



QUANTIFYING RISK, ENABLING OPPORTUNITY

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EV calculation in a SAM World

Presenters

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Agenda

Part one - Introduction to Embedded Values

Part two - Views and perspectives

- View 1: PVFP based on 'adjusted IFRS' basis
- View 2: EV based on 'adjusted SAM' Own Funds
- Analyst views and perspectives

Part three – discussion and next steps

- Discussion session
- Concluding remarks and next steps

Purpose of this session

- Generate interest in the work of the EV subcommittee
- Highlight current developments, key issues and debate on EV reporting
- Share the two broad views on a way forward for APN107
- Create awareness of proposed changes to the LAC's EV reporting guidance
- Stimulate discussion within the profession and encourage feedback

Part one

Introduction to Embedded Values

Gert van den Berg

Poll (*by show of hands*)

Q1: Have you heard of Embedded Value?

All hands up!

Poll (*cont'd*)

Q2: Have you worked on Embedded Value?

Poll (*cont'd*)

Q2: Have you worked on Embedded Value?

If not, put your hand down

Poll (*cont'd*)

Q3: For those of you that worked on Embedded Value, what was the purpose?

- Public financial reporting (e.g. annual report)*
- Business planning*
- M&A*
- Pricing*
- EV securitisation deals / VIF monetisation transactions*

Poll (*cont'd*)

Q3: For those of you that worked on Embedded Value, what was the purpose?

– Public financial reporting (e.g. annual report)

If you haven't worked on public EV reporting, put you hand down

Focus for this session is primarily on public EV reporting

Poll (*cont'd*)

Q4: For those of you that worked on public Embedded Value reporting, what was the type of Embedded Value?

- Traditional EV*
- European Embedded Value*
- Market Consistent Embedded Value*

Poll (*cont'd*)

Q4: For those of you that worked on public Embedded Value reporting, what was the type of Embedded Value?

-
- *European Embedded Value*
- *Market Consistent Embedded Value*

If TEV only, put you hand down...

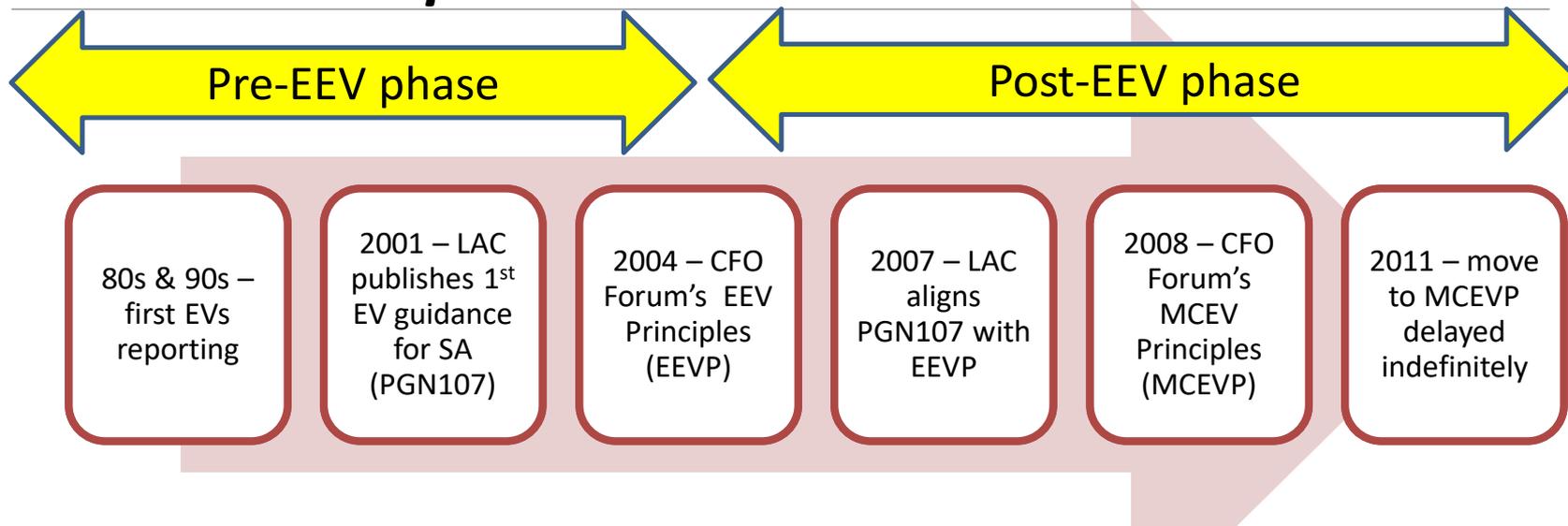
Poll (*cont'd*)

Final question: Did you consider the guidance provided in APN107 in performing the work?

If not, why?

Development of EV reporting and guidance

– two distinct phases



Release of EEVP significantly improved the comparability and credibility EV reporting worldwide:

- Introduce concepts of covered business, EVM and Group EV
- Explicit TVOG deduction
- Cost of capital required to meet internal, regulatory or other objectives
- All risks from shareholder perspective allowed for in EV
- Allow both real-world and risk-neutral / market consistent approaches

EV reporting continues to grow

- Value of reported EV continues to grow in South Africa and abroad

Group embedded value

Embedded value	Combined results			
	2014 Rm	2013 Rm	2012 Rm	2014 vs 2013
Embedded value	277 111	249 117	220 344	11%
Embedded value earnings	39 427	39 207	38 941	1%
Return on embedded value	16%	18%	20%	

Source: PwC's 2014 SA Insurance Industry Analysis

- Around 100 European and Asia-Pacific companies published EVs for YE 2013 of **\$1 trillion** combined. (SA < 1% of total)

APN 107 (previously PGN 107) – *purpose and goals*

- Provide **guidance for actuaries** in preparing EV financial disclosures of SA life insurers, or SA parent companies of such insurers; and
- Also intended to:
 - **Encourage consistent application** by local peer companies
 - Improve **consistency and transparency of disclosure**;
 - Keep up with practice standards worldwide; and
 - Allow EV reporting **consistent with EEV Principles**.
- Applies to routine financial reporting of EV information, but for other situations the basic principles should still apply, but only applies if such information is published and **in itself does not require the publication of embedded value information**.
- Provides **framework for assumptions, calculations and reporting of EVs**.

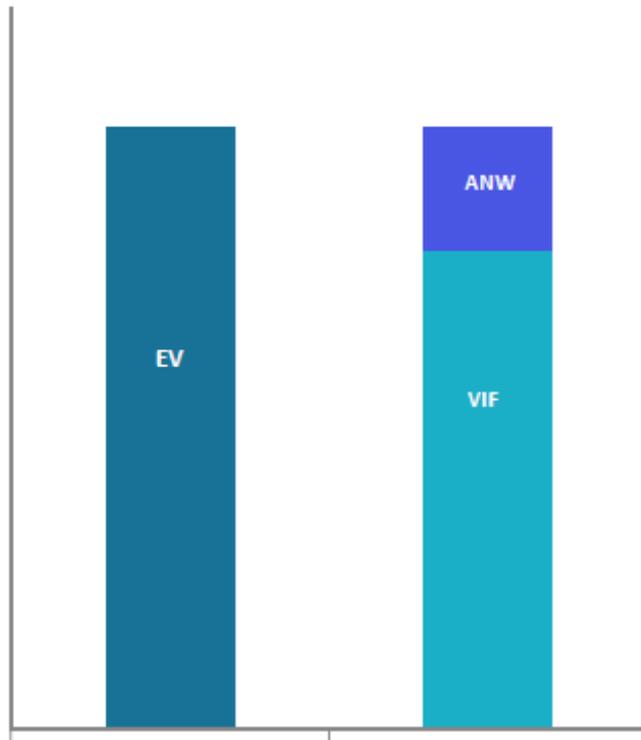
Application of guidance

	APN107 - Embedded value reporting	EEV Principles©	MCEV Principles©
Author	LAC	CFO Forum	CFO Forum
Purpose	Assist ASSA members working on EV reporting	Improve consistency and comparability of reported EV info	Improve consistency and comparability of reported MCEV info
Reporting entities	SA long-term insurers, or SA parent companies	European Insurance groups (primarily)	European Insurance groups (primarily)
Classification	Advisory Practice Note	Compulsory adoption for members	Formal adoption never made compulsory
<i>© EEV / MCEV Principles and Guidance and related documents are copyright of the CFO Forum</i>			

EEV vs. MCEV

	European Embedded Value	Market Consistent Embedded Value**
EV components	EV = FS + RC + VIF	EV = FS + RC + VIF
VIF decomposition	PVFP less TVOG less COC	CEPVFP less TVOG less CNHR less Frictional CoC
Allowance for risks	All	Non-hedgeable market risks
Discount rate	Risk discount rate or risk free rate*	Risk free rate*
Market consistent	Could be	Yes
Best estimate assumptions	Yes	Yes
PVFP = Present Value of Future after tax profits CoC = Cost of Capital; RC = Required Capital * reference rate as defined by insurer ** Two methods - discounted earnings or balance sheet		CEPVFP = Certainty Equivalent PV of future profits after tax CNHR = Cost of residual Non-Hedgable Risks TVOG = time Value of Options and Guarantees

MCEV development – *two methods*



Two methods

- Income Statement method
 - Consistent with CFO Forum definitions and guidance
 - Based on discounting future *profits*
- Balance Sheet method
 - Consistent with Solvency II view
 - Based on discounting future *cash flows*

and SAM view

In either case, basic identity holds
 $EV = VIF + ANW$

Both methods equivalent, but we will focus on Income Statement method

However, analysis of change under balance sheet method introduces new complexities

Source: Society of Actuaries – 2014 Valuation Actuary Symposium

MCEV development – *two methods*

“Some companies use an approach to calculating MCEV based on a balance sheet presentation. Where this is the case the balance sheet approach needs to produce materially the same results and be subdivided into the required constituents.”

CFO Forum – MCEV Principles Basis for Conclusions

Part two

Views and perspectives

Background

- EVs have traditionally been based on statutory liabilities to determine the present value of distributable cash profits. EV guidance refers to 'SVM'.
- SAM will replace the current SVM from 1 Jan 2016; and, as a result, the current version of APN 107 needs to be updated.
- EV subcommittee of the LAC to draft a revised version of APN 107 prior to the introduction of SAM.
- Most agree preferable not to require additional valuation for purposes of EV reporting alone; and therefore the starting points should be one of the valuations that are already required; i.e. IFRS or SAM or tax bases. The tax basis will likely be an adjusted IFRS basis.
- **Two broad views have emerged based on the choice between IFRS and SAM as the starting point.** The EV subcommittee therefore established two work streams to develop proposals on the way forward for each view.

View 1
PVFP based on adjusted IFRS liabilities
(**‘Adjusted IFRS view’**)

Adjusted IFRS view - *philosophy*

- **EV disclosure is generally well understood** and key strengths include inter alia; analysis of differences between assumptions and reality; permits international comparisons; and providing a value for new business;
- Research suggests **EV reporting within an audited framework** reduces information asymmetry and underpins the Share Price.
- Recognises that **EV is best used in conjunction with other indicators**, including IFRS financial statements and related headline KPIs and as well as Economic Value and SAM Balance sheet.
- Different valuations and approaches ,if implemented appropriately and reconciled to other approaches, improves **credibility of reporting**.

Adjusted IFRS view – *key proposal 1*

Key proposal 1

- **Replace ‘SVM’ with ‘Adjusted IFRS’ as the basis for projecting release from assets backing liabilities distributable to shareholders after tax.**
- Fundamental principle: total profit recognised over the lifetime of a policy in the EV should be the same as for IFRS; only difference is timing of the recognition of profits.

Adjusted IFRS view – *key proposal 2*

Key proposal 2

- **The total shareholder cash flow for each future period must be fungible.**
- Aimed at improved consistency and comparability of total EV calculated by ensuring the projected transfers to free surplus are not recognised prematurely (i.e. payback period reflected fully in discounting).

Adjusted IFRS view – *key proposal 3*

Key proposal 3

- **Retain the current real-world approach underlying economic assumptions i.e. using risk free rates plus risk margins to set investment return assumptions and discount rates.**
- However, it is proposed that APN107 should still allow option report MCEVs in accordance with the CFO Forum's MCEV Principles© with appropriate adjustments for the South African market.

Adjusted IFRS view – *further proposals*

Guidance expanded/enhanced in following areas

- Risk allowance / economic assumptions
 - Guidance should be expanded to reflect approaches where projected returns and time dependant **discount rates based on a yield curve.**
 - Further guidance on **setting of the risk margin for Risk Discount Rate to improve comparability**
- Changes to **minimum EV disclosures:**
 - **Sensitivities required for total EV** not only VIF
 - Additional disclosure of **shareholders distributable cash flow profile** (e.g. 1-5; 6-10 ; 11-15; 16-20; 21+ years)

Adjusted IFRS view – *key strengths*

Key strengths

- Link between IFRS and EV clearly defined and easy to understand for most **investors / analysts**, and easier for **management** to explain movements to market and use to manage business.
- Results more intuitive and consistent with valuations of **non-covered business**
- Allows reporting of consolidated effective interest in covered business for legal entities or internally defined business units, territories , products, distribution channels
- Realistic EV projections used for strategy and business planning / budgeting, performance measurement / incentives and pricing
- EV analysis of change (in part) required for SAM reporting (i.e. OF4.3 included in public reporting / must be audited), and will re-use reduce overall work required and audit costs

Adjusted IFRS view – *key strengths*

Key challenges

- Treatment of negative reserves / negative rand reserves recognised on IFRS basis
- Allow for the link between EV and SAM views and how they move relative to each other

Adjusted IFRS view

Summary

- Retain most of existing APN107
- PV of shareholders' interests in the earnings distributable from assets allocated to the covered business
- Use 'adjusted IFRS basis' to determine earnings
- Total shareholder earnings for each period must be distributable as cash
- Retain the current real-world approach
- Further guidance on setting of RDR / minimum disclosures
- Recognise shortcomings and limitations of EVs
- Use in conjunction with other indicators, and reconcile

View 2

EV based on adjusted SAM Own Funds
(‘Adjusted SAM Own Funds view’)

Adjusted SAM Own Funds view

A typical journey...

SAM is already a market consistent / fair value measure – let's use it "as is"!

Good point, some adjustments are necessary but this is still a great idea.

Hang on, some of these adjustments are making my head hurt. Are we sure we want to do this?

Why are we doing this again?

Adjusted SAM OF view – *Why SAM?*

SAM is already a market consistent / fair value measure – let's use it "as is"!

- SAM and Solvency II target a market consistent valuation of technical provisions
- Best Estimate Technical Provisions combined with a Risk Margin explicitly targeted at transfer value of the contractual obligations
- Market value of assets
- Difference should be market value of the business*

* But it's not – see next slides

Adjusted SAM OF view – Why SAM?

SAM is already a market consistent / fair value measure – let's use it "as is"!

$$EV = ANW + VIF$$

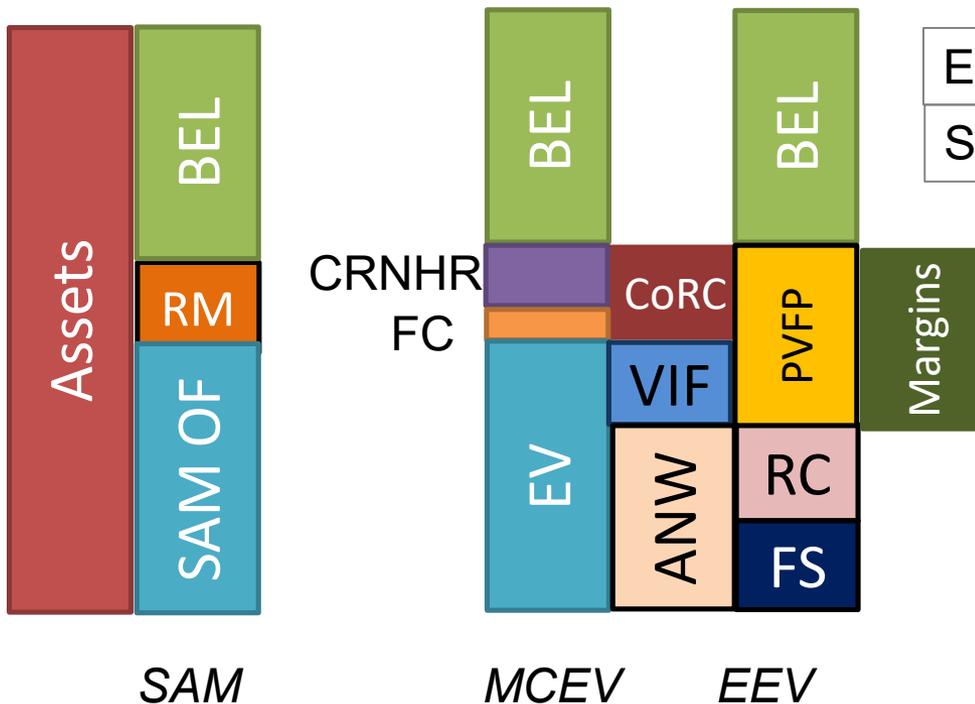
$$EV = [FS + RC] + VIF$$

$$EV = [FS + RC] + [PVFP - CoRC]$$

$$EV = FS + [RC - CoRC + PVFP]$$

$$EV = \text{Assets} - \text{BEL} - \text{CRNHR} - \text{FC}$$

$$\text{SAM OF} = \text{Assets} - \text{BEL} - \text{RM}$$

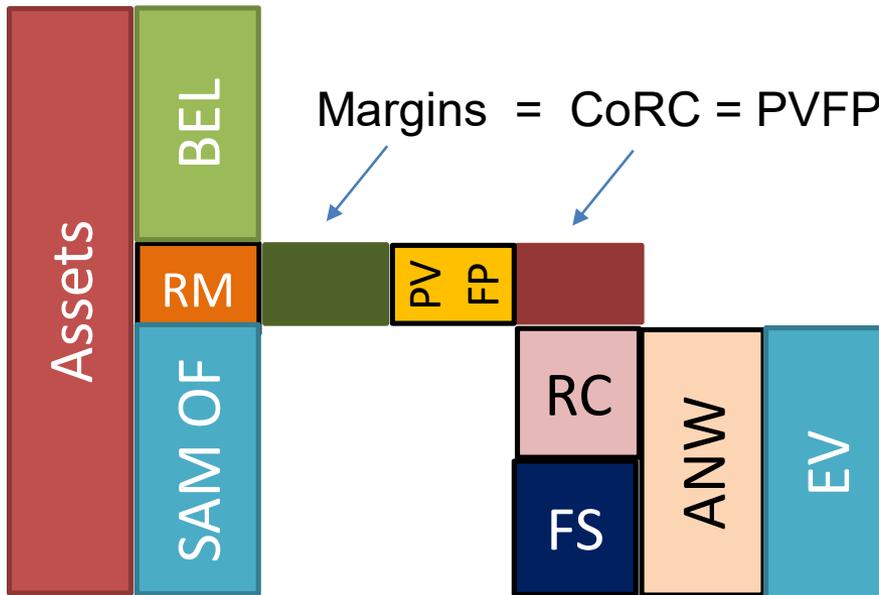


- ANW – Adjusted Net Worth
- BEL – Best Estimate Liability
- CoRC – Cost of Required Capital
- CRNHR – Costs of Residual Non Hedgeable Risks
- EV – Embedded Value
- FC – Frictional Costs
- FS – Free Surplus
- RC – Required Capital
- RM – Risk Margin (SAM)
- SAM OF – SAM Own Funds
- VIF – Value of In Force

Adjusted SAM OF view – Why SAM?

SAM is already a market consistent / fair value measure – let's use it "as is"!

If SAM basis accurately reflects shareholder value:
 $EV = FS + RC + PVFP - CoRC = SAM \text{ Own Funds}^*$



- We expect to earn RM in future, but it turns out this is just enough to cover the costs of capital.
- $PVFP = CoRC = Risk \text{ Margin}$
- $EV = ANW + VIF$ but VIF is zero
- $EV = FS + RC + PVFP - CoRC$
- The approach works identically to current EV
- Simpler! (no rebasing)

* Generally it doesn't

Adjusted SAM OF view – *Why adjustments are necessary*

Good point, some adjustments are necessary but this is still a great idea.

1. Some assets exclusions from Own Funds (intangibles, participations etc.) are not in line with shareholder value
2. We don't want to place zero value on zero boundary linked business or short boundary group life etc. ("customer relationship")
3. We believe a different "risk free" rate is appropriate (liquidity premium et al) or choose real world returns
4. We choose a different CoRC rate than SAM's 6%
 - MCEVs typically calculated on 2.5% to 4.0% CRNHR + FC
5. We hold a different amount of capital and recognise a cost or frictional cost for holding that capital

RC

PVFP

PVFP

CoRC

FS

RC

CoRC

Adjusted SAM OF view – *Two approaches to show adjustments*

Hang on, some of these adjustments are making my head hurt. Are we sure we want to do this?

- $EV = SAM\ OF + Excluded\ Amounts + Customer\ Relationships - CoRC\ on\ Customer\ Relationships + Different\ Investment\ Returns + Lower\ CoRC\ from\ lower\ CoRC\ rate - Higher\ CoRC\ from\ higher\ amount\ of\ RC$

- $EV = FS^* + RC^* + PVFP - CoRC^*$
- $FS^* = SAM\ FS - Additional\ Required\ Capital$
- $RC^* = SAM\ SCR + Excluded\ Assets + Additional\ Required\ Capital$
- $PVFP = SAM\ RM + Customer\ Relationships + Different\ Investment\ Return\ release$
- $CoRC = SAM\ RM + CoRC\ on\ Customer\ Relationships - Lower\ CoRC\ rate + FC\ on\ higher\ capital$

ignoring tax for now

Adjusted SAM OF view – *Interpretation of adjustments*

Why are we doing
this again?

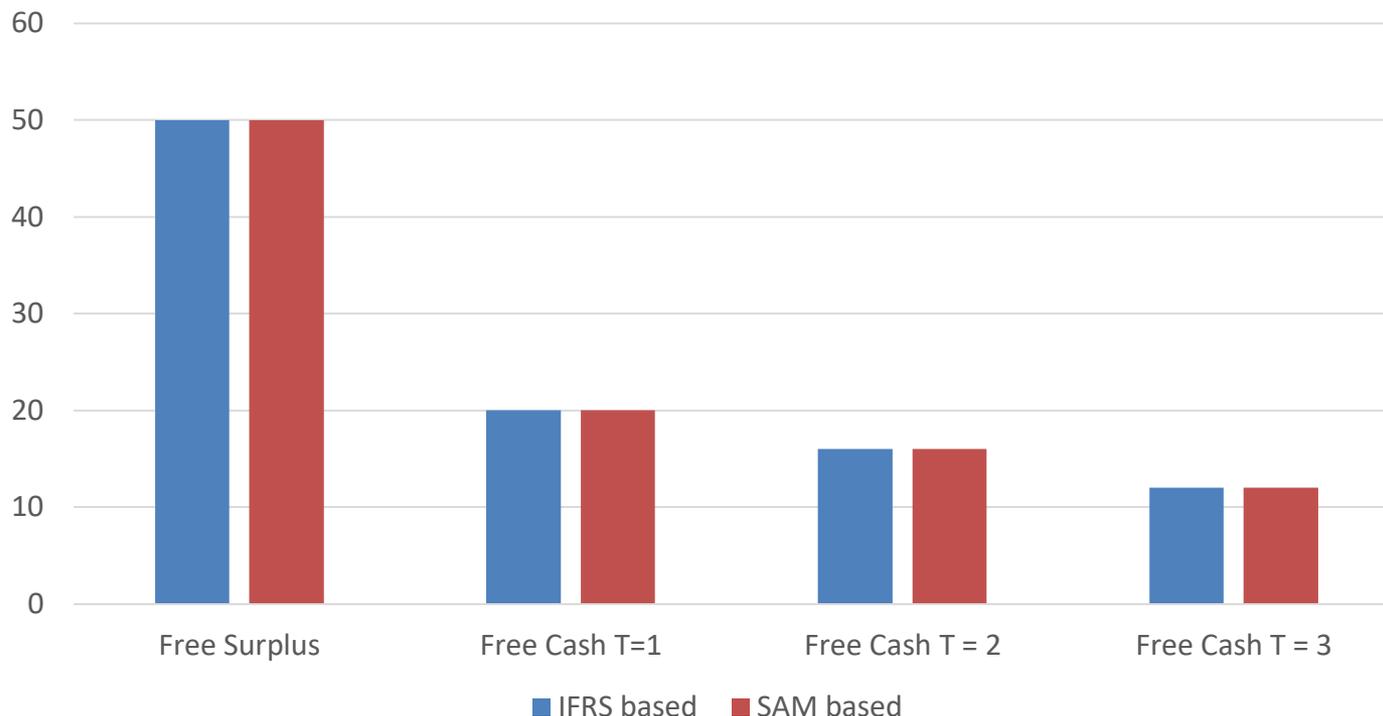
1. Understanding the separate value attributed to Customer Relationships over and above the SAM view of contractual obligations should be useful to internal and external users of EV
2. Impact of different views of risk-free rates, the application of illiquidity premium and/or the use of real world expected returns and a Risk Discount Rate illuminates apparent value from subjective assumptions about market performance and departure from pure market consistency
3. Sharper focus on management's view of the appropriate CoRC rate and the impact of that view could lead to useful discussions with shareholders
4. The impact of frictional costs of holding higher required capital, combined with how the costs of holding that capital could drive capital management decisions

Adjusted SAM OF view

Free Cash Flow consistency

Why are we doing this again?

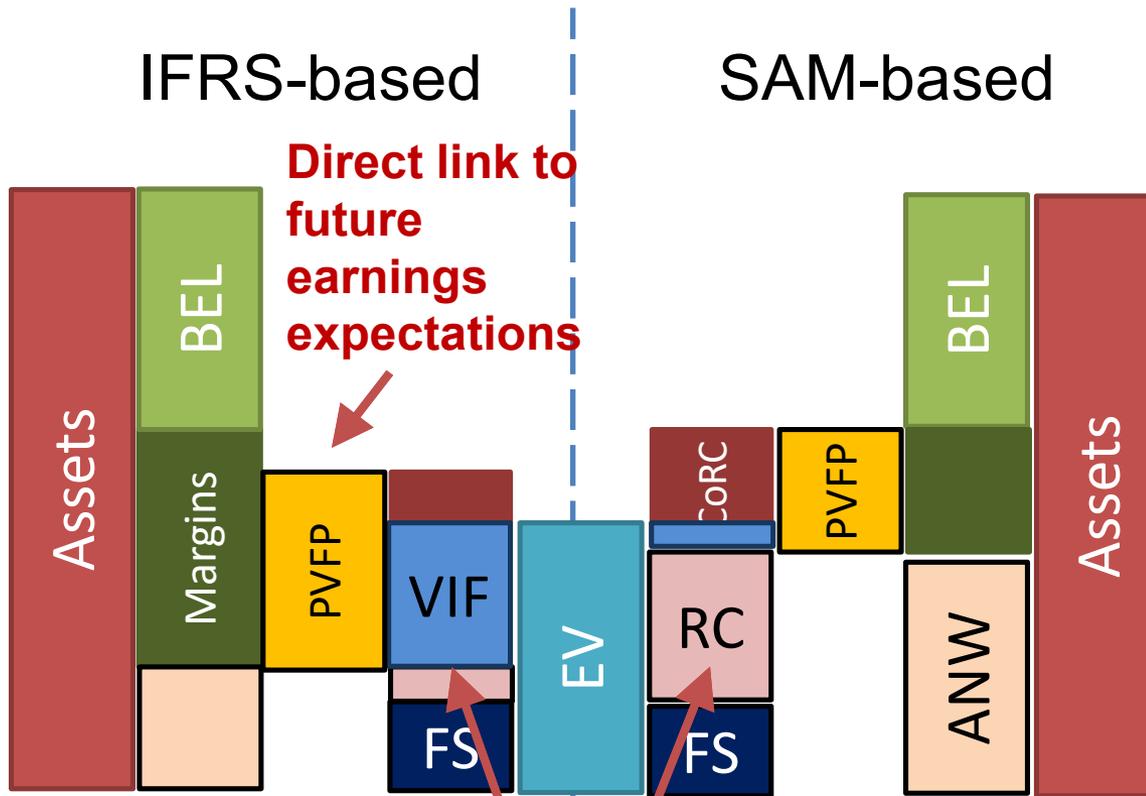
Free Cash Flow independent of underlying measurement basis



Adjusted SAM OF view

Free Cash Flow consistency

Why are we doing this again?



The components may change, but the final value shouldn't

Which is more stable over projection?

Adjusted SAM OF view – *Key advantages*

Why are we doing this again?

- If internal view of required capital is close to, or closely linked to, SAM SCR, then an adjusted SAM OF view on EV might make most sense of a “discounted free cash flow to shareholders” valuation
- The approach lends itself more directly to a Market Consistent Approach (several adjustments fall away or become small) and rebasing is no longer necessary
- It partially bridges the gap in capital management and hedging decisions between a regulatory (SAM) focus and economic value (EV) focus
- Most insurers publishing Economic Capital will base it on a SAM-type balance sheet, providing consistency between EV and EC measures
- It is a more direct descendent of current EV approach in South Africa (although, practically, an IFRS approach might be a smaller change for some insurers)

Adjusted SAM OF view – *Key disadvantages*

Why are we doing this again?

- It will require additional reconciliations, analysis and explanation to provide a useful link to IFRS earnings
- If the business is managed primarily on an IFRS earnings basis, or required capital / dividends are closely linked to IFRS measures, then the link between the SAM balance sheet and actual free cash flow might be weak
- The PVFP and VIF will generally be smaller than users are familiar with and the CoRC higher than we're used to.
 - VIF could be negative.
- The separation of “Customer Relationships” and adjustments to SAM RMs might raise new questions from analysts.
- If real world expected returns are used, we will still need to rebase the projected balance sheet

Unifying Focus on Free Cash Flow

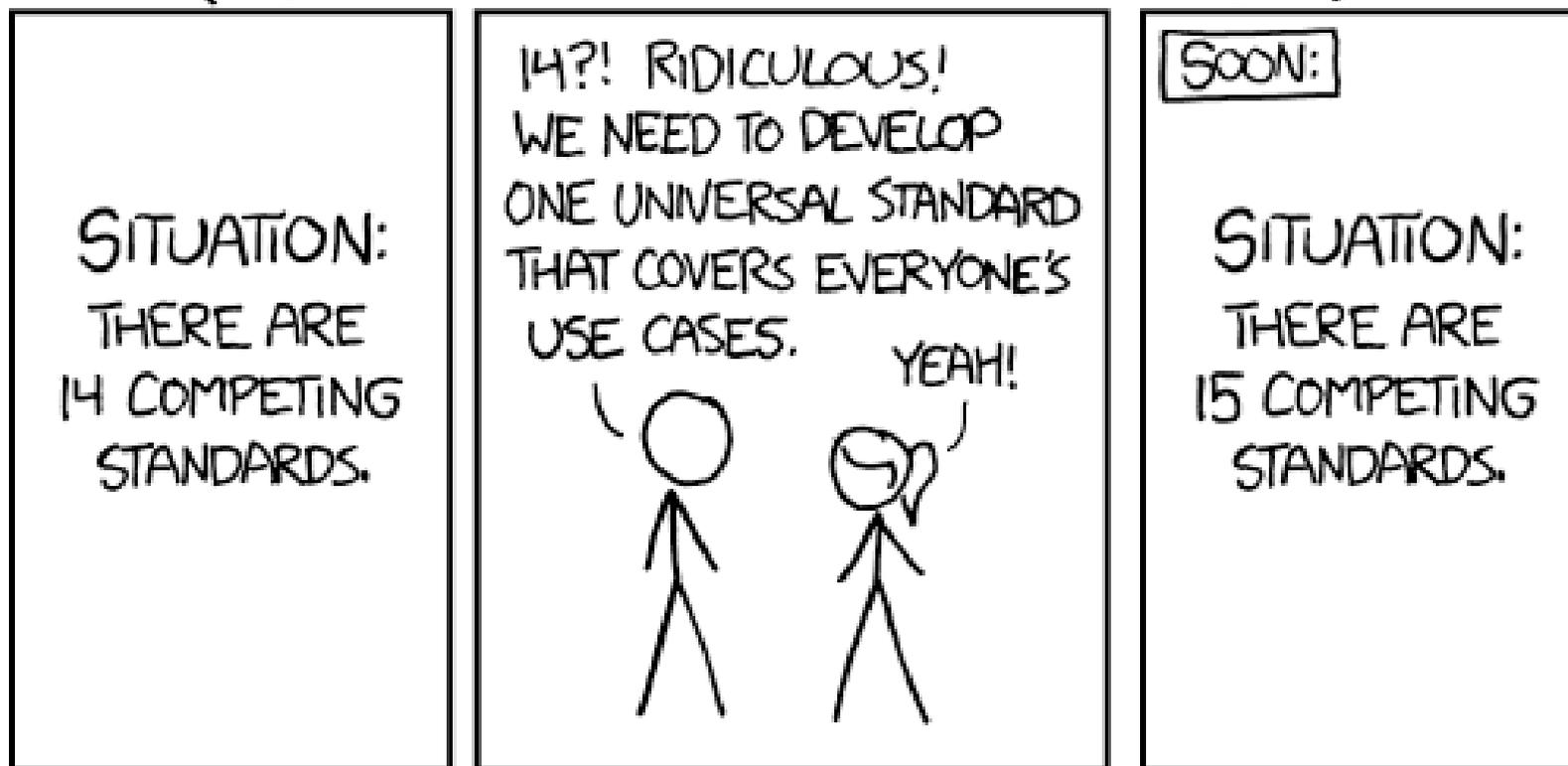
???

- $EV = FS + [RC - CoRC + PVFP]$
= FS + PVFFC
Free Cash Available Immediately
+
Present Value of Future Free Cash
- EV should be the same under IFRS- and SAM-based EVs
- FS should be the same
- Therefore PVFFCF must be same
- This simpler EV decomposition also useful for VNB
 - How much free cash did we give up at POS
 - What value will we get from future cash flows?



Merging different views

HOW STANDARDS PROLIFERATE:
(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC)



Source (used with permission): XKCD <http://xkcd.com/927/>

Lunch Break

Analyst views and perspectives

Discussion session

Concluding remarks / next steps

Thank you!