable rates of return be achieved?

Incurred loss ratios SIF classes (direct bus)



Malaysia (I)

- Consolidation
- Tariffs
- RBC
- Hardening RI
  - increased costs of NP by 30% or more
  - reducing capacity
  - reducing commissions
- Uniform Provisioning?

Summary of regional markets

- Fierce competition
- Further consolidation
- Declining margins
- Increasing reinsurance costs
- Reliance on investment returns
- Difficulty in meeting shareholder expectations

Opportunities

- Optimising capital offers companies opportunity of enhancing returns on capital as well as practicing prudent risk management
- We see this covering a number of subjects
  - Asset liability modelling
  - Optimising reinsurance
  - Business planning
  - Capital allocation

Benefits of adopting internal RBC

- Distinction between regulatory capital and internal RBC calculations
- Standard allocation of capital across country/ lob
- Aids comparability of reporting
- Converted into target loss ratios - measures understandable by the underwriters
- Consistency of performance measurement
- Optimisation of allocated capital- maximising return on capital
- Greater appreciation of risks in business. Provides a consistent framework for assessing risk.