



International Accounting Changes: IASB and FASB Proposals

Presented by CAS Accounting Changes
Committee

September 6, 2012



Agenda

Introduction of Subject and Presenters - Orin Linden

Background and History of the Project - Steve Visner

Key Elements of IASB and FASB Drafts with Key Differences and Redeliberations - Marc Oberholtzer

Risk Adjustment Details for P/C Insurers and Actuaries - Parr Schoolman

Modeling the Effects - Gareth Kennedy



Accounting Changes Task Force/Committee

The Accounting Changes Task Force, reporting to the VP-Research & Development, was a "rapid response" group that evaluated proposed changes to international and US accounting regulations. The Goal was to provide research to the American Academy of Actuaries regarding P/C aspects of proposed accounting changes, as well as educational materials to CAS members. It has recently been reconstituted as the CAS Accounting Changes Committee with similar goals.

Committee Composition

Steve Visner- Chair
Orin Linden – Vice Chair
John Zicarelli- PMO Lead
Marc Oberholtzer- Building Block Lead
Nick Pastor and Gareth Kennedy – Modeling Co-Leads
Parr Schoolman - Reinsurance Lead

Other Members

Jacque Friedland
Gary Koupf
Robert Miccolis

Chris Nelson
Vladimir Shander
Kun Zhang



Introduction

International financial reporting standards ("IFRS") were proposed years ago by the International Accounting Standards Board ("IASB") and these standards are in various states of implementation around the world, outside of the United States.

In the US, financial accounting standards for public companies are promulgated by the Financial Accounting Standards Board ("FASB") and are called "Generally Accepted Accounting Principles" ("GAAP"). These standards are of course quite different.

While this is not an issue for companies solely doing business in the US, it does lead to issues as to which set of standards companies operating internationally should use as well as problems in attempting to compare companies using different accounting standards. Further, the treatment of insurance policies was not well defined under IASB.



Recent Developments

In 2010, separate papers by IASB and FASB further addressed the issues of how to account for insurance contracts under IASB and how to converge the two different accounting systems:

- The IASB's publication of an Exposure draft in July, 2010, outlined their proposal to introduce a transparent accounting treatment for insurance contracts, and
- FASB's publication of a discussion paper in September, 2010, outlined their proposal for the treatment of insurance policies and moving GAAP closer to IFRS.

The proposals have been modified through an ongoing re-deliberation process since early 2011 and is expected to continue at least into the fall of 2012. This session will discuss these proposals updated to reflect preliminary views during the re-deliberation process, and outline the similarities and differences of the two proposals as well as pointing out some of the effects adoption of either would have on U.S. Companies Financial reporting.



Disclaimer

Any opinions expressed are those of the presenters, not the CAS, AAA or their employers. The observations within were produced by the CAS Accounting Changes Task Force. The results demonstrated within are based on preliminary analyses and for illustrative purposes only. They are not intended to estimate the effects on any particular company.



Background and History

Presenter: Steve Visner



IFRS for Insurance Contracts — Overview

- International Financial Reporting Standards (“IFRS”) are promulgated by the International Accounting Standards Board (“IASB”).
- The development of an IFRS for Insurance Contracts began in 1997, when the IASB’s predecessor, the International Accounting Standards Committee (“IASC”) formed a Steering Committee to carry out the initial work on an Insurance project.
- The impetus for the Insurance Contracts project was:
 - There was no (international) standard on insurance contracts;
 - Accounting practices for insurance contracts were diverse, and often differed from practices in other sectors;
 - In some cases, accounting for insurance contracts had been heavily influenced by supervisory concerns.
- The Insurance Contracts project was divided into two Phases in 2002.
- Phase I of the Insurance Contracts project was completed in 2004 when the IASB issued IFRS 4 Insurance Contracts.
- Phase II of the Insurance Contracts began in 2004, and is still in process.

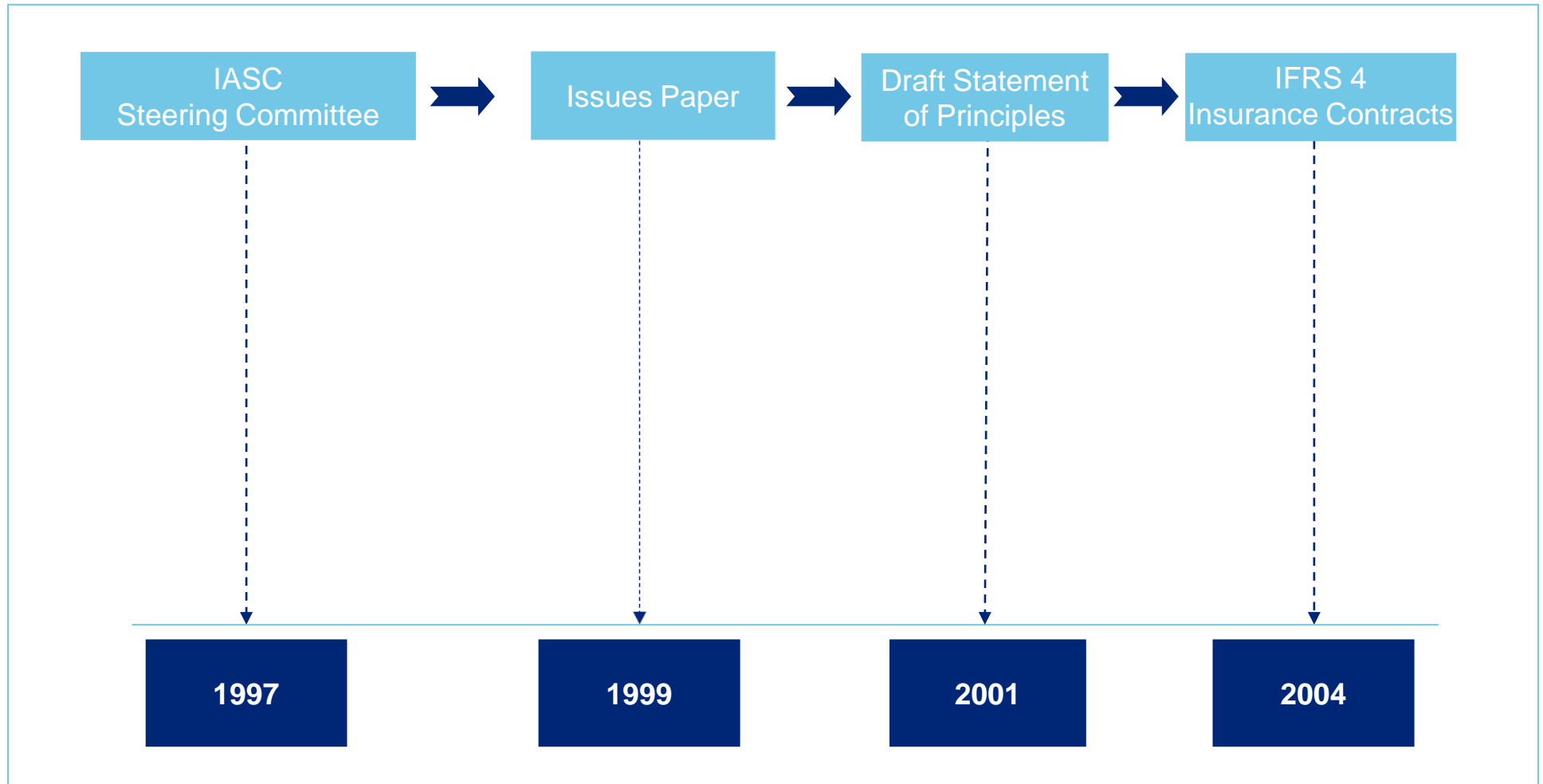


IFRS for Insurance Contracts — Phase I Summary

- In 1999, the Steering Committee published an Issues Paper
- In 2001, the Steering Committee released a Draft Statement of Principles.
- In 2004, the IASB released IFRS 4 Insurance Contracts, which completed Phase I of the Insurance Contracts project.
- IFRS 4 applies to all insurance and reinsurance contracts.
- IFRS 4 does not apply to policyholder accounting.
- IFRS 4 allows insurers to largely continue with local GAAP.
- IFRS 4 key provisions include:
 - Specific and uniform definition of insurance: a contract is an insurance contract only if it transfers significant insurance risk;
 - Insurance liabilities are valued gross of ceded reinsurance;
 - Liability Adequacy Test requirement (similar to unearned premium deficiency reserve testing);
 - Prohibition of reserves for possible claims under contracts that are not in existence at the reporting date (e.g. equalization and catastrophe reserves);
 - Disclosure principles with extensive guidance.



IFRS for Insurance Contracts — Phase I Timeline





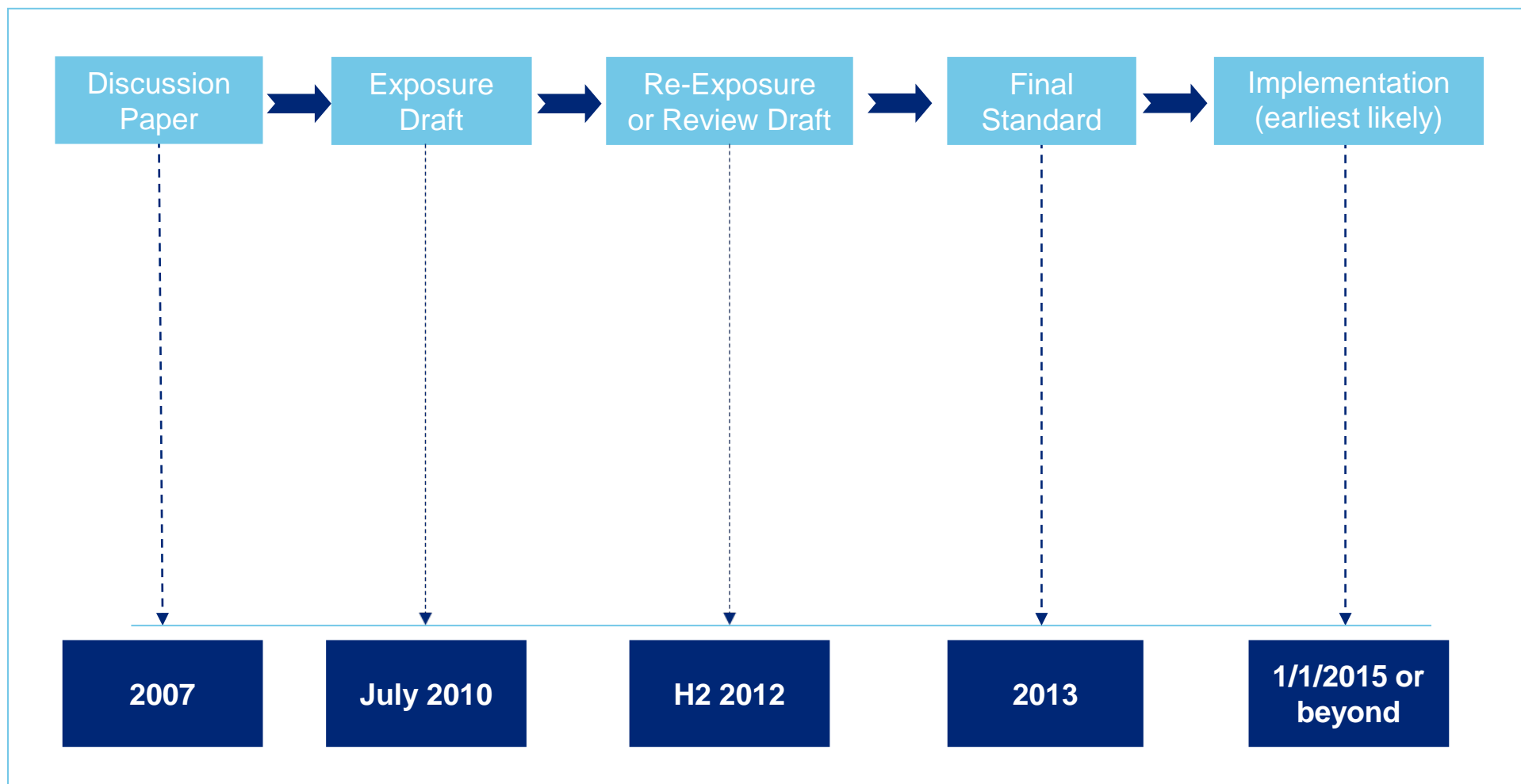
IFRS for Insurance Contracts — Phase II Summary

- Phase II of the Insurance Contracts project began in 2004, soon after the completion of Phase I.
- The key objectives of Phase II are:
 - Introduce a single IFRS accounting model for all types of insurance contracts
 - Make the new accounting model highly transparent
 - Align insurance accounting with IFRS accounting across other industries and other IFRS accounting standards to the extent possible
- The IASB published a Discussion Paper (“DP”) in 2007 based on a fair value approach: current estimate of cash flows + discount adjustment + risk margin.
- The IASB published an Exposure Draft (“ED”) in July 2010.
- The IASB’s ED proposes an entity specific¹ current measurement model: current estimate of cash flows + discount adjustment + risk margin + residual margin (residual margin eliminates any gains at contract inception).
- Re-deliberations are nearing the end - few items remain to be decided; key outstanding item is the presentation of income statement.
- The IASB is expected to re-expose or provide an update (either another exposure draft or a review draft) later in 2012 and release a final standard in 2013.

• ¹ Entity specific reflects the business characteristics, cash flow timing, and risk inherent in the business written by the carrier; this is the approach in the ED. Market consistent reflects the price a company would expect to pay if it transferred its liability to a market participant; this was the approach proposed in the DP.



IFRS for Insurance Contracts — Phase II Expected Timeline



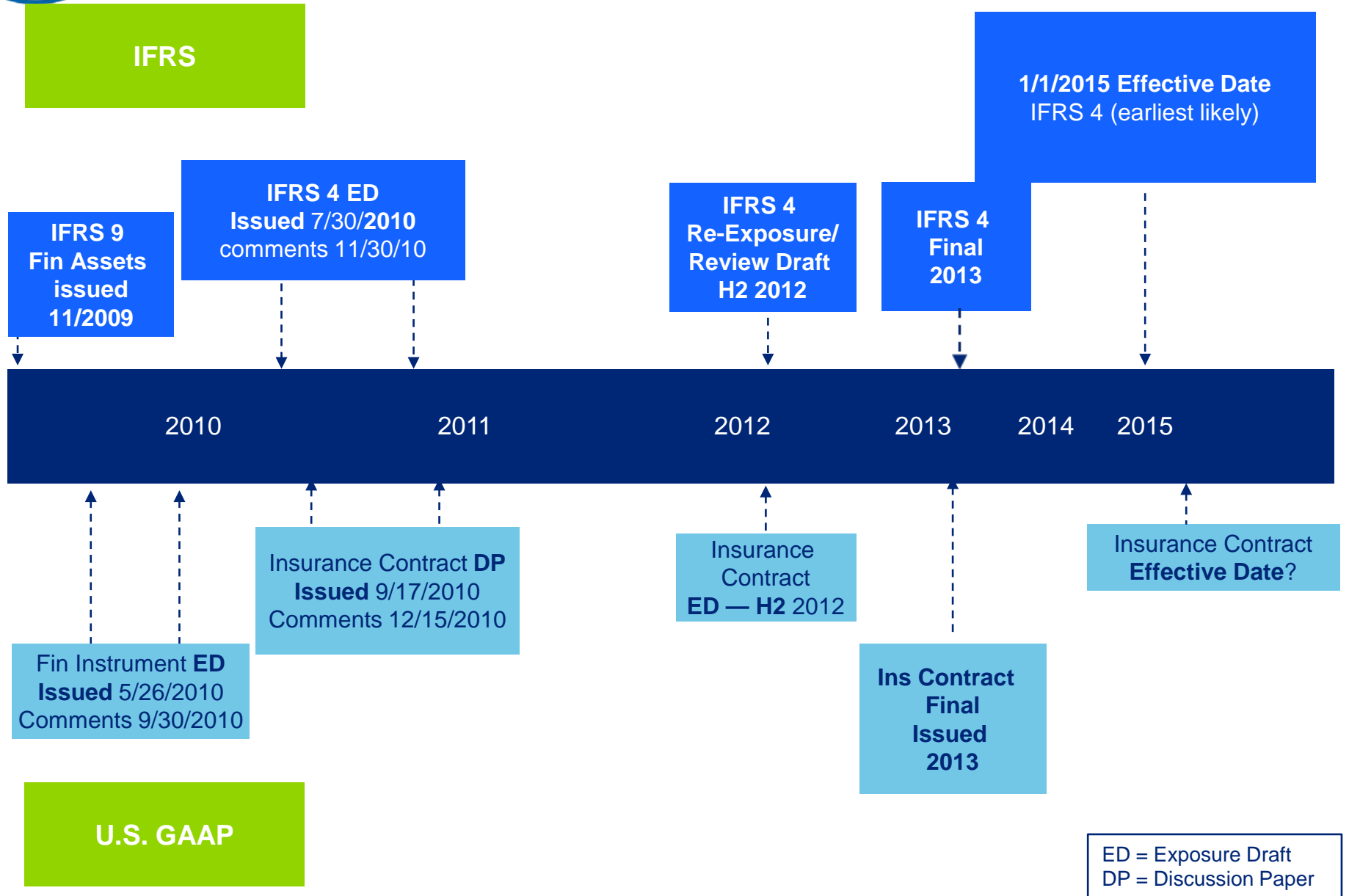


IFRS for Insurance Contracts — Interaction with FASB

- **The FASB joined the insurance accounting project in 2008**
 - IASB/FASB Boards agreed to undertake the project jointly and meet regularly.
 - Some areas of disagreement remained, resulting in the IASB publishing its Exposure Draft without the FASB on July 30, 2010.
 - The FASB published its Discussion Paper on September 17, 2010.
- **IASB and FASB continue working on “converging” U.S. GAAP and IFRS**
 - Efforts were initially geared toward a June 30, 2011 timeline.
 - The timeline for the Insurance Contracts project has been extended to at least 2012.
 - Primary focus is on converging general principles, not every detail.
 - Even “converged” standards may have different requirements.
 - Relatively few areas where there are no efforts to converge U.S. GAAP and IFRS.
- **Ultimately, outcome of the convergence efforts, particularly as it relates to U.S. GAAP, are uncertain**
 - In June 2012, FASB Chair announced that arriving at a converged insurance contracts standard was no longer expected
 - It is possible that, at the end of the project, there are only minor changes to U.S. GAAP accounting agreed to by the FASB (particularly for short duration contracts)



IASB/FASB Expected Timeline





Key Elements of IASB and FASB Drafts with Key Differences and Redeliberations

Presenter: Marc Oberholtzer



Insurance Contracts IASB and FASB Proposals – Current Status

Definition of an Insurance Contract

A contract under which one party accepts significant insurance risk from another party by agreeing to compensate the policyholder if a specified uncertain future event adversely affects the policyholder.

Insurance risk is risk other than financial risk

Based on nature of contract, not entity issuing contract

Risk Transfer Analysis

Significant underwriting or timing risk

Remote scenarios considered – must be a scenario where insurer outflows are greater than inflows



Insurance Contracts

IASB and FASB Proposals – Current Status

Recognition

The coverage effective date unless there is an onerous contract

Boundary of the Contract

The point at which the insurer (1) is no longer required to provide coverage OR (2) has the right to reassess the risk of the portfolio and, as a result, can set a price for the portfolio that fully reflects that risk

Unbundling

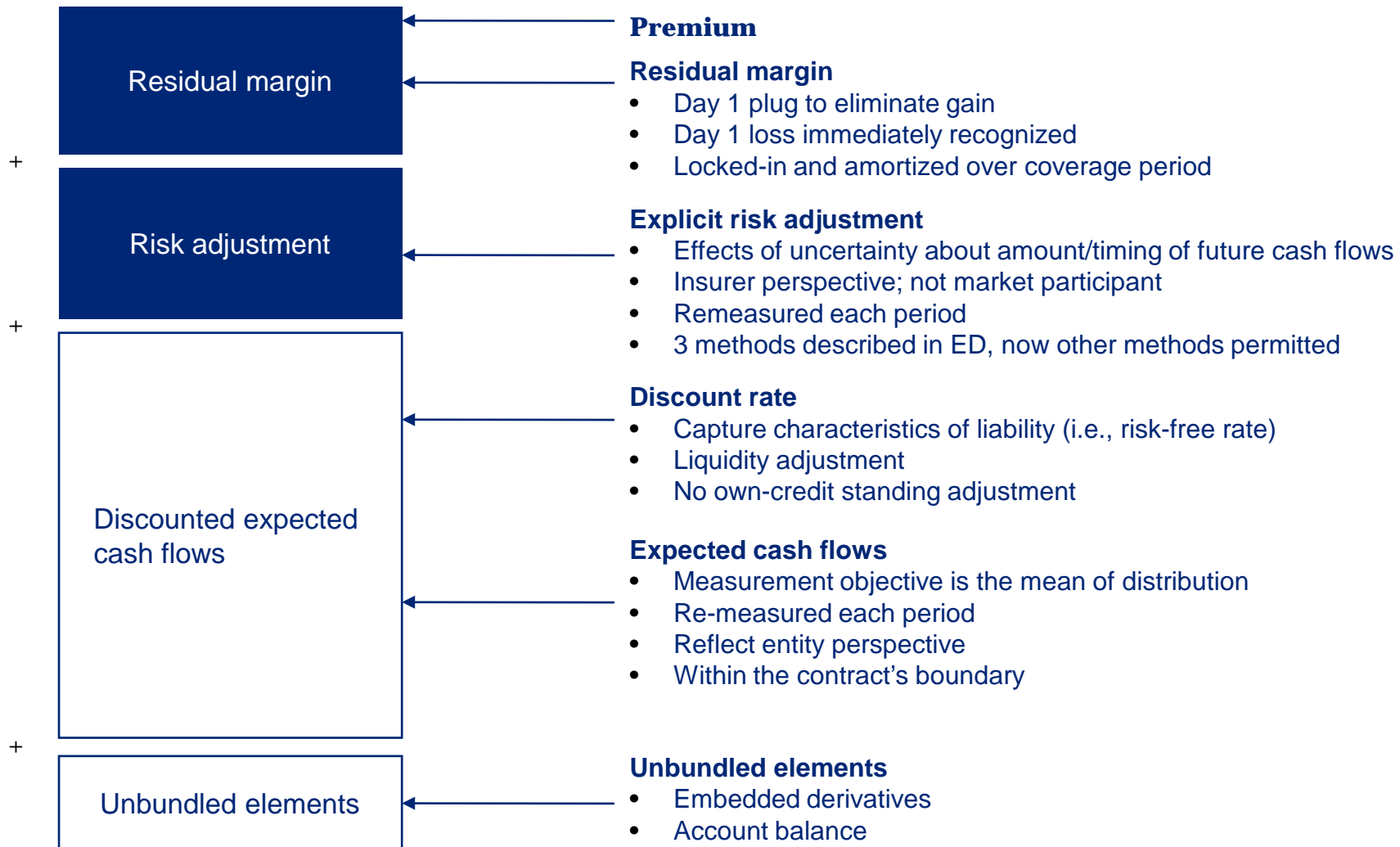
Continues to be subject to re-deliberation. Goal is generally to unbundle certain investment accounts, embedded derivatives and goods and/or services not closely related to the insurance agreement. Has potential impact to loss sensitive p/c products, in particular high deductible and retrospectively rated contracts, and reinsurance contracts with experience accounts.



Insurance Contracts

IASB measurement approach

The building block approach *with an explicit risk adjustment and residual margin*

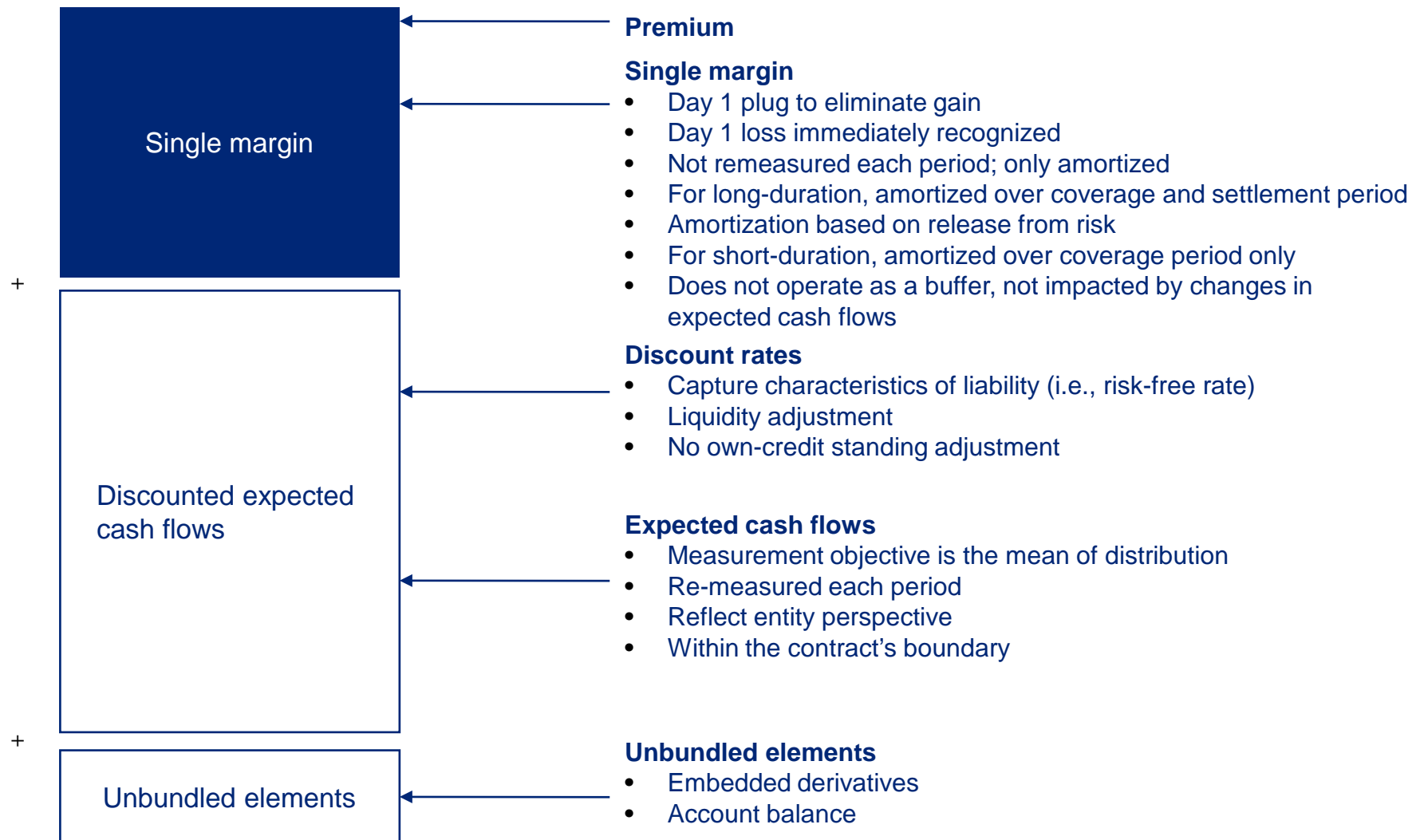




Insurance Contracts

FASB measurement approach

The building block approach *with a single margin*





Insurance Contracts From IASB ED and Redeliberations

Premium Allocation Approach (PAA) - Short Duration Contracts

IASB's PAA model would cover short duration contracts, including most property and casualty insurance contracts; the PAA model would retain unearned premium for pre-claim period

IASB - PAA for Short Duration Contracts (designed to cover most p/c contracts)

- PAA is an approximation of the standard building block approach
- Covers contracts up to 12 months, as well as contracts that are longer if the unearned premium continues to be a reasonable proxy for what would be determined using a building block approach
- Details still being determined; seasonality, accretion of interest only considered if “significant”
- Includes unearned premiums for pre-claim period, building block approach without residual margin in post-claim period; certain acquisition costs would be capitalized
- Potentially no balance sheet gross-up for premiums receivable

FASB - PAA for Short Duration Contracts

- PAA is a separate model, one akin to revenue recognition
- Covers contracts up to 12 months
- Includes unearned premiums for pre-claim period, discounted loss reserves without margin or risk adjustment in post-claim period; certain acquisition costs would be capitalized



Insurance Contracts Measurement Approach

Explicit Risk Adjustment (IASB Approach)

Objective:	Approach:
<ul style="list-style-type: none">• To reflect effects of uncertainty about amount and timing of cash flows from issuer perspective• An amount that would make the insurer indifferent to selling (paying to transfer) versus retaining the liability and related uncertainties until payment <p>FASB would not separately measure</p>	<ul style="list-style-type: none">•Originally limited to 3 techniques in IASB ED, confidence level, tail value at risk, cost of capital; now IASB is considering allowing other methods•Need to select most appropriate technique, considering 5 specified characteristics•Uses current estimates and is remeasured each period•Level of measurement is now not prescribed and could reflect diversification across portfolios but not beyond the reporting entity•Only risks associated with contract, not operational and investment risks



Insurance Contracts Measurement Approach

Single Margin (under FASB Alternative Composite Margin or Single Margin Approach)

The “plug” to eliminate any gain at initial recognition:

PV future cash
inflows

—

PV future cash
outflows

=

Composite
margin

- Composite margin is now referred to as “single margin”
- Single margin cannot be negative:
- Record a loss at inception if expected PV of cash outflows exceeds expected PV of cash inflows
- Single margin amortized over coverage and claims handling period
- Amortization of single margin not prescribed specifically, it should be amortized based on release from risk.
- For contracts that are subject to the PAA (short-duration products), the FASB’s current view is to release single margin over the coverage period, which would result in discount reserves without a margin in the post claims period.
- Single margin not remeasured, and not a “shock absorber,” but amortization pattern could change based on changes in ratio components
- Interest is not accreted on this margin under FASB view.



Insurance Contracts

Financial Statement Presentation and Disclosure

- Income statement presentation continues to be under discussion and re-deliberation
- Negative reaction to summarized margin presentation; P&C contracts may retain a premiums and incurred claims presentation on the income statement
- May be additional detail as regards unwinding of discount, prior period development, changes in explicit risk adjustment
- Substantial disclosure requirements
 - Reconciliation from opening to closing balance of each major component of contract balances, including:
 - Insurance contract liabilities,
 - Insurance contract assets, and
 - The risk adjustment and residual margin included in each (IASB).
 - Similar information for reinsurance contracts.



Insurance Contracts

Reinsurance

- Minimal discussions during original deliberations, minimal guidance in IASB ED/FASB DP
- Finally discussed in more depth during 2011; Boards tentatively agreed on:
 - Risk transfer guidance, which stays same as ED/DP, except there would be a “standing in the shoes” provision
 - Treatment of reinsurance of past events – gains would be deferred similar to today under US GAAP
 - Recognition for risks attaching contract would follow direct contract recognition
 - Ceded risk adjustment would reflect the “risk removed” by usage of reinsurance
 - Credit risk reflected using financial instruments model
- Ceding commissions to be discussed at future meeting



The end game

- Many topics have been re-deliberated and the IASB and FASB have tentatively reached many decisions
- IASB and FASB and reaching out to preparers, users, other groups for comments focusing on unintended consequences
- Still remaining are key IASB/FASB board discussions / decisions:
 - Presentation and Use of Other Comprehensive Income
 - Unbundling (separating Service and Deposit components)
 - Transition
 - Business combinations

Key Reminders:

- Board decisions so far are **tentative** – boards can and do change their minds!!
- IASB re-exposure/draft toward the end of 2012
- FASB would prepare an exposure draft likely toward the end of 2012



Risk Adjustment Details for P/C Insurers and Actuaries

Presenter: Parr Schoolman



Risk Adjustment Methodology Characteristics

- In general, a risk margin methodology should exhibit the following characteristics:
 - Risks with low frequency and high severity will result in a higher risk margin than risks with high frequency and low severity.
 - For similar risks, contracts with longer duration will result in higher risk margins than those with shorter duration.
 - Risks with a wide probability distribution will result in higher risk adjustments than risks with a narrower distribution
 - The less that is known about the current estimate and its trend, the higher the risk adjustment should be
 - To the extent that emerging experience reduces uncertainty, risk adjustments will decrease, and vice versa.

Source: <http://www.ifrs.org/NR/rdonlyres/54465C67-3F1F-4EC2-92D6-2F02CB21CF36/0/AP7Criskadjustment.pdf>



Risk Adjustment Methodologies

- Exposure Draft provided examples for three methodologies for determining risk adjustment:
 - Confidence Level (aka VaR) –
Risk adjustment will be the difference between the probability weighted expected value and the corresponding result at a selected percentile of the probability distribution
 - Conditional Tail Expectation (CTE, aka TVaR) –
Risk adjustment will be the difference between the probability weighted expected value and the average of all tail results of a distribution beyond a selected percentile.
 - Cost of Capital –
Risk adjustment will be measured as the present value of the cost of capital required to fulfill its obligations to policyholders, with capital based upon confidence level or regulatory capital approach, and the cost rate based upon the risks relevant to the liability
- Risk adjustment methodology is not restricted to these approaches



Methodologies for Determination of Reserve Probability Distribution

- Loss Triangle based:
 - Mack: “Distribution-Free Calculation of the Standard Error of Chain Ladder Reserve Estimates”
 - [http:// www.casact.org/library/astin/vol23no2/213.pdf](http://www.casact.org/library/astin/vol23no2/213.pdf)
 - England & Verrall: “A Flexible Framework for Stochastic Claims Reserving”
 - <http://www.casact.org/pubs/proceed/proceed01/01001.pdf>
- Incremental Triangle based:
 - Barnett & Zehnirth : “Best Estimates for Reserves”
 - <http://www.casact.org/library/00pcas/barnett.pdf>
- Fall 2008 and 2010 CAS E-Forums
 - Several stochastic reserving papers



Example

- Assume you have a portfolio with an estimated reserve of \$100M
- Assume you have estimated the distribution of reserves to follow a lognormal distribution with a coefficient of variation (standard deviation/mean) of 10%
- Assume the risk free rate is 2%
- Assume the payout of those reserves has been estimated to be:

Payout Pattern

Year	Incremental % Paid	Cumulative % Paid
1	35.0%	35.0%
2	22.8%	57.8%
3	14.8%	72.5%
4	9.6%	82.1%
5	6.2%	88.4%
6	4.1%	92.5%
7	2.6%	95.1%
8	2.5%	97.5%
9	2.5%	100.0%

- What type of risk adjustment would be implied by the three different methods?

Confidence Level Method

- Key Assumptions:
 - Mean = \$100M
 - Distribution = Lognormal
 - Standard Deviation = \$10M (10% CV)
 - Percentile Threshold = 75th

Lognormal	
Mean	100
SD	10
CV	10.0%

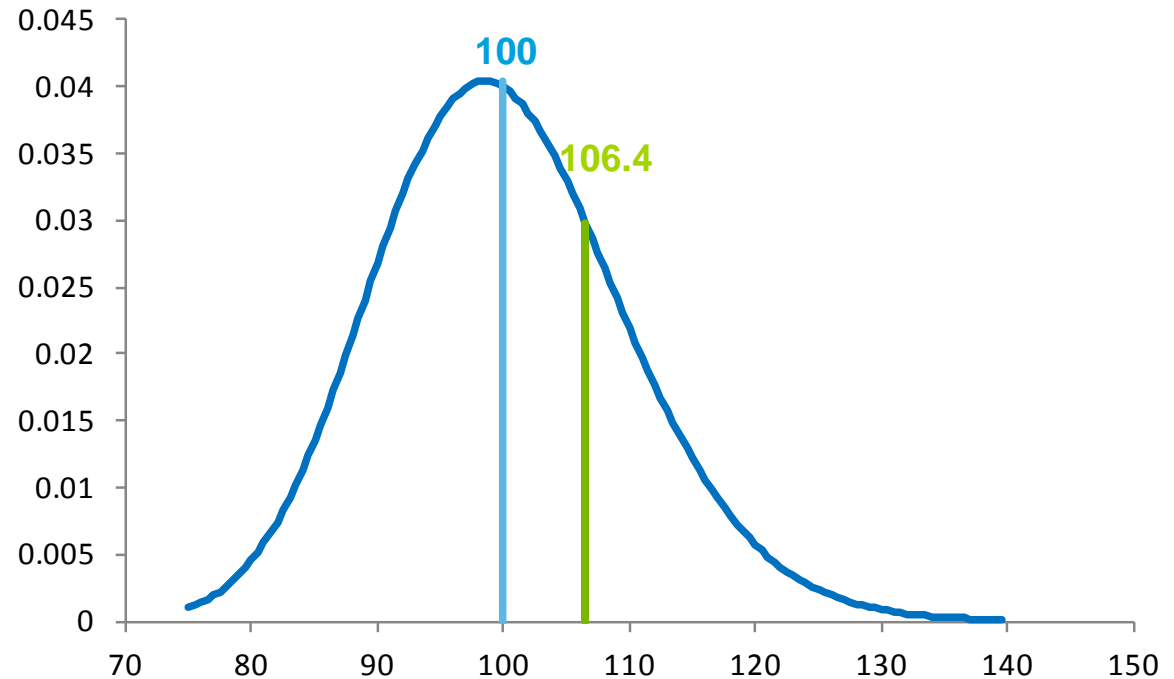
Percentile	VaR
60.0%	102.1
65.0%	103.4
70.0%	104.8
75.0%	106.4
80.0%	108.2
85.0%	110.3
90.0%	113.1

Nominal risk adjustment
 $106.4 - 100 = 6.4$

Discounted mean reserve
 \$95.6M (.956 discount factor)

Discounted risk adjustment
 $\$6.1\text{M} = 6.4 \times .956$

Discounted, risk-adjusted reserve
 \$101.7M



Conditional Tail Expected Method

- Key Assumptions:
 - Mean = \$100M
 - Distribution = Lognormal
 - Standard Deviation = \$10M (10% CV)
 - Percentile Threshold = 75th

Lognormal		
Mean	100	
SD	10	
CV	10.0%	

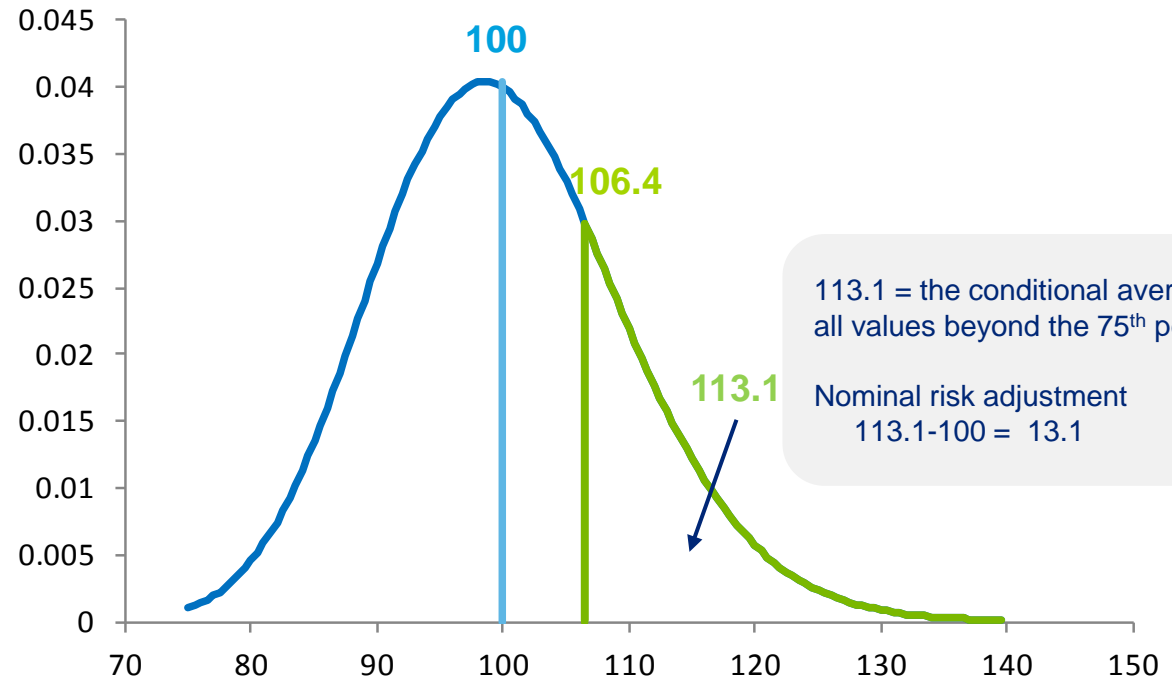
Percentile	VaR	CTE
60.0%	102.1	109.7
65.0%	103.4	110.7
70.0%	104.8	111.8
75.0%	106.4	113.1
80.0%	108.2	114.5
85.0%	110.3	116.3
90.0%	113.1	118.6

- For lognormal distribution:
- 75th percentile CTE is approximately the same as the 90th percentile VaR
 - 60th percentile CTE is approximately the same as the 85th percentile VaR

Discounted mean reserve
\$95.6M

Discounted risk adjustment
\$12.5M = 13.1 x .956

Discounted, risk-adjusted
reserve = \$108.1M



113.1 = the conditional average of all values beyond the 75th percentile

Nominal risk adjustment
113.1 - 100 = 13.1

Cost of Capital Method

- Key Assumptions:

- Mean = \$100M
- Distribution = Lognormal
- Standard Deviation = \$10M (10% CV)
- Percentile Threshold = 99.5th (1 in 200, consistent with Solvency II*)
- Cost of Capital = 8%
- Risk free discount rate = 2%

* Solvency II is on a 1 year horizon, while IFRS ED is to ultimate

Required capital assumes constant CV of reserves of 10% for each year of payout,

Cost of Capital Method

Year	Nominal Reserve	99.5% VaR	Required Capital	Cost of Capital	PV Factor @ 2%	PV Cost of Capital
1	100	129	29	2.3	0.990	2.3
2	65	84	19	1.5	0.971	1.4
3	42	54	12	1.0	0.952	0.9
4	27	35	8	0.6	0.933	0.6
5	18	23	5	0.4	0.915	0.4
6	12	15	3	0.3	0.897	0.2
7	8	10	2	0.2	0.879	0.2
8	5	6	1	0.1	0.862	0.1
9	2	3	1	0.1	0.845	0.0
10	0	0	0	0.0	0.829	0.0
Total Risk Adjustment				6.4		6.1

Discounted mean reserve
\$95.6M

Discounted risk
adjustment \$6.1M

Discounted, risk-adjusted
reserve = \$101.7M

Risk Adjustment and Diversification

- Assume you now have a portfolio with 3 lines of business, each with an estimated reserve is \$100M, and CV of 10%
 - What would the portfolio 75th percentile risk adjustment be if calculated at the portfolio level with between line of business correlations of 100%, 50%, and 0%?

Risk Adjustment Diversification Impact

	LOB 1	LOB2	LOB 3	Sum	Portfolio View@ Correlation:		
					100.0%	50.0%	0.0%
Mean Reserve	100.0	100.0	100.0	300.0	300.0	300.0	300.0
St Deviation	10.0	10.0	10.0	30.0	30.0	24.5	17.3
CV	10.0%	10.0%	10.0%	10.0%	10.0%	8.2%	5.8%
VaR 75th Percentile	106.4	106.4	106.4	319.3	319.3	315.9	311.4
Risk Margin	6.4	6.4	6.4	19.3	19.3	15.9	11.4
Diversification Impact on Risk Adjustment					0.0	-3.4	-7.9

- Due to diversification impact, the level at which risk adjustment calculation is performed (policy, line of business, reporting segment, consolidated group), as well as the corresponding correlation assumption, will affect the resulting risk adjustment



Modeling the Effects

Presenter: Gareth Kennedy



Modeling Objectives

The focus of the modeling work has been to demonstrate the potential impact on income emergence resulting from the proposed IASB and FASB accounting models for insurance contracts. The key issues illustrated are:

- The impact on income recognition at inception from revising/clarifying requirements on expense recognition.
- The impact from discounting liabilities and recording a related risk adjustment, and amortizing these amounts over time.
- Potential differences in income emergence based on the definition of a portfolio under the IASB model, resulting from the consideration (or lack of consideration) of diversification effects.
- The potential impact from using different risk adjustment methodologies and estimation techniques under the IASB model.

ASSUMPTIONS AND DATA



Modeling Assumptions

Below are some of the key modeling assumptions used to create the scenarios:

- Income for each scenario is modeled as if all business was written at time 0. While in reality insurance companies continually writing business throughout the year, this was done for illustrative purposes.
- Further, in order to highlight the effects of the proposed accounting changes we have made some simplifying assumptions, such as assuming that general expenses are incurred as premiums are earned and all loss payments are made just prior to the end of each time period. In addition, we assume that all losses and expenses will emerge as expected (i.e. no favorable or adverse reserve development).
- The model displays only the impacts on underwriting income. Investment income and taxes are not reflected in the graphs as the IASB and FASB proposals for insurance contracts do not change income recognition related to these items.
- Liabilities are discounted using a risk-free yield curve plus an illiquidity adjustment (specifically, US Treasury yields as of 12/31/2009 plus 35 basis points)
- Income is shown on a semi-annual basis for the first 3 years, with the subsequent income streams combined together.



Data Utilized

Expected loss ratios, expense ratios, and loss payment patterns for each line of business are based on 2009 industry results, normalized to a 95% combined ratio (details are included in the Appendix).

Expenses are further broken down into incremental acquisition costs (assumed to be commissions and premium taxes), non-incremental acquisition expenses (principally underwriting salaries and related costs), and general expenses.

The underlying basis for the risk adjustment measures was the current S&P reserve risk charge factors by line of business for AAA-rated companies. These factors were used to derive parameters to determine the risk adjustment under the different measurement techniques.

BASELINE RESULTS



Baseline Considerations

Each line of business is considered to be a single portfolio, with no consideration of diversification across portfolios

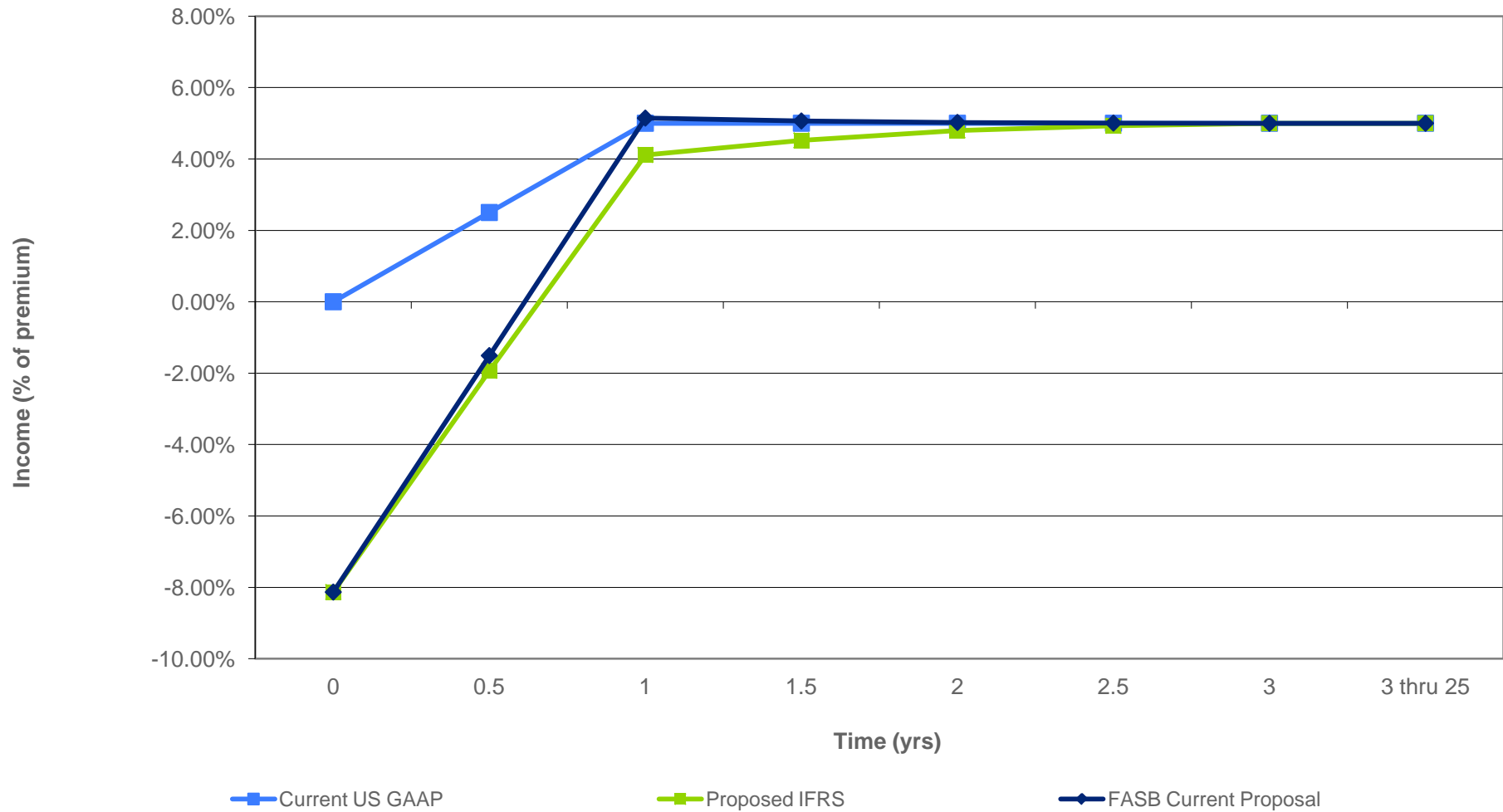
The underwriting income produced by each accounting model is exactly the same (based on a projected 95% combined ratio). The model results show the difference in timing of income recognition.

The risk adjustment for the proposed IASB model is estimated using a “Cost of Capital” approach with return on capital set at 8% above the risk free rate. At each stage, future capital needs are estimated by applying the S&P reserve charge to the projected future cash flows and then discounted to the current date.

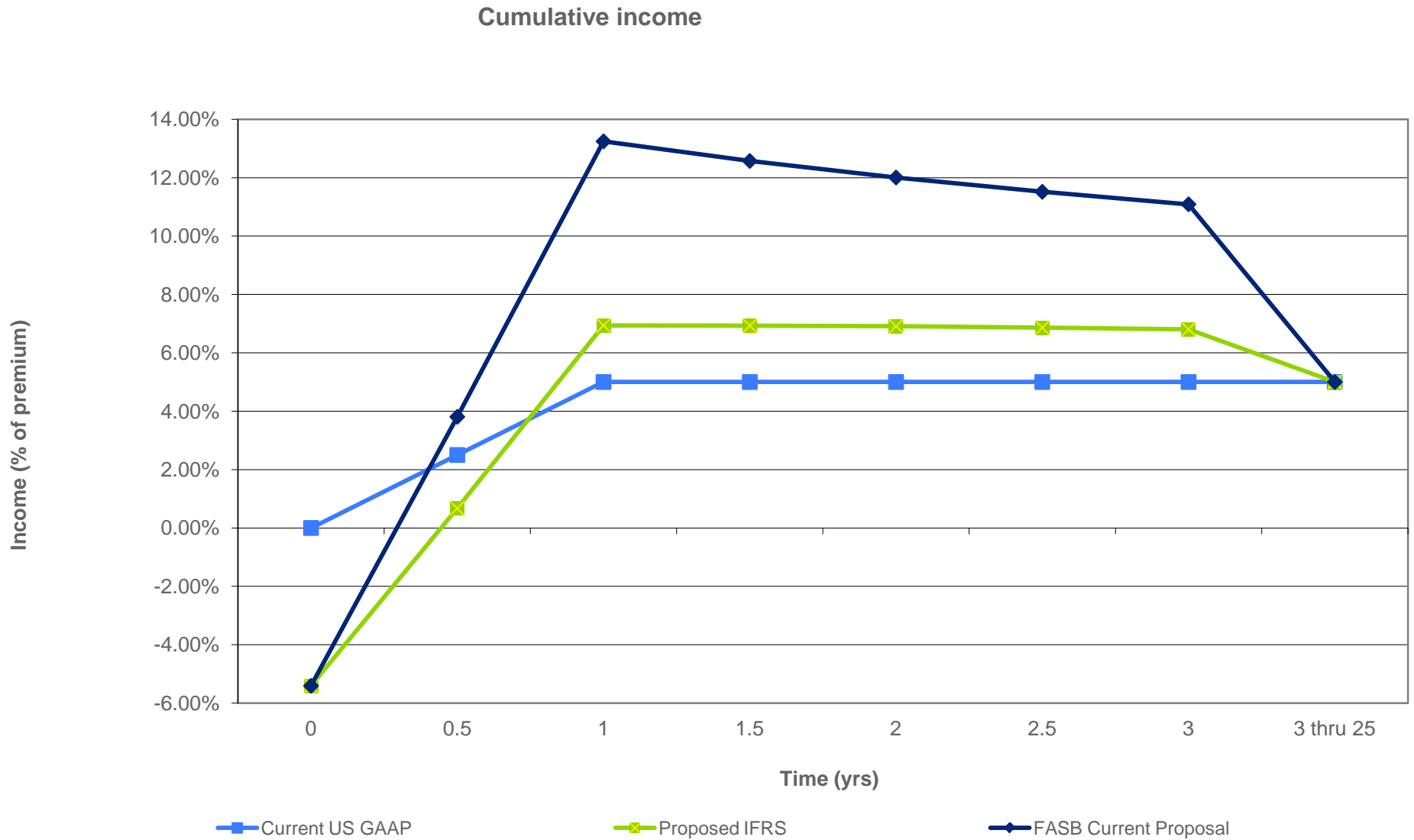
The current FASB proposal is a similar model to what we have today but with loss reserves discounted using a current market based discount rate.

Commercial Auto Physical Damage

Cumulative income



Workers Compensation





Baseline Observations

- A key observation in the graphs is the loss at time 0. In these examples, we have treated certain acquisition costs as being fully expensed at inception. Current practices under GAAP vary significantly, however we have assumed that these are fully deferred today. (EITF 09-G may require certain companies to change the way they treat these expenses.)
- In certain cases (the Workers Comp example), the underwriting income may accrue to a level higher for the proposed IFRS than current GAAP, before converging to a common level. This is most likely to occur in long-tail lines where the level of discount may exceed the risk adjustment.
- The current FASB proposal of discounted reserves effectively accelerates the recognition of investment income on the assets backing the liabilities. That accelerated income then has to be paid back over time as the discount unwinds.

DIVERSIFICATION CREDIT PORTFOLIO DEFINITION



Diversification Credit/Portfolio Definition Assumptions

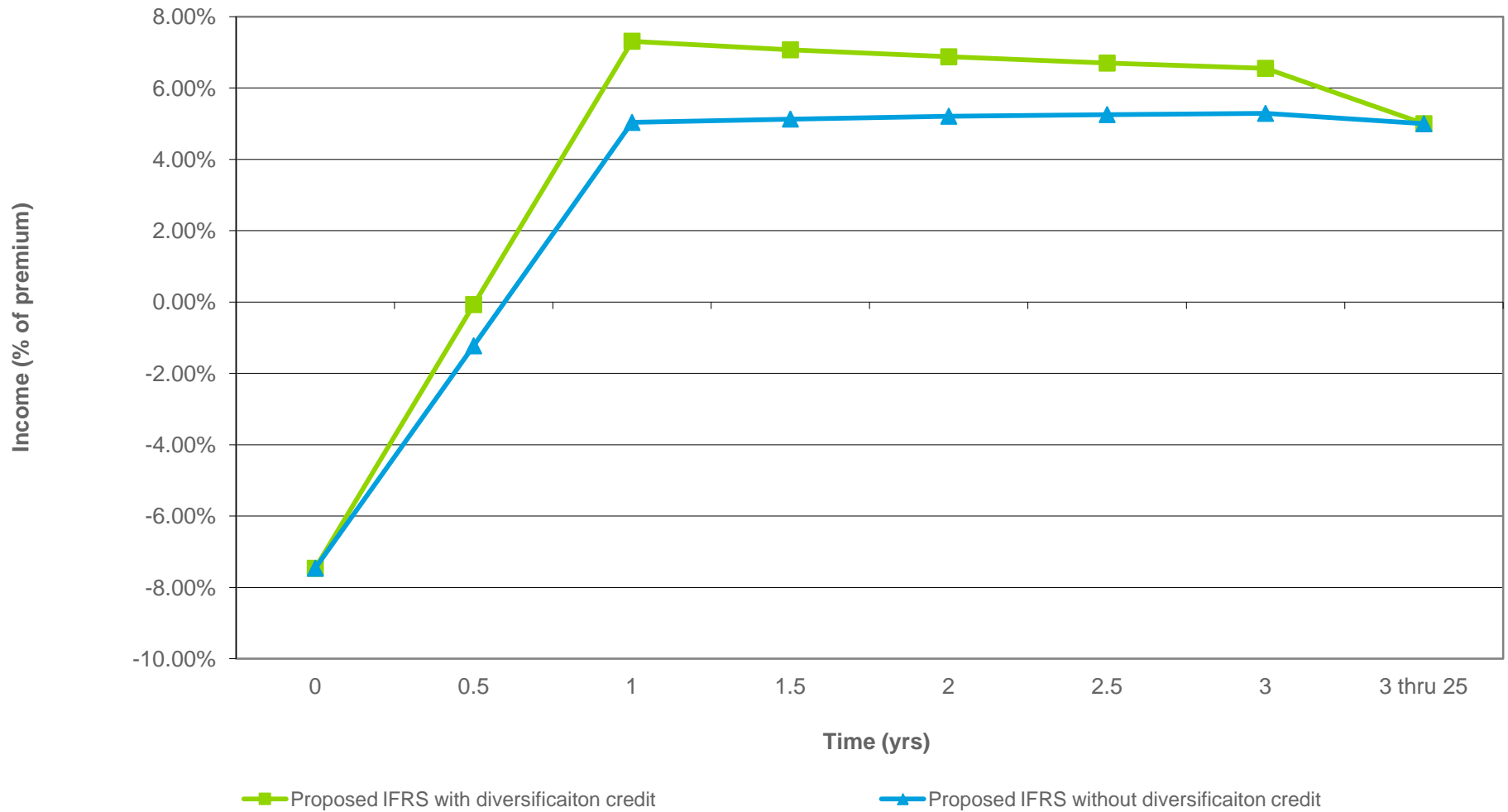
This scenario shows the effect of recognizing each individual line of business as a portfolio (with no diversification benefit) versus combining multiple lines of business into a single portfolio for income statement purposes.

We used commercial lines business (i.e. CMP, Commercial Auto, Other Liability, Workers Comp) as an example.

The diversification credit was approximated by simulating a combined lognormal distribution and measuring the resulting change in coefficient of variation for the combined distribution against the average of the individual coefficients of variation. This difference was then applied to determine a risk adjustment for the combined portfolio, via a cost of capital method.

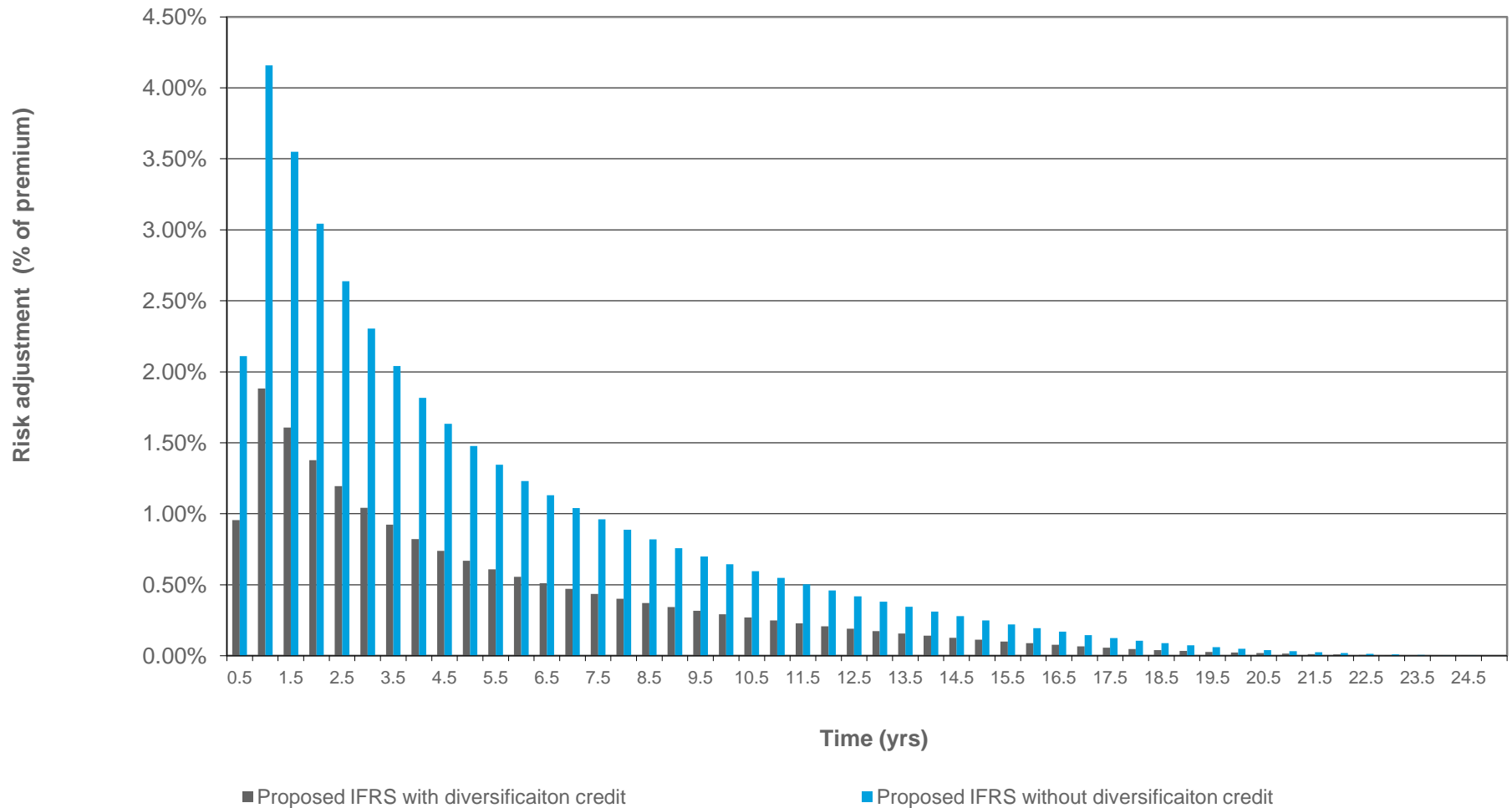
Diversification Impact Commercial Lines

Cumulative Income



Diversification Impact Commercial Lines

Proposed IFRS risk adjustments





Diversification Observations

The failure to recognize the diversification credit between lines of business results in a higher risk adjustment when combining the results from individual lines of business versus considering the combined lines as a single portfolio.

As can be seen in the graphs, this results in a delay in the recognition of income when there is no diversification benefit.

The diversification credit as a % of the undiversified risk adjustment can be substantial (roughly 50% in this example).

RISK ADJUSTMENT METHODOLOGIES



Risk Adjustment Assumptions

The confidence level and CTE approaches were based on a study of industry coefficients of variation for each line of business.

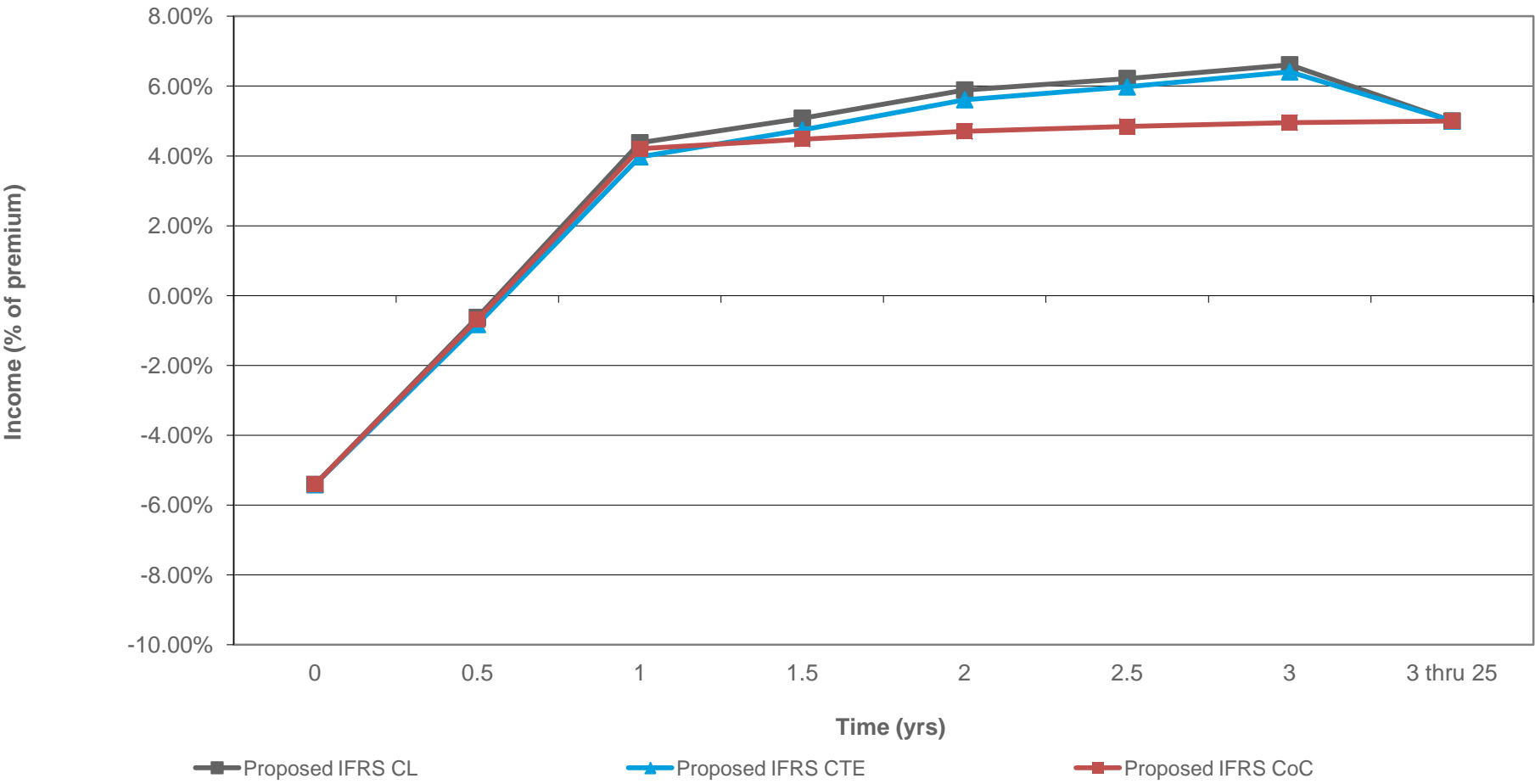
The selected percentile for confidence level method was 80% while the selected percentile for the CTE method was 55%. These were determined in order to produce a comparable risk adjustment between the two methods.

The cost of capital method relied on the same assumptions as the baseline model with the amount of capital adjusted such that the starting risk adjustment was comparable to the CTE and confidence level starting point. This enabled us to compare the income emergence under each method.

The risk loads relative to central estimate liabilities for the confidence level and CTE methods were kept constant during the run-off of the underwriting year under the assumption that the coefficient of variation of the overall portfolio was unchanged during this time.

Risk Adjustment Methodology Impacts Workers Compensation

Cumulative income





Risk Adjustment Observations

The risk adjustment as a percentage of expected loss for the confidence level and CTE were similar, hence their run-off was very similar.

The cost of capital method was adjusted to be a similar value to the confidence level and CTE methods at inception. In this example, the risk adjustment for the cost of capital method unwound in line with discount in the tail and had less reversal than the confidence level and CTE methods.

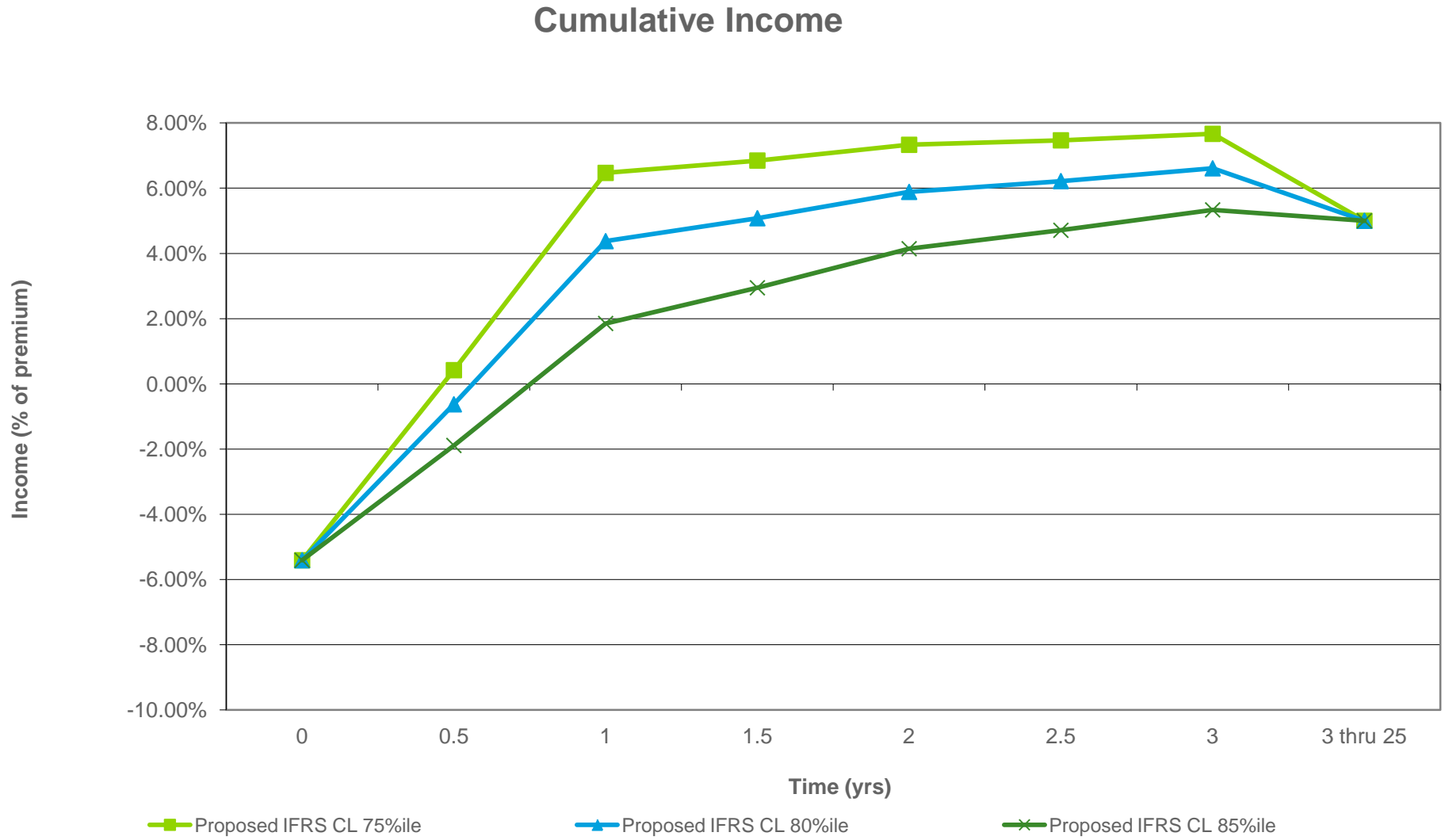


Risk Adjustment – Percentile Impact

The amount of risk adjustment for the confidence level and CTE methods vary based on the percentile chosen for each method.

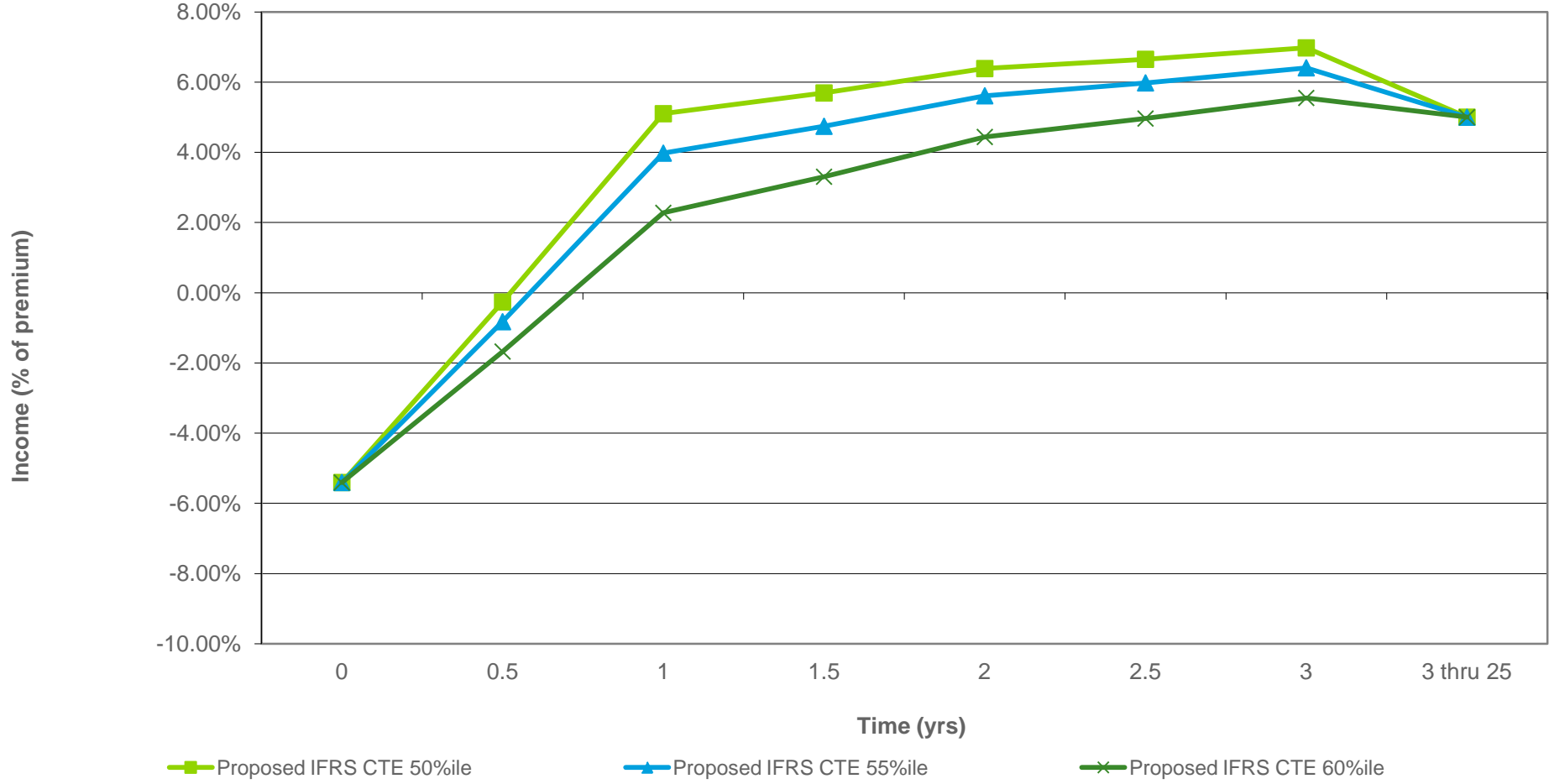
The following charts show the income emergence for each method at differing percentiles.

Risk Adjustment - Confidence Level Method Workers Compensation



Risk Adjustment - CTE Method Workers Compensation

Cumulative Income





Risk Adjustment – Percentile Impact

In the examples shown here, the selection of different percentiles had a more significant effect on the confidence level method.

This is a result of the fact that the CTE method implicitly reflects some impact from the tail at each percentile and the distribution for Workers Comp is skewed. We would expect to see a similar result for other casualty lines of business.

APPENDIX

BASELINE ASSUMPTIONS

Payment Patterns

Time period ending	Workers Compensation	Commercial Auto Physical Damage	Time period ending	Workers Compensation	Commercial Auto Physical Damage
0.5	10.00%	39.35%	13	0.48%	0.00%
1	10.00%	39.35%	13.5	0.48%	0.00%
1.5	12.40%	7.40%	14	0.48%	0.00%
2	12.40%	7.40%	14.5	0.48%	0.00%
2.5	7.40%	3.25%	15	0.48%	0.00%
3	7.40%	3.25%	15.5	0.48%	0.00%
3.5	4.40%	0.00%	16	0.48%	0.00%
4	4.40%	0.00%	16.5	0.48%	0.00%
4.5	2.65%	0.00%	17	0.48%	0.00%
5	2.65%	0.00%	17.5	0.48%	0.00%
5.5	1.75%	0.00%	18	0.48%	0.00%
6	1.75%	0.00%	18.5	0.48%	0.00%
6.5	1.45%	0.00%	19	0.48%	0.00%
7	1.45%	0.00%	19.5	0.48%	0.00%
7.5	1.15%	0.00%	20	0.48%	0.00%
8	1.15%	0.00%	20.5	0.48%	0.00%
8.5	0.85%	0.00%	21	0.48%	0.00%
9	0.85%	0.00%	21.5	0.48%	0.00%
9.5	0.70%	0.00%	22	0.48%	0.00%
10	0.70%	0.00%	22.5	0.48%	0.00%
10.5	0.48%	0.00%	23	0.48%	0.00%
11	0.48%	0.00%	23.5	0.48%	0.00%
11.5	0.48%	0.00%	24	0.48%	0.00%
12	0.48%	0.00%	24.5	0.48%	0.00%
12.5	0.48%	0.00%	25	0.48%	0.00%

Loss and Expense Ratios

Line of Business	Loss and LAE Ratio	Commissions and Brokerage	Taxes, Licenses and Fees	Other Acquisition Costs	General Expenses	Combined Ratio
Workers Compensation	73.3%	5.6%	3.8%	5.4%	6.9%	95.0%
Commercial Auto Physical Damage	63.5%	11.1%	2.4%	8.1%	9.9%	95.0%



Q&A

Presenters: All



Presenter Biographies



Orin Linden, FCAS

Orin Linden is a Director in the RCS practice of Towers Watson. He is currently Vice-Chair of the CAS Accounting Changes Task Force as well as a member of the CAS Disciplinary Committee, the CAS Committee on Volunteer Resources and the American Academy of Actuaries Financial Regulatory Reform Task Force. He is a former member of several other CAS Committees and a past President of the Casualty Actuaries of Greater NY. He is also on the faculty of Queens College graduate school.



Steve Visner, FCAS

Steve Visner is the Principal in charge of Deloitte Consulting's NY Actuarial Risk and Analytics Practice, and their ARA Federal Practice Leader. He is currently Chair of the CAS Accounting Changes Task Force as well as a Member of the AAA Casualty Practice Council. He is a former member of the CAS Committees on Reserves, Ratemaking, and Theory of Risk, as well as a past President of the Casualty Actuaries of Greater NY,



Marc Oberholtzer, FCAS

Marc Oberholtzer is a Principal at PricewaterhouseCoopers, a Fellow of the CAS and a Member of the American Academy of Actuaries. Marc has over 20 years of experience in actuarial consulting. Marc currently serves on the board of the American Academy of Actuaries (Academy), and he recently completed a three year term as chairperson of the Academy's Committee on Property and Liability Financial Reporting. He also serves on the Academy's Financial Reporting Committee, its Casualty Practice Council and its IFRS Task Force. Marc is the Casualty Actuarial Society's representative to the International Actuarial Association's Insurance Accounting Committee.



Parr Schoolman, FCAS

Parr Schoolman is the leader of the Aon Benfield Analytics Global Risk and Capital Strategy team. He specializes in assisting clients in the cost/benefit analyses of their reinsurance placement, as well as with enterprise risk management projects involving cost of capital allocation, risk tolerance rationalization, and catastrophe exposure management.



Gareth Kennedy, ACAS

Gareth Kennedy serves as Ernst & Young's International Financial Reporting Standards (IFRS) property and casualty actuarial subject matter professional in the United States. He is also a member of Ernst & Young's Global Insurance Working Group. Gareth has performed research, presented at actuarial conferences and written articles on the possible effects on insurance companies of the proposed IASB and FASB insurance contracts standards. Gareth holds a Master of Physics degree from the University of Lancaster. He is an Associate of the Casualty Actuarial Society (CAS), a Member of the American Academy of Actuaries. He currently serves as the Vice Chair of the Academy's Financial Reporting Committee and a member of the CAS' Accounting Changes Task Force.



Nicholas Pastor, FCAS

Nicholas Pastor is the Chief Actuary for QBE the Americas, the US operations for the Australian-based QBE Group. In this role, Nick is responsible for all aspects of actuarial services, including pricing, reserving, catastrophe modeling, and financial modeling. Nick is a Fellow of the Casualty Actuarial Society and a Member of American Academy of Actuaries. He is a former member of the CAS Committee on Ratemaking and currently a member of the CAS' Accounting Changes Task Force.