



19th September 2012

IFRS 4 Phase I and II: The issues for takaful, implications for the Mudharabah and Wakala Model

Zainal Abidin Mohd Kassim, FIA
Senior Partner

Contents

- **Financial Reporting**
- **IFRS 4 explained**
- **IFRS 4 Phase I**
- **IFRS 4 Phase II**
- **Examples for Wakala and Mudharabah Models**
- **Conclusions**



The purpose of financial statements



Financial Reporting Purpose of Accounts

- Who are the users of the accounts?
 - Investors/analysts
 - Lenders
 - Regulators
 - Business partners
- For investors accounts provides the ability to compare financial performance between entities. It is therefore important that accounts are prepared on a standardized basis.
- For bond holders, accounts allow the lenders to assess the ability of the company to repay loans.
- For Regulators accounts allow an assessment of the entity to continue in business.
- For business partners, accounts provide an assessment of the financial strength of the partner.



Can one accounting basis satisfy all readers of the financial statements?

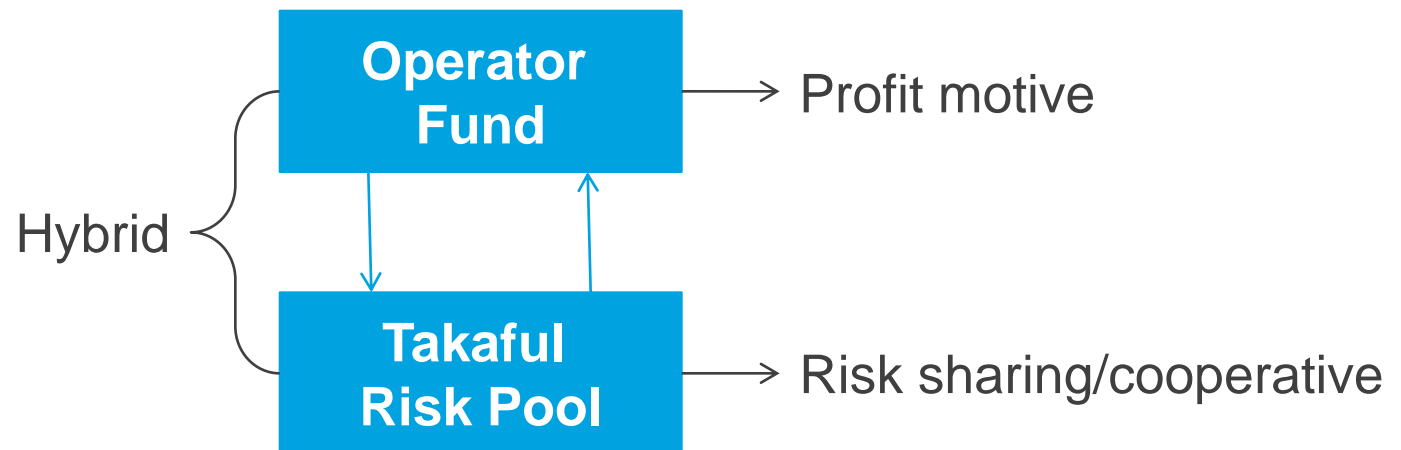
- Where the equity in the company rests in the same group of stakeholders, perhaps...
- Where different stakeholders have equity in the company, probably not. For example, the Insurance Regulators may impose a more stringent reserving basis for the insurer's liability towards policyholders. Accounting convention calls for best estimate liabilities (subject to LAT), while regulators require prudent margins in policyholders liabilities.
- In takaful we have at least two different groups of stakeholders, the investors, who provides capital to the takaful operation, and the participants, who collectively insure each other against the respective insured risks.



IFRS 4

-Covers Insurance Contracts

- Insurance under IFRS 4 is defined as
 - A contract under which one party (the insurer) accepts **significant** insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.
- Takaful consist of two stakeholders. Takaful Operator (shareholders) and Takaful Risk Pool (participants) with very different motives



IFRS 4

-Covers Insurance Contracts (cont.)

- First question then, should IFRS 4 apply to the takaful Operator?
 - Operator provides a “insurance” management service to the participants for a predetermined fee, calculated as a percentage of contribution and/or a percentage of profits/investment income. This is NOT an insurance contract.
 - HOWEVER, the Operator is obliged to provide a Qard should the participants risk pool is LESS than the computed liability. Does this “contractual” loan make it an Insurance contract?
- Second question then, should IFRS 4 apply to the takaful risk pool?
 - The risk pool accepts the liability to compensate the participant should the insured event results in a financial loss. Following from the definition of insurance under IFRS 4, this IS an insurance contract.
 - HOWEVER, the takaful risk pool is not a legal entity in its own right, the Operator is.

IFRS 4

- How should the accounts of a takaful entity be structured?

- Option 1: The takaful operator and the takaful fund should have **separate financial** statements.
- Option 2: The takaful operator and the takaful funds should have “**combined**” financial statements.
- Option 3: The takaful operator and the takaful fund should have **consolidated** financial statements.
- One major difference between “combined” financial statements and consolidated financial statements is that in the former, inter-fund transactions are not eliminated. Takaful companies in Malaysia currently show “combined” financial statements. May not be applicable under IFRS 4 Phase II.
- Under IFRS 10 (*Consolidated Financial Statements*), a company is required to consolidate entities it controls. What defines CONTROL?

Defining “Control”

- Under IFRS 10, Control is defined as having the ability to affect an entity’s returns’. Specifically it says;
 - *An investor controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee **AND** has the ability to affect those returns through its power over the investee. Thus an investor control an investee if and only if the investor has **ALL** of the following:*
 - *power over the investee..*
 - *exposure, or rights, to variable returns from its involvement*
 - *the ability to use its power over the investee to affect the amount of the investor’s returns*

Does the Takaful Operator control the participants funds?

- Takaful Operator;
 - Sets the contribution rates, manage the level and quality of underwriting, determine the products sold, determines how the surplus is calculated and determines the investment strategy of the takaful funds.
 - In particular it sets the wakala fee, the mudharabah sharing percentages and the surplus sharing percentages.
- HOWEVER, the takaful Operator;
 - Does not own the assets of the takaful risk pool, nor does it own the assets of the Participant Funds (in a family takaful set up)
 - Cannot change the wakala fee, mudharabah and surplus sharing percentages for long term (more than one year) contracts. Thus the takaful operator cannot change the level of profitability or loss it makes from the participants' funds once the contract terms have been determined.

Questions

- Does IFRS 4 apply to takaful?
- If it does, should it apply to the operator's fund and the takaful risk pool, or only to the takaful risk pool?
- Should the operators fund be separate, combined or consolidated with the takaful funds (which consists of the takaful risk pool and the participants' funds)?

You Decide!



IFRS 4 explained



Objective of IFRS 4

- Comprehensive framework to provide information relevant to users of financial statements for **economic decision-making**.
- Eliminate inconsistencies and weaknesses in existing practices
- Provide comparability across entities / jurisdictions / markets.
- More understandable for investors and provide clearer insight into the economics of insurance

IFRS 4 Phase I vs. Phase II

Phase I

- Definition of insurance contracts
- Disclosure requirements
- Restrictions e.g. on changing accounting policies

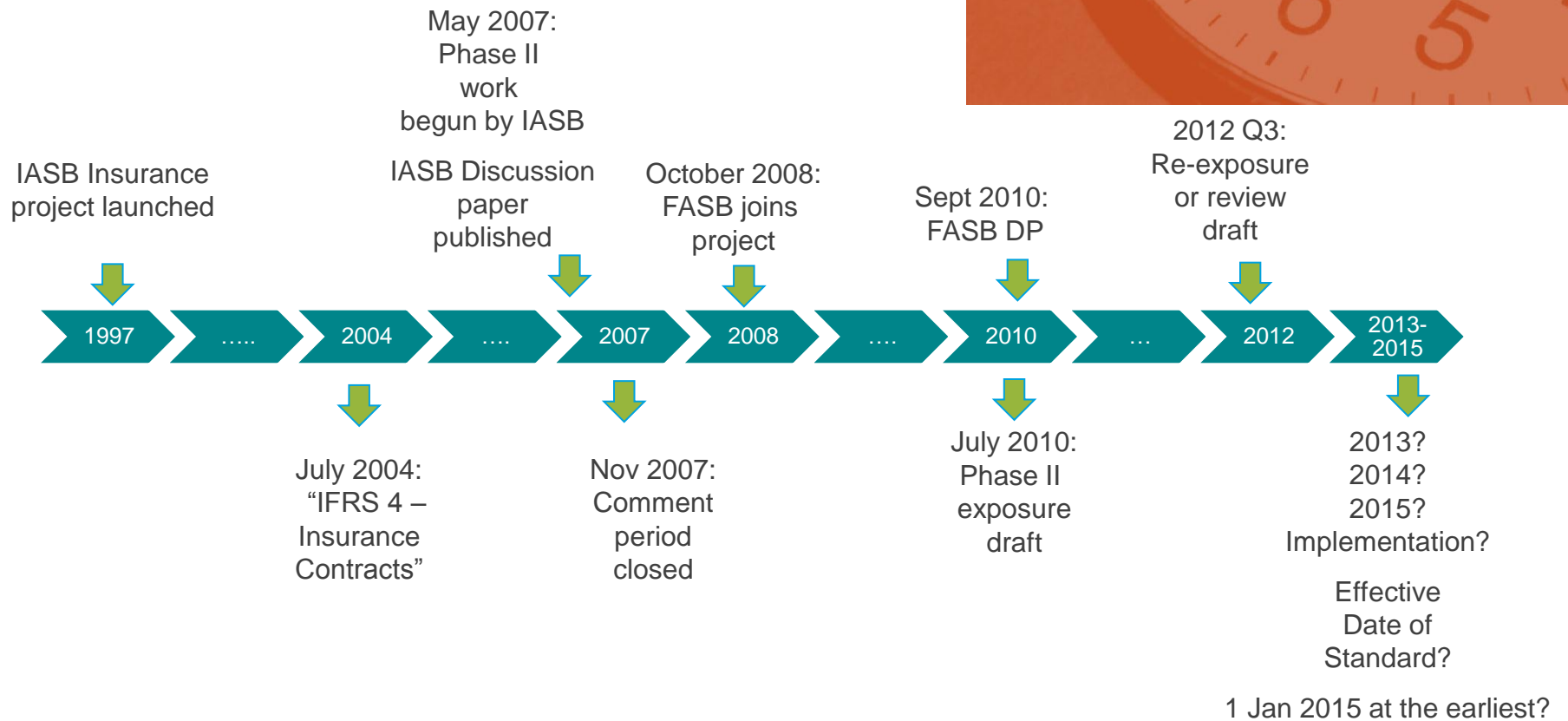


Phase II

- Accounting for insurance contracts
- Liability measurement
- Presentation and disclosures

IFRS 4

Background and timetable



Recap on IFRS 4 Phase I

- Focused on the definition of an **insurance contract**
 - Uncertain future events
 - Transfers significant insurance risk from policyholders to the insurer
 - Adverse effect on the policyholder
- Includes investment contracts with **discretionary participation feature**
- **Unbundling of contracts:**
 - Contracts with both an insurance and a 'deposit' component, unbundling is required for consistent accounting treatment for each element.
- **Liability adequacy test (LAT)**
 - Assessed at each reporting date whether recognised insurance liabilities are adequate based on current estimates of future cash flows
 - Only minimum requirement
- **Deferred acquisition costs (DAC)** were not addressed under Phase 1.

IFRS 4 Phase II

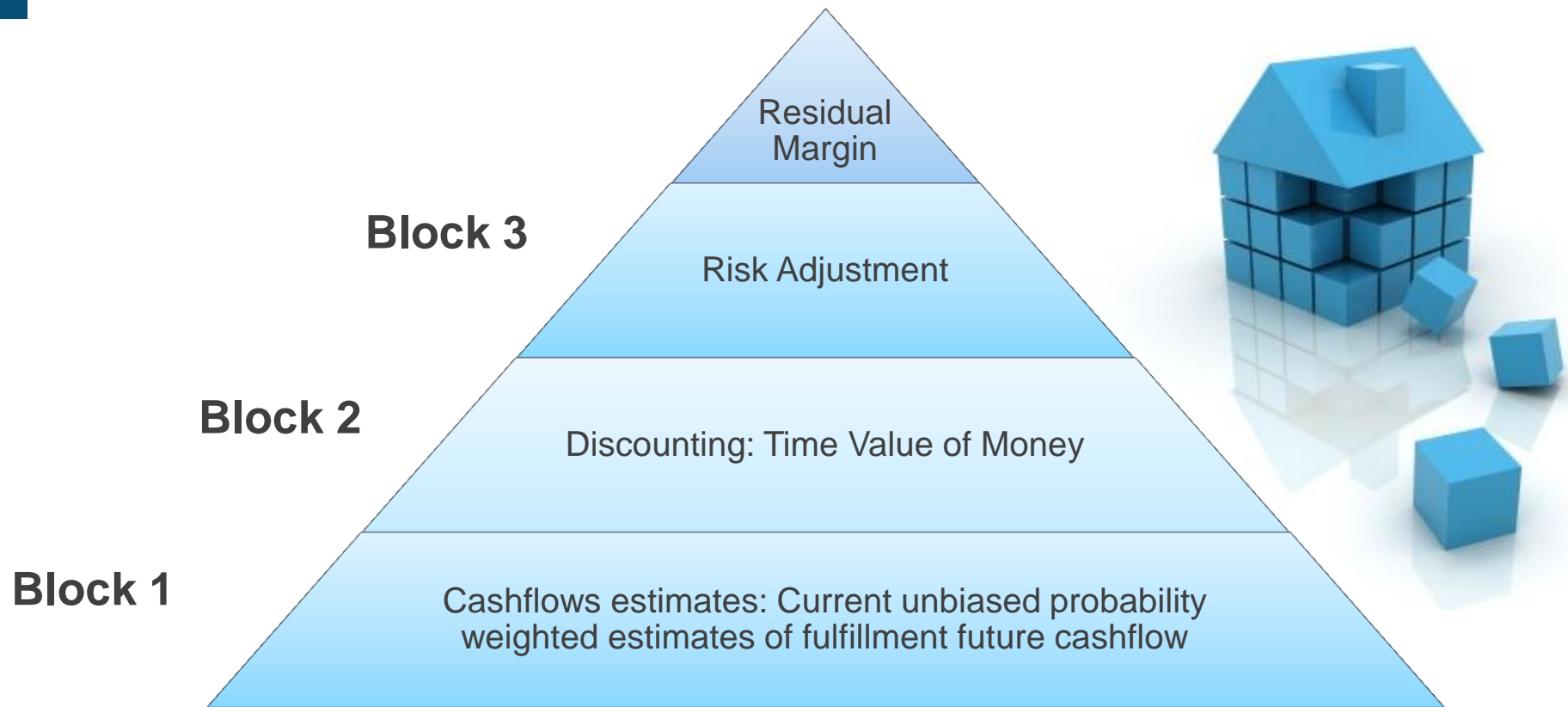


IFRS 4 Phase II

- IFRS 4 Phase II looks at a radical change in the way insurance accounts are presented:
 - impact on profit arising in an insurance entity
 - affect the investors perception of an insurer's financial performance
- Key proposals of measurement model:
 - Cash flows
 - Discount rates **NEW**
 - Risk adjustment **NEW**
 - Residual margin **NEW**
 - Subsequent re-measurement
 - Presentation of results **NEW**



Measurement Model under IFRS 4 Phase II – “Building Blocks”



- One model for all insurance contracts
- Day 1 loss in income statement, no day 1 gain
 - Margins are calculated as part of liability

Building Block 1: Cash flows estimates

Estimates of cash flows for a portfolio of insurance contracts shall include all incremental cash inflows and outflows (i.e. not only contractual cash flows) arising from that portfolio, and shall:

Be explicit (i.e. separate from estimates of discount rate and risk adjustments)

Reflect the perspective of the entity but for market variables be consistent with observable market prices

Incorporate in an unbiased way all available information about the amount, timing and uncertainty of cash flows

Be current (i.e. reflect all available information at the measurement date)

Include only those cash flows that arise from existing contracts

The aim is not necessarily to identify every possible scenario but rather to incorporate all relevant information and not to ignore data or information that is difficult to obtain. Sophisticated stochastic modelling is only likely to be needed if the cash flows respond in a highly non-linear fashion to changes in economic conditions

Acquisition costs:

- Only include incremental and directly attributable to the sale of the policy
 - All other acquisition costs (e.g. overheads) are expensed.

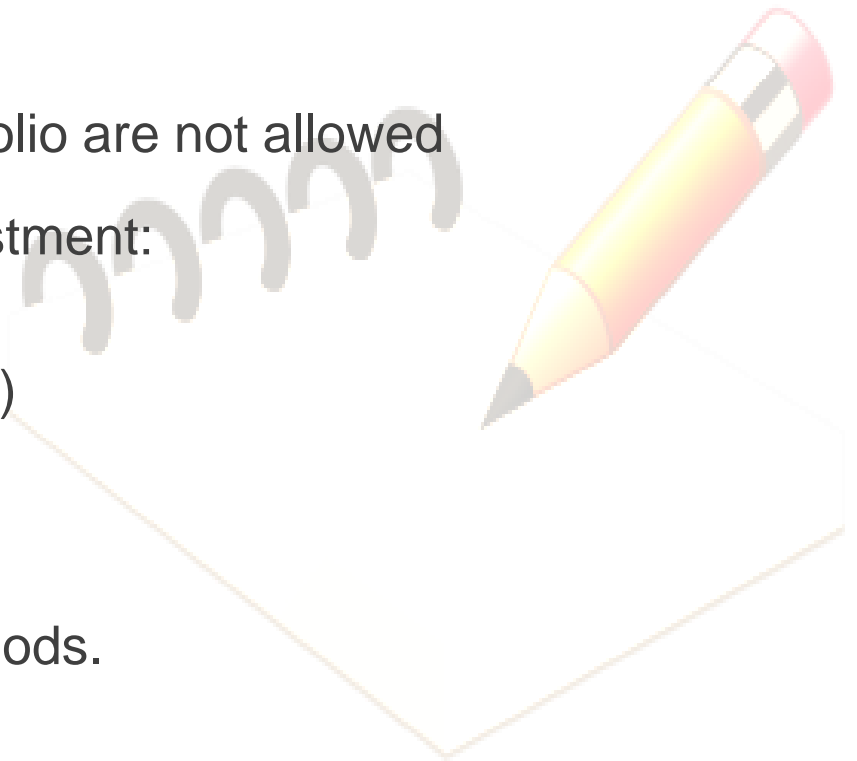
Building Block 2: Discount Rates

- To adjust future cashflows for time value of money.
- Discount rate reflects characteristics of the liability (not assets held).
 - If liability is independent of supporting asset, discount rate is **risk free** with adjustment for **illiquidity premium**.
 - If liability is linked to supporting assets then discount rate can reflect this.
- Adjusted to reflect currency, duration and liquidity of liabilities.
- Similar to Malaysia RBC except the recognition of illiquidity premium
 - Illiquidity premium approach does not exist in Malaysia RBC.
 - Illiquidity premium results in a higher discount rate compared to risk free in recognition of the long term nature of the underlying contract.



Building Block 3: Risk adjustment

- Margin to reflect uncertainty in the estimate of future cashflows
 - *The compensation an insurer requires to bear the risk that the ultimate cashflows could exceed those expected*
- Estimated at a portfolio level (thus can take diversification credit at portfolio level)
- Diversifications across different portfolio are not allowed
- Techniques to estimate the risk adjustment:
 - Confidence interval
 - Conditional Tail Expectation (CTE)
 - Cost of Capital
 - Others?
- **Re-measured** at future reporting periods.



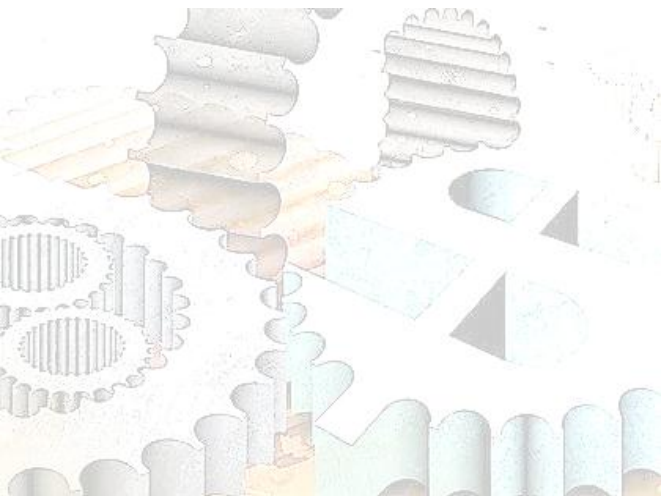
Residual margin

- **It is a balancing item**
 - To eliminate any gain at inception of contract
 - Residual margin cannot be negative
- Profit is released over the lifetime of the contract
 - Amortised over the term of the contract and is used to partly offset the insurers' future overhead expenses.
- Recognition of all losses that may arise (as residual margin cannot be negative).
- Determined at a 'cohort' level (grouping by year of issue).
- No re-measurement (although this is being re-considered by IASB).

Residual margin

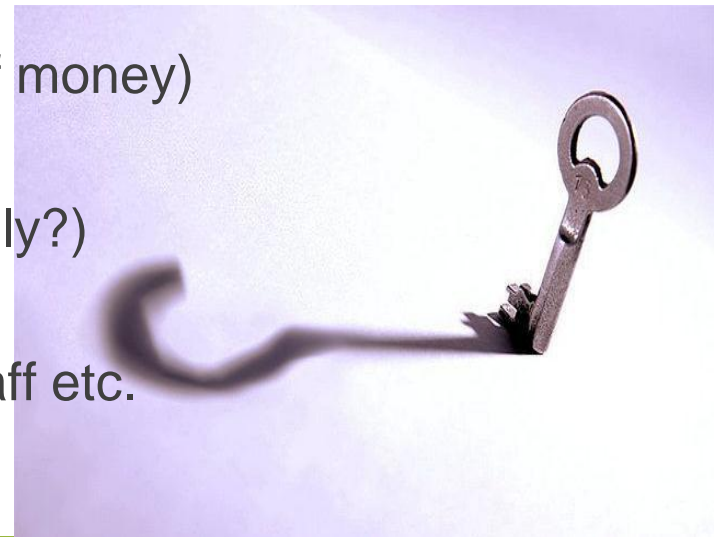
-contd.

- On implementation of Phase II, and depending on current basis of valuation, there will likely be accounting losses in the immediate following years as the in force block of business would have zero Residual Margin
 - Whole industry portrayed as start-up business
 - **Profitability emerges only from release of risk margin and excess investment income and when the total of these income exceeds overheads**



Potential key issues for takaful operators under IFRS 4 Phase II

- **Based on the assumption that takaful falls under the scope of IFRS 4, the key issues for takaful operators under the proposed IFRS 4 Phase II include:**
 - Fund segregation in takaful (separate accounting for operators and participants funds? Combined or consolidated accounts?)
 - Cashflows and its allocation to either the operator or participants funds
 - Participating features within takaful (through reserving for future surplus distribution)
 - Discount rate to use for takaful (time value of money)
 - Calculation of the risk adjustment
 - Residual margin for takaful (operator fund only?)
 - Volatility of reported profits
 - Others e.g. systems requirements, skilled staff etc.





Examples for Wakala and Mudharabah models

Wakala Model (Operator's accounts)

- Under the Pure Wakala Model the operator receives a percentage of the contribution for its efforts in managing the takaful pools.

Example: assume zero discount rate, wakala fee is RM50 (assume residual margin equals wakala fee), five year contract, overhead expenses incurred in each year is RM8. Single contribution contract.

Year 5	10					10
Year 4	10				10	
Year 3	10			10		
Year 2	10		10			
Year 1	10	10				
		Year 1	Year 2	Year 3	Year 4	Year 5
Reserve at year end	50	40	30	20	10	0
IFRS 4 Accounts						
Release in residual margin		10	10	10	10	10
Overhead Expenses in year		8	8	8	8	8
Profit arising		<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>

Wakala Model (Operator's accounts)

-contd.

- Now assume under the model the reserves are computed assuming 5%p.a. return and the operator earns 5% p.a. profit (no tax).

		Year 1	Year 2	Year 3	Year 4	Year 5
Reserves at year end	45.46	37.23	28.59	19.52	10.00	0

IFRS 4 Accounts

Release in Residual Margin	10.00	10.00	10.00	10.00	10.00
Expected Investment Income on Reserves	(1.77)	(1.36)	(0.93)	(0.48)	0.00
Actual Investment Income earned on Reserves	1.77	1.36	0.93	0.48	0.00
Overhead Expense in Year	(8.00)	(8.00)	(8.00)	(8.00)	(8.00)
Profit arising	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>

Wakala Model (Operator's accounts)

-contd.

- What if the operator instead earns 10% p.a. profit (no tax).

		Year 1	Year 2	Year 3	Year 4	Year 5
Reserves at year end	45.46	37.23	28.59	19.52	10.00	0

IFRS 4 Accounts

Release in Residual Margin	10.00	10.00	10.00	10.00	10.00
Expected Investment Income on reserves	(1.77)	(1.36)	(0.93)	(0.48)	0.00
Actual Investment Income earned on reserves	3.54	2.72	1.86	0.96	0.00
Overhead Expense in Year	(8.00)	(8.00)	(8.00)	(8.00)	(8.00)
Profit arising	<u>3.77</u>	<u>3.36</u>	<u>2.93</u>	<u>2.48</u>	<u>2.00</u>

Mudharabah Model (Operator's accounts)

- Under the Mudharabah model the operator receives a percentage of the investment profits for its efforts in managing the takaful pool. Does that mean Residual Value should be nil?

Example: assume 10% gross investment return per annum (no tax) and the risk pool has an actuarial reserve for the product of 200 which is unchanged for five years. Operator taken 50% of the investment income every year ($10\% \times 200 \times 0.5 = 10$).

	Year 1	Year 2	Year 3	Year 4	Year 5
IFRS 4 Accounts					
Operators Share of investment return on takaful fund	10	10	10	10	10
Overhead Expenses in Year	8	8	8	8	8
Profit	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>

Note: Roll up of investment return on takaful risk pool reserves would not affect takaful operator's accounts

How do we account for the surplus in the takaful pool?

- IFRS Accounts (participants risk pool)

Release in Reserves in year A

Contributions received in year B

Expected Investment income on Reserves C

Actual Investment income on Reserves D

Claims paid E

Surplus arising in takaful pool $A+B-C+D-E$



Note: Residual Margin (if any) accounted in Operators Fund as would be expenses.

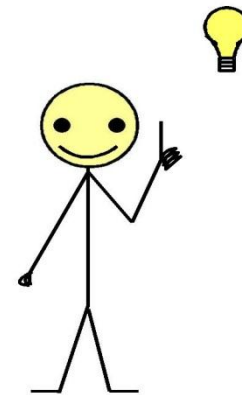
Fund Accounting IFRS 4 Dilemma

- Structure of current insurance/takaful operations in Malaysia is fund segregation for shareholders and insurance/takaful funds.
- For general insurance and non participating life funds there is a need under IFRS 4 to recognize retained surpluses as shareholders equity.
- IFRS 4 Phase II starts as its “base” fund the present value of future cashflows (including risk margins and residual margins) associated with the insurance business. Any excess of Fund balances over these contingent reserves under IFRS 4 would be counted as shareholders “equity”. Consistent with the concept of “consolidated” accounts? But is it consistent with takaful?
- There is a further complication arising from how insurance and takaful are taxed in Malaysia!
- So how many sets of accounts would takaful companies need to prepare?

Summary

- Accounts under IFRS 4 Phase II will be tightly integrated with the reserving basis used in determining insured liabilities. Thus should current BNM reported reserves are used for IFRS accounts, different “profits” are released in each year.
- Reader of accounts can immediately “see” the composition of profits/surplus in the year e.g. is it from the release of residual margin, excess investment income, higher overheads, change in reserving basis, etc.. However, it is still doubtful whether this makes understanding insurance accounts any EASIER!
- In order to produce accounts, finance needs to work with actuarial much more closely. This is not the case in the way existing insurance/takaful accounts are produced.
- There will be greater demand for actuarial and finance resources with the implementation of IFRS 4 Phase II. Possibly actuarial reserving team would need to move to finance department!
- Systems will need to be upgraded.

Conclusion



Conclusion

- IASB have attempted to introduce more transparency to the accounts of the insurance companies which resulted in a draft proposal for IFRS 4 Phase II. However comparability may be hampered by different methodologies.
- There are significant challenges in applying IFRS to takaful (approach to determine cashflows, discount rate, etc). The devil is in the details and investors/analysts education is key.
- The appropriateness of applying IFRS to certain aspects of takaful remains questionable. Nevertheless, takaful needs to be regulated under international standards if it wants to be globally accepted, potentially supplemented by additional standards (e.g. IFSB).

“If you change the way the game is scored, you change the way the game is played” – Equity Analyst Comment

Mo.net – Our chosen financial modeling system . Easily adaptable to the requirements of IFRS 4 Phase II.

- First actuarial software tailored for Takaful business. Local technical support, no need to fly in expensive programmers.
- Has been used to deal with increased computational complexities required by Solvency II

What Is Mo.net?

Mo.net is a financial modelling system designed by actuaries and written in Microsoft's powerful and productive .NET development environment. Its primary role is to offer unrivalled flexibility in the financial modelling process and allow the end user to have full transparency of all model code, inputs, calculations and results. Mo.net has an intuitive user interface and only requires the user to have basic skills in writing visual basic (VB) function code (similar to Excel VBA) so it is quick to learn and become productive.

[More on Mo.net Software](#)

Mo.net Partners Takaful Model

With Mo.net as a platform, Partners has developed the first actuarial software tailored specifically for Takaful business. Mo.net has been used in the UK by a number of companies to deal with the increased computational complexities required by Solvency II. Drawing from this experience, and with the ever changing regulatory requirements happening in the Takaful industry, Partners has put together a model that can be used to perform an extensive range of actuarial work. The model's functionalities include product pricing and profit testing, net / gross contribution valuation, statutory valuation under the Malaysian regulatory requirements of Risk Based Capital for Takaful (RBCT), embedded value calculations and many others.

[More on Mo.net Partners Takaful Model...](#)

Mo.net Partners Insurance Model

Partners has also developed actuarial models using the Mo.net software to cater for conventional life insurance and winding up developing models for general insurance business.

<http://www.actuarialpartners.com/mo-net-software/>



Questions

zainal.kassim@actuarialpartners.com

Suite 17.02, Kenanga International
Jalan Sultan Ismail
50250 Kuala Lumpur, Malaysia
Tel 603 2161 0433
www.actuarialpartners.com