

**Meeting Between Federal Reserve Staff  
and Representatives of MetLife, Inc. (MetLife)  
May 2, 2013**

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(Federal Reserve Board)

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**Summary:** Representatives of MetLife met with Federal Reserve staff on May 2, 2013, to discuss the points raised in MetLife's comment letter regarding the Basel III NPRs' application to insurance activities, including the treatment of separate accounts and insurance subsidiaries' regulatory capital requirement. The attached documents were distributed.



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# Alternative Framework to Basel for Insurance Companies

May 2, 2013

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## Introduction

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- Discussion today will address solvency frameworks for SIFI-designated insurers
- However, we continue to emphasize that traditional life insurance generally, and MetLife in particular, do not pose systemic risk
- Naming just a handful of companies as SIFIS is not the best approach to regulating potentially systemic activities of insurers
- Because we recognize the possibility that FSOC may designate one or more insurers as non-bank SIFIs, we have prepared this outline of a regulatory regime for insurers that could be workable
- We have worked with Oliver Wyman and Promontory to help us develop and flesh out proposals laid out in this document

## Agenda

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- During our earlier meetings, you requested input from us on alternative capital adequacy frameworks for Insurers
- To develop an alternative framework, we first laid out a set of principles for a capital regime for insurers
- We evaluated the proposed Basel approach for insurers (considering potential enhancements) against these criteria – ultimately concluding that the Basel approach is a poor fit
- We propose an alternative framework – an “aggregated activities-based approach” – that approximates a consolidated view of capital adequacy by summing available and required capital across all activities utilizing the existing capital regimes
  - Extends and enhances the Group Supervision approach already in place in Europe
  - Compatible with current IAIS/FSB proposals

## Sensible principles for an effective regulatory capital regime

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- 1** Tailored and calibrated to the activities of the institution

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- 2** Ensures sufficient capital to protect solvency even in a severe stress

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- 3** Comprehensively captures entities and risks

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- 4** Provides comparability among banks, insurers and other financial institutions

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- 5** Feasible implementation with minimal complex adjustments

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## Evaluation of the Basel approach for insurers

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## Basel framework as applied to insurers falls short of the key principles

Design principle	Assessment
1 Tailored and calibrated	<ul style="list-style-type: none"> <li>• Designed and calibrated for banks, not insurers</li> <li>• Insurers have different risk and liquidity profiles</li> </ul>
2 Ensures sufficient capital in a severe stress	<ul style="list-style-type: none"> <li>• Basel ratios do not measure current constraints                             <ul style="list-style-type: none"> <li>– Insurance operating entities</li> <li>– Insurance holding companies</li> </ul> </li> <li>• Basel ratios can generate “<b>false positive</b>” or “<b>false negative</b>” solvency indicators</li> </ul>
3 Comprehensive	<ul style="list-style-type: none"> <li>• Covers all legal entities via consolidation but fails to capture liability oriented risks</li> </ul>
4 Comparable	<ul style="list-style-type: none"> <li>• Comparable <i>in form</i>, but <i>not in substance</i></li> </ul>
5 Feasible implementation	<ul style="list-style-type: none"> <li>• Significant adjustments necessary to tailor for insurers</li> </ul>

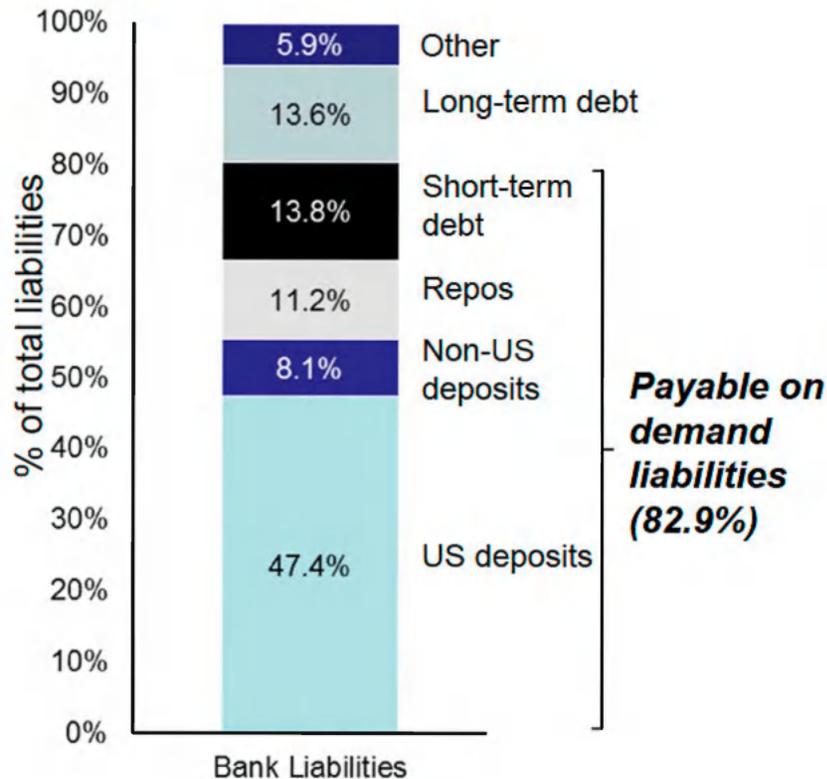
 Critical issues; discussed in following slides

# Significant differences between risk profile and solvency of banks and insurers

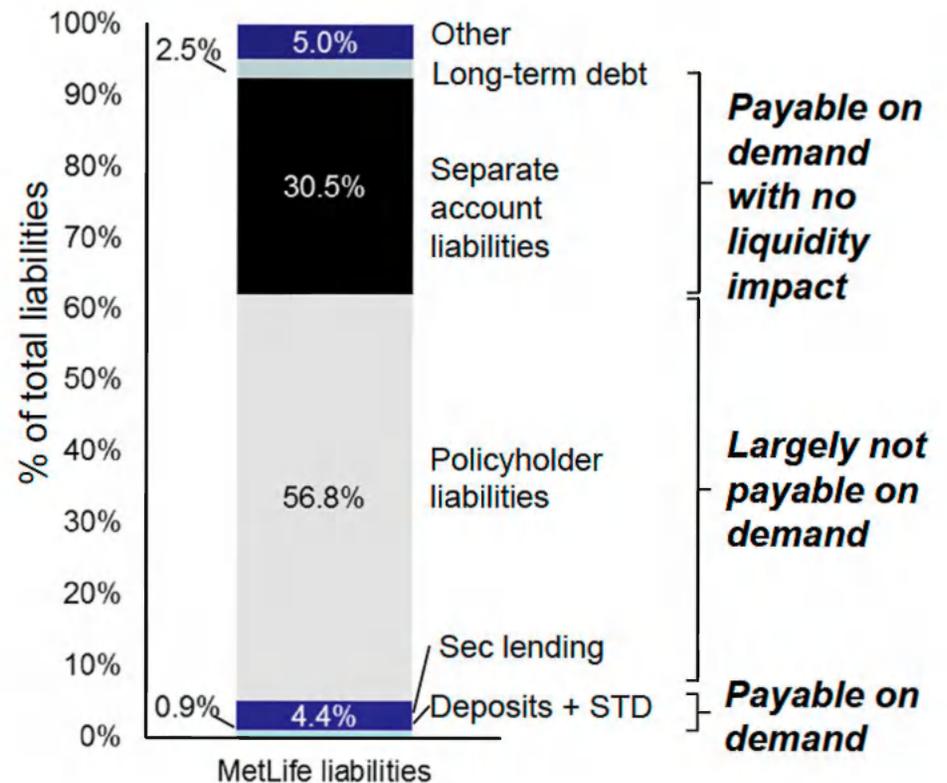
	<b>Banks</b>	<b>Insurers</b>
<b>Liability profile</b>	<ul style="list-style-type: none"> <li>• Deposits and short-term debt</li> </ul>	<ul style="list-style-type: none"> <li>• Insurance policies</li> </ul>
<b>Pattern of failure</b>	<ul style="list-style-type: none"> <li>• Institution fails at “tipping point” when depositors/markets lose confidence – even if capital is ultimately sufficient</li> </ul>	<ul style="list-style-type: none"> <li>• Protracted failure due to small proportion of liabilities payable on demand</li> <li>• Insurers with significant non-traditional insurance activities may have bank-like failures</li> </ul>
<b>Regulatory accounting and capital requirements</b>	<ul style="list-style-type: none"> <li>• Liability par values well known</li> <li>• Failures driven by asset losses</li> <li>• Asset risk-focused capital regime</li> </ul>	<ul style="list-style-type: none"> <li>• Value of liabilities difficult to measure</li> <li>• Failures driven by assets, liabilities, or ALM</li> <li>• Capital regime with broader coverage</li> </ul>

# Insurers are far less reliant on short-dated funding

**Banks – sources of funding<sup>1</sup>**  
Q4 2012



**MetLife – sources of funding<sup>2</sup>**  
Q4 2012



1. Dollar-weighted average for Bank of America, Wells Fargo, Citigroup, Morgan Stanley, JP Morgan; Source: SNL, 10-K filings; 2. MetLife 10-K filing

# STAT accounting and insurance regulatory capital assess solvency in a way that GAAP/Basel for insurers do not

	<b>GAAP (Basel) assessment</b> “Shareholder perspective”	<b>Statutory B/S (RBC) assessment</b> “Policyholder/debtholder perspective”
<b>Available capital</b>	<p>Focus</p> <ul style="list-style-type: none"> <li>• Timing of earnings profile</li> </ul> <hr/> <p>Example: embedded options / guarantees</p> <ul style="list-style-type: none"> <li>• Some products: full capture of mark-to-market value</li> <li>• Others: guarantees reflected on an accrual basis</li> </ul>	<ul style="list-style-type: none"> <li>• Solvency under conservative reserving principles</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Comprehensive capture by reserves through cashflow testing – shortfalls in spread require reserve increase</li> </ul>
<b>Required capital</b>	<p>Focus</p> <ul style="list-style-type: none"> <li>• Assets</li> </ul> <hr/> <p>Example: ALM risks</p> <ul style="list-style-type: none"> <li>• Not captured for general accounts/banking book</li> </ul> <hr/> <p>Example: P&amp;C risks</p> <ul style="list-style-type: none"> <li>• Not captured</li> </ul>	<ul style="list-style-type: none"> <li>• Assets, Asset-Liability Matching, Mortality/Morbidity and Property and Casualty risks</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Captured through extensive stress testing of ALM position</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Captured through quantification of underwriting risk</li> </ul>
	 <i>Fails to comprehensively capture and tailor risks for insurers</i>	 <i>Determines solvency and ability to operate as going concern</i>

## False negatives

### Example

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**Scenario** • MetLife during 2008 financial crisis

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**Impact to Basel ratios** • *Result = “False negative”*  
• [REDACTED]

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**Impact to RBC ratios** • *Result = insurer passes test*  
• RBC ratios of MetLife’s insurance subsidiaries dipped during the financial crisis but still indicated that the insurers were financially healthy and able to continue on a going concern basis

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**MetLife’s insurance subsidiaries continued to write large volumes of new business and benefited from a “flight to quality”**

## False positives

### Example

<b>Scenario</b>	<ul style="list-style-type: none"><li>• Insurer with a mismatched interest rate position</li><li>• Falling interest rates that remain low</li></ul>
<b>Impact to Basel ratios</b>	<ul style="list-style-type: none"><li>• <i>Result = “False positive”</i></li><li>• Available capital can be overstated: embedded guarantees in General Account not captured under GAAP</li><li>• Basel ratios improve: Fixed income assets appreciate while insurance liabilities are unaffected</li></ul>
<b>Impact to RBC ratios</b>	<ul style="list-style-type: none"><li>• <i>Result = insurer fails test</i></li><li>• Statutory requirement to post capital and increase reserves upfront: Stochastic cashflow testing assesses the runoff profile of assets and liabilities</li></ul>

  
**Basel capital ratios will look “good” under certain scenarios, even though actual impact is negative; RBC ratios better reflect reality**



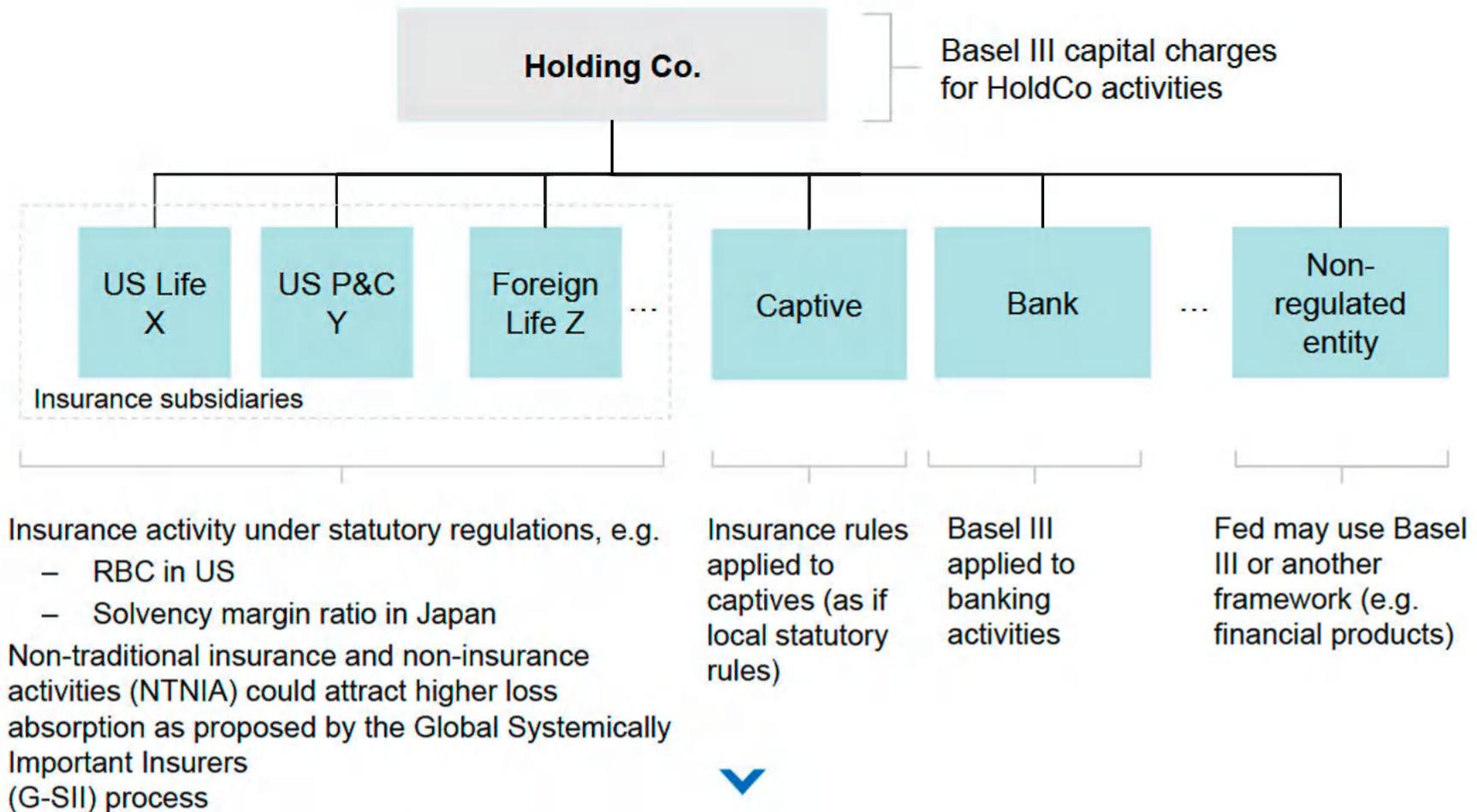
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## Description of the alternative approach

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## Local regulatory rules are applied to each entity within the aggregated activities based approach



**Comprehensively addresses all activities using most tailored rules**

## Summary of proposed approach

Worked example for Tier 1 capital

- 1** Sum the available and required capital for each subsidiary

<b>US Insurance entities</b> Required capital: 100 Available capital: 500
<b>Non-US Ins. entities</b> Required capital: 100 Available capital: 500
<b>Other subs</b> (e.g. Asset management) Required capital: 100 Available capital: 200
=
<b>Total</b> Required capital: 300 Available capital: 1200

- 2** Adjust for holding company double leverage and capital requirements

Unconsolidated holding company balance sheet	
<b>Assets</b>	<b>Liab. and equity</b>
Assets: 300	Sub. debt <sup>1</sup> : 200
	Other debt: 500
	Total debt: 700
	Total equity: (400)
	<hr/>
	Preferred stock <sup>2</sup> : 100
	Total common eq.: (500)

- 3** Determine aggregated activities based capital ratio

Aggregated activities based capital ratio	
Required capital: 300	
Tier 1 com: 1200 – 500 = 700	
Tier 1 total: 800	
Total capital: 1000	
<b>Tier 1 common = 233%</b>	
<b>Tier 1 = 266%</b>	
<b>Total = 333%</b>	

- 4** Stress test aggregated capital ratio

<b>Tier 1 com. = 180%</b>
<b>Tier 1 = 213%</b>
<b>Total = 280%</b>

### Challenges to implementation

- A. Equivalency of capital measures across the regulatory regimes (e.g. US RBC vs. Japan solvency margin ratio)**
- B. Calibration of capital thresholds to ensure comparability across banking, insurance and other holding companies**

1. Tier 2 instrument; 2. Tier 1 instrument

## The alternative approach addresses the weaknesses of existing regulatory regimes as applied to insurers

### Major weaknesses of existing frameworks

- **Basel regime as applied to insurers**
  - Measures do not align with how insurers fail
  - Basel capital rules, GAAP capital measures, and minimum ratios, not tailored to insurers' risk profile
- **Existing insurance regime**
  - Capital ratios measured only at the subsidiary level
  - Capital rules ignore risk-taking within unregulated subsidiaries and the holding company



### Proposed alternative approach

- Captures holding company assets and non-insurance subsidiary capital requirements
- Aggregates available and required capital based on regulatory regime tailored to financial activities and risks of all entities
- Can be applied to bank holding companies and other holding companies
- Compatible with IAIS proposed G-SII policy measure for HLA capacity

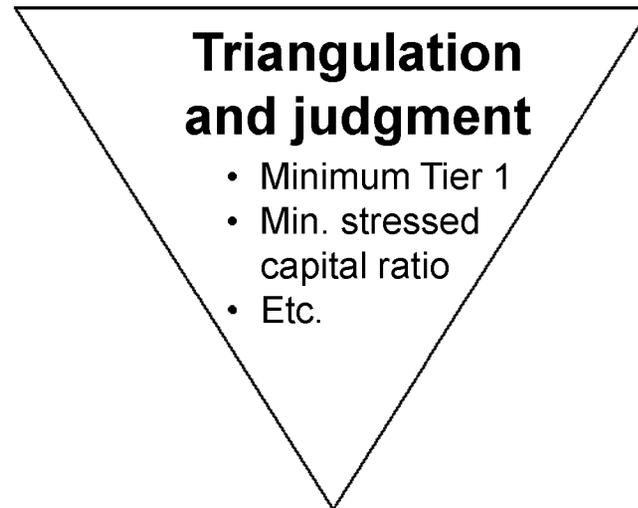
## Calibrating equivalent capital thresholds between Basel and alternative regime

### 1 “Market-implied” approach

Calibrate through credit default swap spreads – similar CDS spreads imply equivalent default risk and capital levels

### 2 “Regulatory intervention” approach

Calibrate based on similar triggers for regulatory intervention across banking and insurance



### 3 Empirically

Calibrate empirically – identify levels that resulted in insurer distress / insolvencies by applying approach pro-forma to crisis

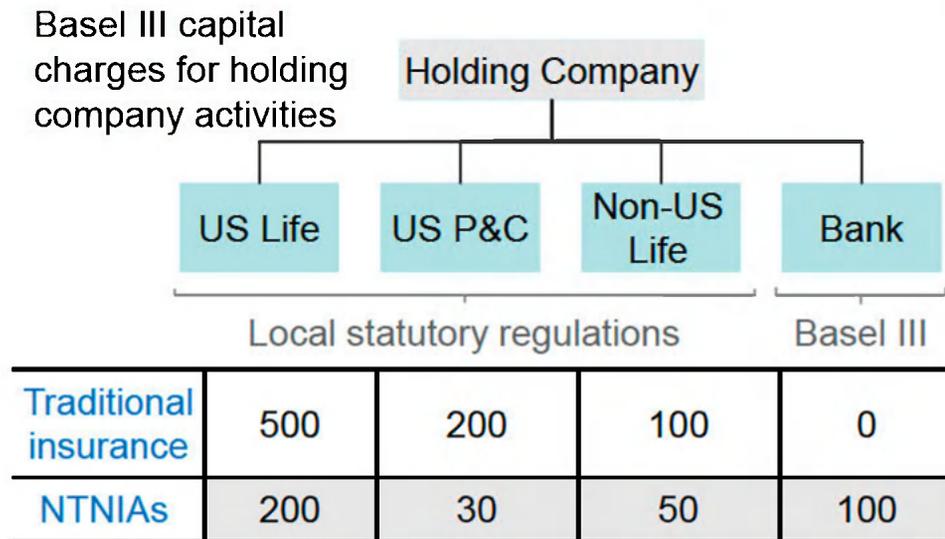
## The alternative approach is compatible with IAIS proposal for G-SIIs

### IAIS capital buffer framework

- Mandates higher loss absorption (HLA) capacity for a G-SII
- Applied to the base capital requirement of NTNIA's only
  - Non-traditional insurance activities: add-on to local statutory required capital
  - Non-insurance activities: add-on to Basel required capital
- Size of buffer depends on
  - Effective separation of the NTNIA's
  - Degree of interconnectedness (if not effectively separated)

### Application of HLA buffer to proposed approach

Illustrative example



Buffer can be applied per the IAIS proposal

## Alternative approach satisfies the design principles

Design principle	Assessment
1 Tailored and calibrated	<ul style="list-style-type: none"> <li>• Regulated entities: Developed and calibrated to fit the institutions' risk profiles over many years</li> <li>• Non-regulated: Group regulator to select a capital regime</li> </ul>
2 Ensures sufficient capital in a severe stress	<ul style="list-style-type: none"> <li>• Proposed measures dictate whether an insurer remains a going concern post stress</li> <li>• Measures are compatible with a stress testing framework</li> </ul>
3 Comprehensive	<ul style="list-style-type: none"> <li>• All risks are captured in the aggregated ratios</li> </ul>
4 Comparable	<ul style="list-style-type: none"> <li>• Ratios can be calibrated for substantive comparability</li> </ul>
5 Feasible implementation	<ul style="list-style-type: none"> <li>• Relies on existing measures, minimal need for adjustments</li> </ul>

## Summary

### Aggregated activities based approach

### Basel approach

#### Approach

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Measure capital using rules specific to entities / activities</li> <li>• Determine equivalency and aggregate capital ratios</li> </ul> | <ul style="list-style-type: none"> <li>• Measure and stress consolidated capital ratio under Basel capital rules</li> </ul> |
|---|---|

#### Key challenges

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Establish equivalency of capital measures across regulatory regimes</li> <li>• Calibrate capital thresholds to ensure comparability</li> </ul> | <ul style="list-style-type: none"> <li>• Potential for false positives and false negatives</li> <li>• Risk of unintended consequences</li> <li>• Would require multiple complex adjustments and tailoring</li> </ul> |
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# Alternative Framework to Basel for Insurance Companies – Full Version

May 2, 2013

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## Agenda

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Introduction and agenda	4
1. Aggregated activities based approach	6
A. Criteria for an effective regulatory capital regime	7
B. Evaluation of the Basel approach for insurers	9
C. Description of framework	19
D. Evaluation of the alternative framework	27
E. Compatibility with IAIS proposal for G-SIIs	34
2. Separate Accounts	37
Appendix A – Separate Accounts: supporting materials	49
Appendix B – MetLife organizational structure	52

## Introduction

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- Discussion today will address solvency frameworks for SIFI-designated insurers
- However, we continue to emphasize that traditional life insurance generally, and MetLife in particular, does not pose systemic risk
- Naming just a handful of companies as SIFIS is not the best approach to regulating potentially systemic activities of insurers
- Because we recognize the possibility that FSOC may designate one or more insurers as non-bank SIFIs, we have prepared this outline of a regulatory regime for insurers that could be workable
- We have worked with Oliver Wyman and Promontory to help us develop and flesh out proposals laid out in this document

## Agenda

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- During our earlier meetings, you requested two items from us:
  1. An outline of an alternative framework to the Basel regulatory regime
  2. A proposed alternative measurement approach for Separate Accounts
- To develop an alternative framework, we first laid out a set of principles for a capital regime to guide our design
- We evaluated the proposed Basel approach for insurers (considering potential enhancements) against these criteria – ultimately concluding that the Basel approach is a poor fit
- We propose an alternative framework—an “aggregated activities-based approach”—that approximates a consolidated view of capital adequacy by summing available and required capital across all activities utilizing the existing capital regimes
  - Extends and enhances the Group Supervision approach already in place in Europe
  - Compatible with current IAIS/FSB proposals
- We have also responded to your request with regard to Separate Account treatment



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## Section 1 – Aggregated activities based approach

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## Section 1A – Criteria for an effective regulatory capital regime

## We developed the alternative framework consistent with sensible regulatory objectives for a solvency framework

Design principle	Framework requirement
<b>1</b> Tailored and calibrated to the activities of the institution	<ul style="list-style-type: none"> <li>Capital rules should be tailored to the nature and level of risks (including liquidity) of the institution and each of its activities and subsidiaries</li> </ul>
<b>2</b> Ensures sufficient capital to protect solvency even in a severe stress	<ul style="list-style-type: none"> <li>Minimum capital levels (particularly post stress levels) should be defined and set in a manner that an insurer that “passes” can operate as a “going concern”</li> <li>Minimizes the likelihood of “false positives” (distressed insurer with “good” Basel ratios) and “false negatives” (healthy insurer with “poor/low” Basel ratios)</li> </ul>
<b>3</b> Comprehensively captures entities and risks	<ul style="list-style-type: none"> <li>The framework should have a consolidated measure of capital adequacy that comprehensively captures all risks taken by the parent and each of its subsidiaries</li> </ul>
<b>4</b> Provides comparability among banks, insurers and other financial institutions	<ul style="list-style-type: none"> <li>The framework should support meaningful comparisons of capital adequacy across bank and insurance holding companies, and other financial institutions</li> </ul>
<b>5</b> Feasible implementation with minimal complex adjustments	<ul style="list-style-type: none"> <li>Supervisors should be able to implement and monitor the framework with minimal complex adjustments</li> </ul>



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## Section 1B – Evaluation of the Basel approach for insurers

## Summary

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- The Basel regime for solvency assessment was not designed with an insurer's business or risk profile in mind
  - Liquidity profile and mode of failure
  - Breadth of risks
- Even if significant “line item” changes were made to the Basel regime to try to tailor it to insurers, it would still lack true comparability for solvency assessment
  - We lack an experiential calibration of solvency against Basel capital ratios for insurers, the way we have for banks – i.e., a 5% Tier 1 common ratio for an insurer does not necessarily translate into the same probability of default as a 5% ratio for a bank
- The key stakeholders of insurers (insurance regulators, policyholders, insurance intermediaries and debt holders) currently look to insurance capital regimes to evaluate insurer solvency
  - This will likely continue to be the case unless the existing regime is replaced with the Basel regime for all insurers, not just those designated as SIFIs
  - This might lead to both “false positives” (distressed insurer with “good” Basel ratios) and “false negatives” (healthy insurer with “poor/low” Basel ratios)
- A better alternative is to start from the existing insurance regulatory regime, which was designed specifically for insurers, and work to achieve equivalency in establishing minimums

## The Basel framework as applied to insurers falls short of the key principles

Design principle	Assessment
<b>1</b> Tailored and calibrated	<ul style="list-style-type: none"> <li>• The framework was designed and experientially calibrated for banks, not insurers, and is not reflective of their risk profiles or how they fail</li> <li>• Significant “line item” adjustments would be needed to reflect the more liability centric profile of insurer risks</li> <li>• Even after adjustments, a 7% Tier 1 ratio for an insurer does not imply that it has the same probability of insolvency as a bank with a 7% ratio – we lack a way to experientially calibrate these ratios for insurers</li> </ul>
<b>2</b> Ensures sufficient capital in a severe stress	<ul style="list-style-type: none"> <li>• As demonstrated in the financial crisis, the ability of             <ul style="list-style-type: none"> <li>– <i>Insurance operating entities</i> to function as a going concern is governed by their current and “stressed” regulatory capital ratios</li> <li>– <i>Insurance holding companies</i> to meet their obligations and internal capital calls, and maintain adequate liquidity is based on the dividend up-streaming capacity of the insurance entities, which in turn is governed by insurance regulation</li> </ul> </li> <li>• Basel ratios can generate solvency indicators which are “false positive” (distressed insurer with “good” Basel ratios) or “false negative” (healthy insurer with “poor/low” Basel ratios)</li> </ul>
<b>3</b> Comprehensive	<ul style="list-style-type: none"> <li>• Covers all legal entities via consolidation but fails to capture liability oriented risks</li> </ul>
<b>4</b> Comparable	<ul style="list-style-type: none"> <li>• Metrics are comparable <i>in form</i> between banks and insurers, but <i>not in substance</i> (i.e. different meaning in terms of relative solvency and probability of default)</li> </ul>
<b>5</b> Feasible implementation	<ul style="list-style-type: none"> <li>• Significant adjustments are necessary by regulators to tailor approach for insurers (see Section 2 for details and a separate account example)</li> </ul>

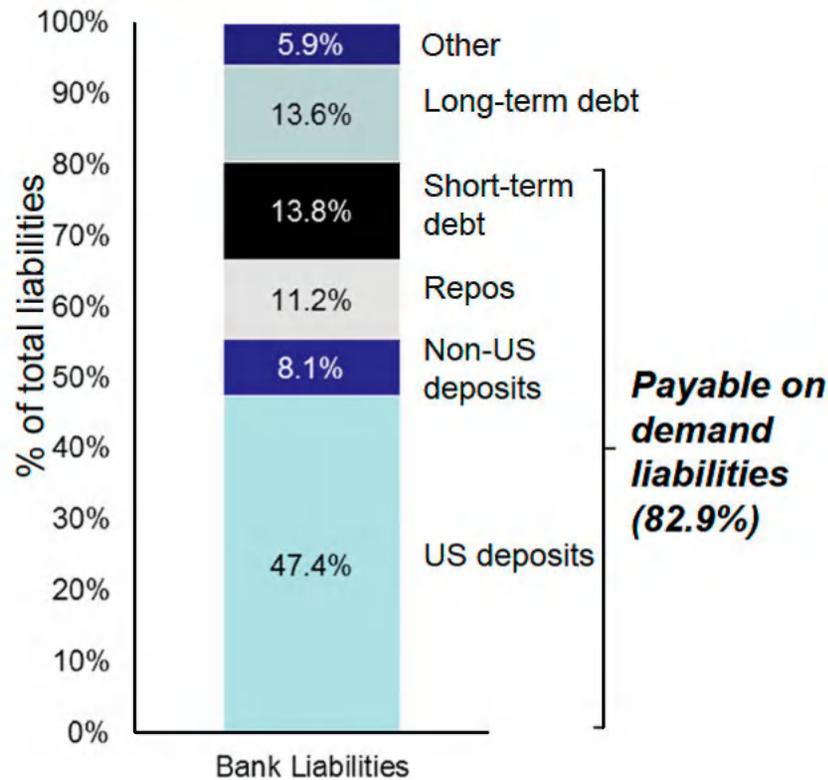
■ Critical issues; discussed in following slides

## There are significant differences in the risk profile of insurers which impact the assessment of an institution’s solvency

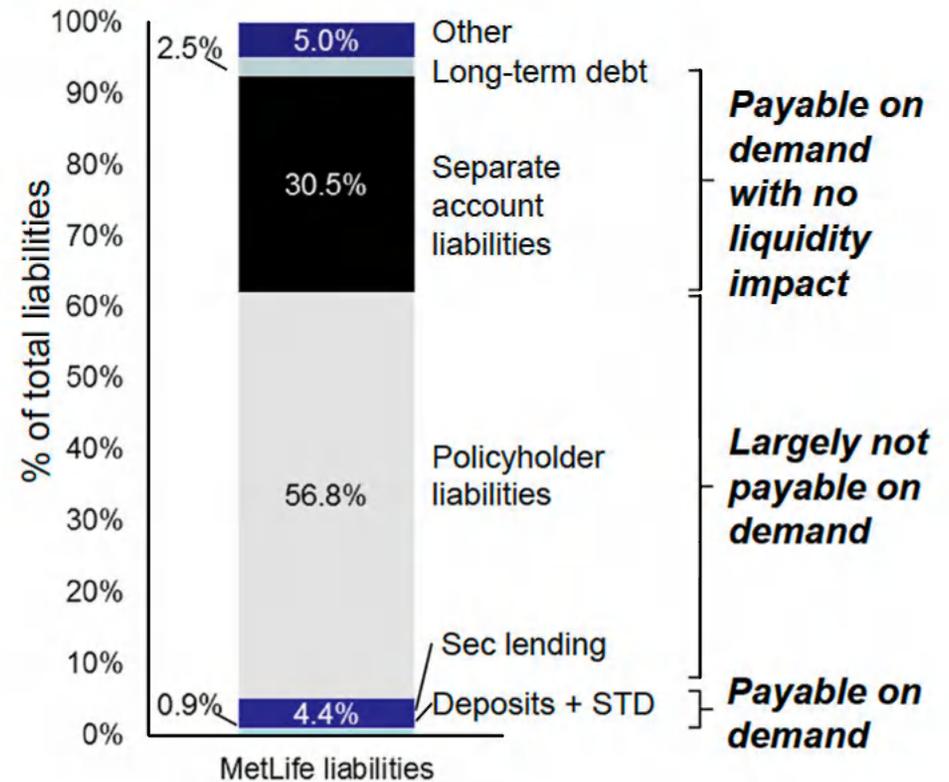
	<b>Banks</b>	<b>Insurers</b>
<b>Liability profile</b>	<ul style="list-style-type: none"> <li>Majority funded through deposits and short-term debt that provide holders a “low risk” parking place for cash</li> </ul>	<ul style="list-style-type: none"> <li>Majority funded through insurance policies that provide holders value through protection and/or tax-advantaged savings</li> </ul>
<b>Pattern of failure</b>	<ul style="list-style-type: none"> <li>When depositors (who have little to gain from remaining in a risky deposit) and debt and collateral markets lose faith in the institution due to losses, large banks typically have a “tipping point” leading to a failure</li> <li>This is a key reason banks need to hold significant capital buffers to retain market confidence</li> </ul>	<ul style="list-style-type: none"> <li>Because of the lack of liabilities payable on demand, an insurer’s path to failure is more staged                             <ul style="list-style-type: none"> <li>An insurer that suffers significant losses is downgraded and is no longer able to write new business – this puts the insurer into run-off but does not cause a bank-like run</li> <li>Further losses may put an insurer into receivership and an orderly resolution</li> </ul> </li> <li>Insurers engaging in significant non-traditional insurance activities may have failures that are more similar to that of a bank failure</li> </ul>
<b>Regulatory accounting and capital requirements</b>	<ul style="list-style-type: none"> <li>The par values of assets (with some exceptions) and liabilities are well known</li> <li>Bank failures are generally driven by losses on assets</li> <li>Capital assessment focuses largely on measuring asset risk</li> </ul>	<ul style="list-style-type: none"> <li>The value of liabilities are complex and difficult to measure</li> <li>Insurer failures can be driven by assets, liabilities or ALM issues</li> <li>Capital assessment focuses on correctly estimating liability costs and comprehensively covering all risks</li> </ul>

## Insurers are far less reliant on short-dated funding

**Banks – sources of funding<sup>1</sup>**  
Q4 2012



**MetLife – sources of funding<sup>2</sup>**  
Q4 2012



1. Dollar-weighted average for Bank of America, Wells Fargo, Citigroup, Morgan Stanley, JP Morgan; Source: SNL, 10-K filings; 2. MetLife 10-K filing

## Statutory accounting and insurance regulatory capital (RBC) have been designed to assess solvency in a way that GAAP/Basel for insurers do not

		GAAP (Basel) assessment "Shareholder perspective"	Statutory B/S (RBC) assessment "Policyholder/debtholder perspective"
	Description	<ul style="list-style-type: none"> <li>GAAP focuses on ensuring no gain or loss at inception</li> <li>Recognition of future losses on policies mixes accrual and mark-to-market concepts</li> </ul>	<ul style="list-style-type: none"> <li>Statutory accounting focuses on solvency employing conservative principles for measuring available capital</li> <li>Recognition of future losses on policies through reserves required</li> </ul>
<b>Available capital</b>	Example: embedded options/guarantees	<ul style="list-style-type: none"> <li>For certain products fully captures mark-to-market value of options</li> <li>For other products (i.e., fixed annuities) guarantees are reflected on an accrual basis over time (through net interest income)</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensively captures embedded options through evaluation of reserves                             <ul style="list-style-type: none"> <li>Explicit requirement to conduct "cashflow testing" to test runoff profile of assets and liabilities</li> <li>Test can produce additional reserve requirements upfront</li> </ul> </li> </ul>
	Description	<ul style="list-style-type: none"> <li>Focused on asset side of balance sheet</li> </ul>	<ul style="list-style-type: none"> <li>Focused on assets, Asset-Liability Matching, Mortality/Morbidity and Property and Casualty risks</li> </ul>
<b>Required capital</b>	Example: ALM risks	<ul style="list-style-type: none"> <li>Not captured for general accounts/banking book</li> </ul>	<ul style="list-style-type: none"> <li>Captured through extensive stress testing of ALM position under multiple capital market scenarios</li> </ul>
	Example: P&C risks	<ul style="list-style-type: none"> <li>Not captured</li> </ul>	<ul style="list-style-type: none"> <li>Captured through quantification of underwriting risk</li> </ul>

*Fails to comprehensively capture and tailor risks for insurers*

*Determines solvency and ability to operate as going concern*

While the Basel framework could be adopted to better suit insurers, it would still not be as well tailored as the STAT/RBC approach

**Example issues – proposed Basel approach for insurers**

Issue	Description
<b>Risk weights</b>	
Separate accounts (risk weighting)	<ul style="list-style-type: none"> <li>Assets of the guaranteed separate accounts are assigned corresponding risk weights although the risk of the guaranteed accounts lies in its guarantee, not the notional value of the separate accounts. Furthermore, risk weight is applied independent of any actions the insurer may take to offload the exposure via hedging</li> </ul>
Differentiation by asset quality	<ul style="list-style-type: none"> <li>Risk weights do not distinguish between higher or lower credit quality of the holdings</li> </ul>
Closed blocks	<ul style="list-style-type: none"> <li>Assets supporting closed blocks are assigned full risk weights although credit risk is largely borne by policyholders</li> </ul>
Policy loans	<ul style="list-style-type: none"> <li>Policy loans are assigned a 20% risk weight although they pose no risk to the insurer</li> </ul>
<b>Capital</b>	
Insurance subsidiary capital deduction/liability risk	<ul style="list-style-type: none"> <li>Capital requirements of insurance subsidiaries are deducted from total capital to account for liability risks and limited capital mobility in insurers; this deduction is punitive and is not calibrated meaningfully to either issue</li> </ul>
AOCI	<ul style="list-style-type: none"> <li>AOCI is largely driven by interest rate and risk premium and reflect asymmetric accounting</li> </ul>
Conservatism in GAAP reserves in capital calculation (PADs)	<ul style="list-style-type: none"> <li>PADs are treated as liabilities under GAAP; however, they provide an additional buffer for deviations away from expected loss, which is consistent with the definition of capital</li> </ul>
Separate accounts (Leverage Ratio)	<ul style="list-style-type: none"> <li>Tier 1 Leverage Ratio includes separate account assets where investment risks are borne by policyholder</li> <li>Assets backing reserves of guarantees on separate account are already included in the Leverage Ratio</li> </ul>
2.5% capital buffer/minimum requirement levels	<ul style="list-style-type: none"> <li>The 2.5% capital conservation buffer and minimum capital requirements were determined under the banking construct – a comparable analysis was not performed for the insurance sector</li> </ul>
<b>Stress testing</b>	
Insurance-specific stress scenarios	<ul style="list-style-type: none"> <li>Existing Fed scenarios are calibrated to stress the macroeconomic risk profile of a typical bank with little regard to macroeconomic sensitivity of insurers' books</li> </ul>



**Even after significant “line item” tailoring, the issue of calibration would remain – we lack the experiential understanding of these ratios for insurers and it remains unclear whether and how capital minimums need to be adjusted**

## Key counterparties assess insurance holding companies and entities based on statutory RBC ratios, and not consolidated GAAP metrics

### Insurance operating entities' ability to operate depends on their RBC ratios

- The key counterparties that ensure the ability of the insurer to remain a going concern are the policyholders, their advisors, and regulators
  - Insurance operating companies have limited short term debt
- Key counterparties assess counterparty risk by primarily evaluating the solvency of the regulated insurance entity, which requires the use of RBC (operating companies don't have GAAP financials)
- During the crisis, current and "stressed" RBC ratios of flagship insurance legal entities functioned as the primary signal to the financial and insurance markets

### Insurance holding company's ability to meet obligations depend on the insurance operating entities' ability to upstream dividends

- Liquidity and financial strength of insurance holding companies are primarily reliant on
  - Up-streaming of dividends or capital calls from regulated insurance entities and from non-insurance operations
- Because up-streaming from regulated insurance entities is governed by statutory balance sheet and minimum local regulatory capital ratios in each jurisdiction the insurer operates in, counterparties of the holding company focus on RBC of the operating subsidiaries

**While this may inherently be “self-fulfilling” – the only way of addressing this issue would be to replace the rules for all insurers, not just for a small group of SIFs**

In the current proposals, Basel ratios can produce “false negatives”

**Example**

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**Scenario** • MetLife during 2008 financial crisis

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**Impact to Basel ratios** • *Result = “False negative”*  
• [REDACTED]

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**Impact to RBC ratios** • *Result = insurer passes test*  
• RBC ratios of MetLife’s insurance subsidiaries dipped during the financial crisis but still indicated that the insurers were financially healthy and able to continue on a going concern basis

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**MetLife’s insurance subsidiaries continued to write large volumes of new business and benefited from a “flight to quality”**

## Basel ratios can also produce “false positives”

### Example

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<b>Scenario</b>	<ul style="list-style-type: none"><li>• Insurer with a mismatched interest rate position</li><li>• Falling interest rates that remain low</li></ul>
<b>Impact to Basel ratios</b>	<ul style="list-style-type: none"><li>• <i>Result = “False positive”</i></li><li>• Available capital can be overstated: embedded guarantees in General Account not captured under GAAP</li><li>• Basel ratios improve: Fixed income assets appreciate while insurance liabilities are unaffected</li></ul>
<b>Impact to RBC ratios</b>	<ul style="list-style-type: none"><li>• <i>Result = insurer fails test</i></li><li>• Statutory requirement to post capital and increase reserves upfront: Stochastic cashflow testing assesses the runoff profile of assets and liabilities</li></ul>

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**Basel capital ratios will look “good” under certain scenarios, even though actual impact is negative; RBC ratios better reflect reality**



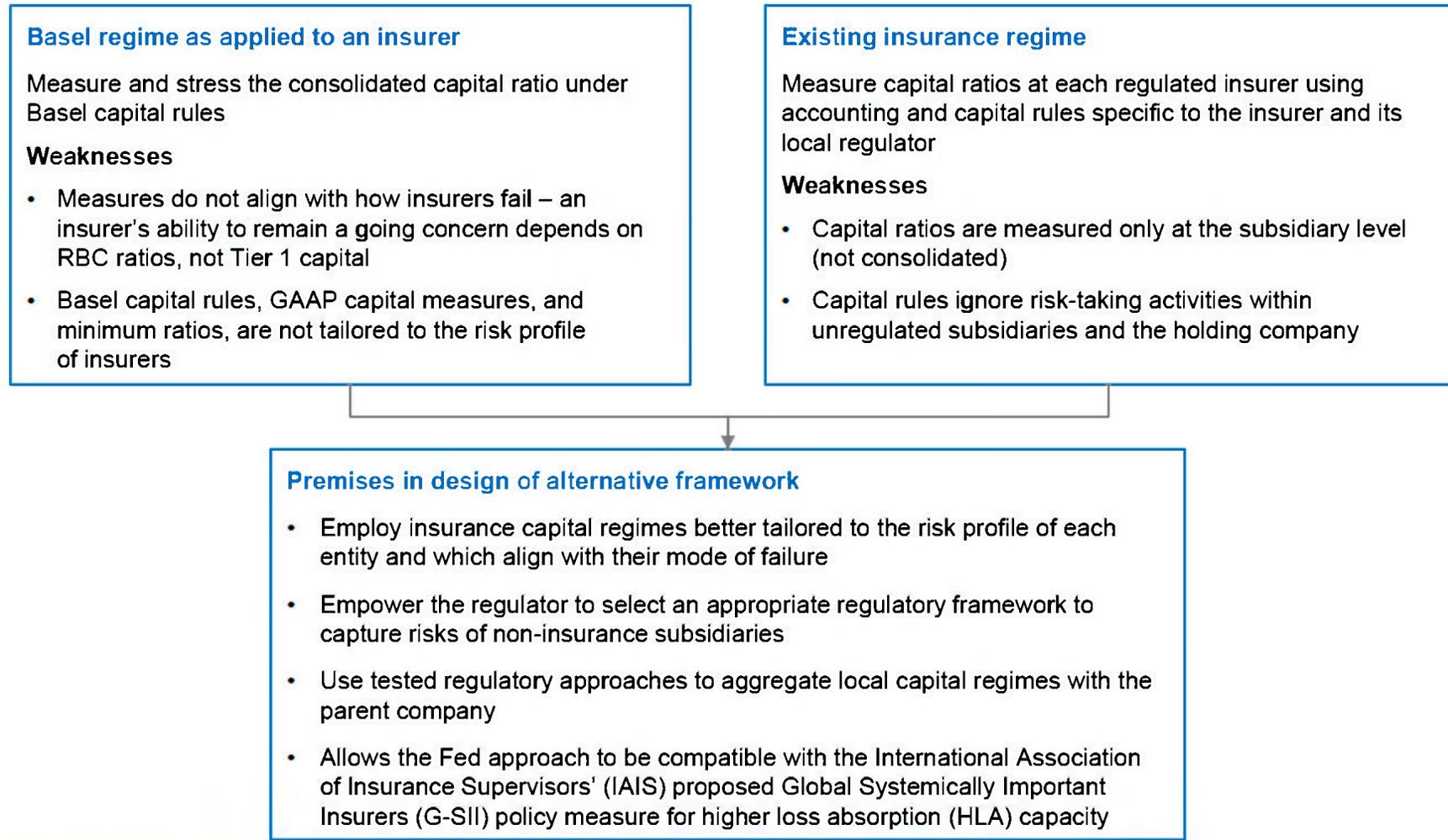
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## Section 1C – Description of framework

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## The alternative framework addresses the weaknesses of Basel applied to an insurer and the existing insurance regulatory regime



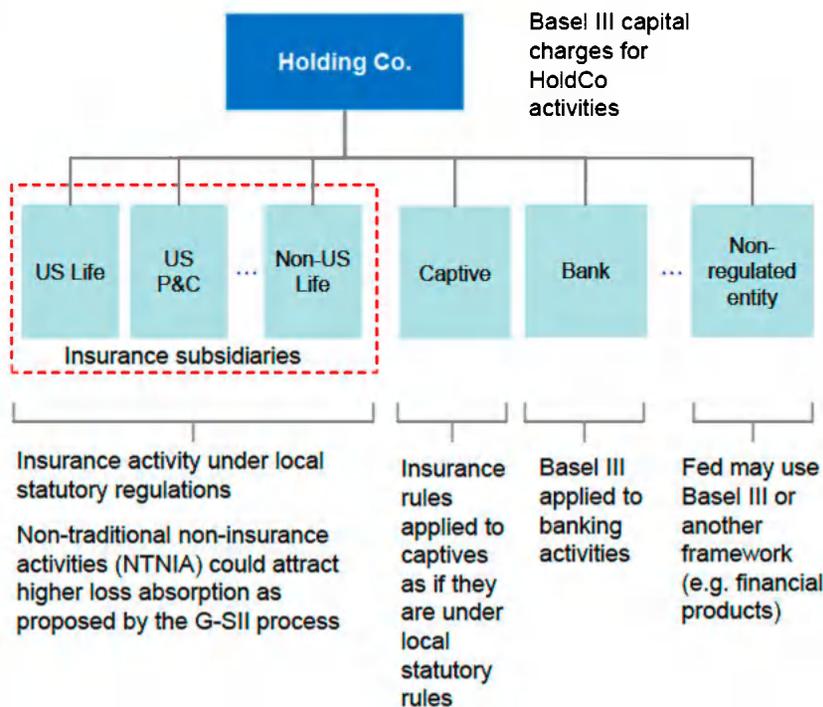
## Description and rationale for the proposed alternative framework

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- The proposed alternative extends and enhances the European Group Supervision approach to meet the Fed's goals to capture holding company assets and non-insurance subsidiary capital requirements, and to support stress testing
- The approach aggregates available and required capital based on a regulatory regime specifically tailored to the financial activities and risks of all entities within the holding company structure
  - Available and required capital for regulated subsidiaries is based on regulatory frameworks tailored to the activity of the entity (e.g. application of a statutory framework to insurance activities and a banking approach to banking activities)
  - Available and required capital for hitherto non-regulated entities may be determined using an approach selected by the Fed that reflects the unique activities of the entity (e.g. extending Basel approach to asset management activities)
- In addition, the approach is compatible with the International Association of Insurance Supervisors' (IAIS) proposed G-SII policy measure for higher loss absorption (HLA) capacity
  - IAIS proposes a capital buffer applicable to non-traditional insurance and non-insurance activities (NTNIAs)
  - Under the proposed alternative framework, capital adequacy is evaluated at the legal entity level
    - the HLA buffer can simply be applied to the required capital related to NTNIAs of each entity

## The aggregated activities based approach measures available and required capital based on the existing regulations tailored to the activity of each entity

### Illustration of regulations applicable to each entity within the activities based approach



### Comments

- Aggregated activities based approach works in four high-level steps
- 1 Sum the available<sup>1</sup> and required capital for each entity, based on the appropriate regulatory framework applicable to the business activity
- 2 Adjust for holding company double leverage and capital requirements
- 3 Sum up the above to determine the aggregated activities based capital ratio
  - Similar to Basel, different ratios and thresholds can be applied to differentiate by quality of capital
- 4 Apply prescribed stress scenarios to the aggregated activities based capital ratio
- A similar form of this approach is already used by European country regulators to evaluate large insurers
- The issues to address with this approach are
  - Ostensibly reduced comparability between insurance and banks
  - Requirement for the Fed to gain familiarity with statutory reserve capital regimes and/or put in place a mechanism to establish equivalency between US RBC and other jurisdictions

1. Note that available capital is differentiated by quality of capital – i.e. Tier 1 common, Tier 1 and total capital

## Capital ratios are derived by summing the subsidiary capital, adjusting for double leverage and adding back non-subsidiary assets of the HoldCo

Worked example for Tier 1 capital

**1** Sum the available and required capital for each subsidiary

<b>US Insurance entities</b> Required capital: 100 Available capital: 500
<b>Non-US Ins. entities</b> Required capital: 100 Available capital: 500
<b>Other subs</b> (e.g. Asset management) Required capital: 100 Available capital: 200

- European approach applies an equivalency test for non-EU domiciled insurers
- Required capital defined as the minimum regulatory capital level that triggers a regulatory action

**2** Adjust for holding company double leverage and capital requirements

Unconsolidated holding company balance sheet	
<b>Assets</b>	<b>Liab. and equity</b>
Assets: 300	Sub. debt <sup>1</sup> : 200
	Other debt: 500
	Total debt: 700
	<b>Total equity: (400)</b>
	<i>Preferred stock<sup>2</sup>: 100</i>
	<b>Total common eq.: (500)</b>

- Determine which debt instruments qualify as Tier 1 or Tier 2 capital
- Deduct HoldCo debt from HoldCo assets (excluding investments in subsidiaries) to adjust for double leverage

**3** Determine aggregated activities based capital ratio

Aggregated activities based capital ratio
Required capital: 300
Tier 1 com: 1200 – 500 = 700
Tier 1 total: 800
Total capital: 1000
<b>Tier 1 common = 233%</b>
<b>Tier 1 = 266%</b>
<b>Total = 333%</b>

- Required capital: sum of required capital at subsidiaries
- Available capital: sum of available capital in subs and adjusted HoldCo equity (excluding investments in subsidiaries)
  - Differentiated by quality of capital: Tier 1 common, Tier 1 and total



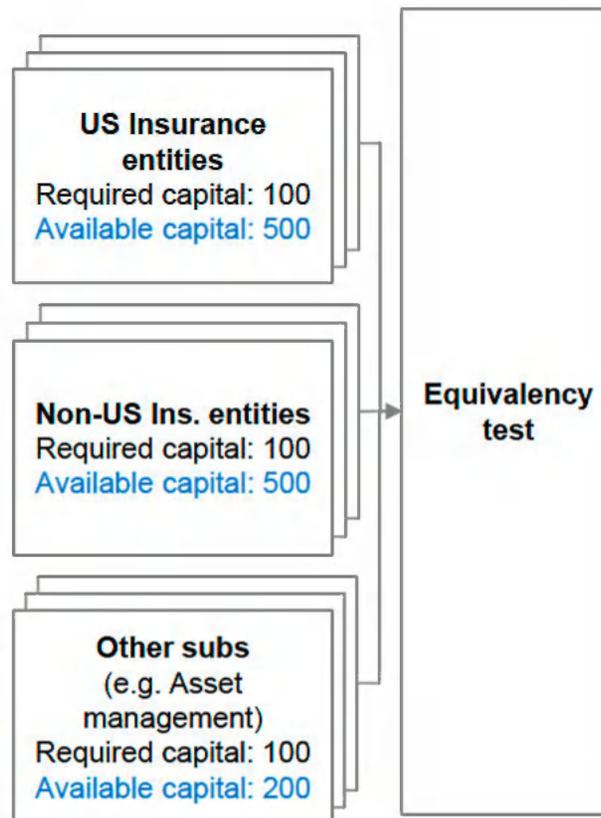
**4** The Fed could apply stress scenarios to the aggregated activities based capital ratios

1. Assumes all cash and cash equivalents in this example – does not attract capital requirements

## The key challenge will be in ensuring consistency of capital measures across regimes

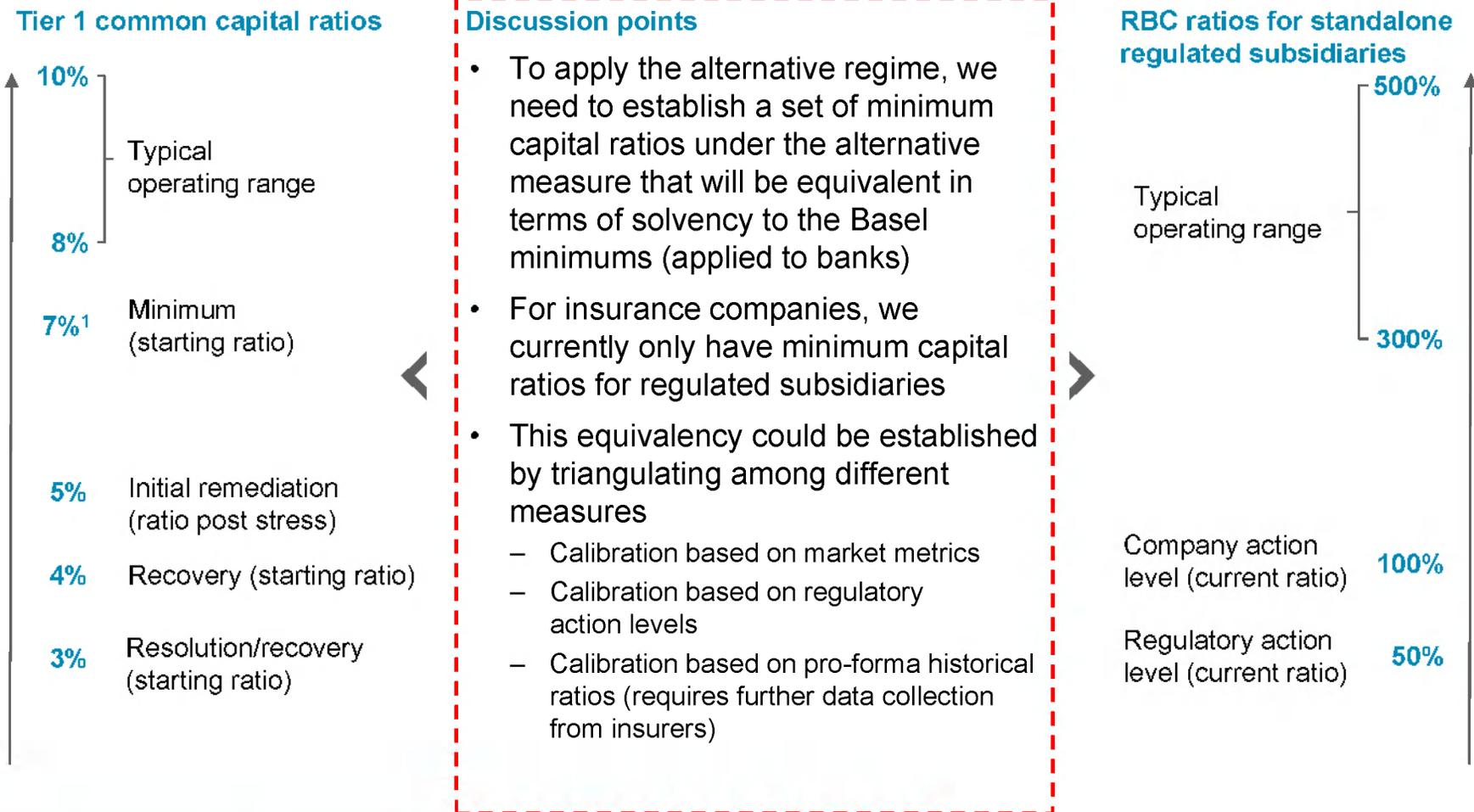
### Applicable metrics

- US: RBC
- Japan: Solvency margin ratio
- UK: Solvency capital ratio
- etc.
- Asset management: Basel III capital measures (or other)
- etc.



- Two key issues need to be addressed with the aggregated activities-based approach
  1. Are existing regulatory regimes equivalent (e.g. is \$1 of RBC equivalent to \$1 of solvency capital in the UK)?
  2. Are minimum capital ratios across regimes appropriately calibrated and comparable?
- The equivalency of regimes can be addressed using a similar method to the European Group Supervisory approach
  - If a regulatory regime is deemed equivalent, then capital is additive
  - If not, then available and required capital have to be restated or scaled
- The calibration of regimes will require development of conversion rules (see *subsequent slides for examples*)

To enable comparability, it is critical to establish appropriate minimum capital ratios for the aggregated measure



1. With capital conservation buffer

Minimum capital ratios can be calibrated through triangulation of several approaches – illustrative examples are shown below

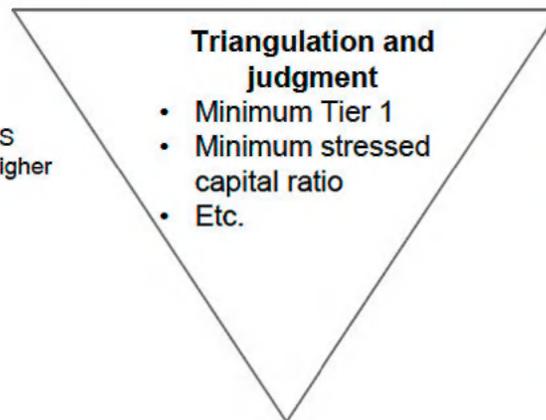
## 1 “Market-implied” approach

Calibrate through credit default swap spreads – similar CDS spreads imply equivalent default risk and capital levels

### Worked example for Tier 1 common

Q4 2012	Bank <sup>1</sup>	MetLife
5-year CDS spreads (bps)	142	157
Capital ratios	Tier 1 common: 11.9%	[REDACTED]
As % of min. required (7.0% <sup>2</sup> )	170%	

Met CDS ~10% higher



Minimum Tier 1 activities-based aggregated ratio = [REDACTED]

## 2 “Regulatory intervention” approach

Calibrate based on similar triggers for regulatory intervention across banking and insurance

### Worked example for Tier 1 common

Tier 1 common capital ratios		RBC ratios	
7% <sup>2</sup> Minimum (starting ratio)	↔	Insurance parity	~175%
5% Initial remediation (ratio post stress)	↔	Insurance parity	~125%
<i>Implied equivalents</i>			
4% Recovery (starting ratio)	↔	Company action level (current ratio)	100% <b>Anchor</b>
3% Resolution/recovery (starting ratio)	↔	Regulatory action level (current ratio)	50%

## 3 Empirically

Calibrate empirically – identify levels that resulted in insurer distress / insolvencies by applying approach pro-forma to crisis

1. Average of Bank of America, Citi, Morgan Stanley, JP Morgan, Wells Fargo; 2. With capital conservation buffer



## Section 1D – Evaluation of the alternative framework

The proposed alternative framework satisfies a set of design principles that align with what we believe are key objectives for the Fed

Design principle	Assessment
<b>1</b> Tailored and calibrated	<ul style="list-style-type: none"> <li>For regulated entities, applies capital regimes which have been developed and calibrated to fit the institutions' risk profiles over many years (Basel for banks, local statutory rules for insurers)</li> <li>For non-regulated entities, empowers the Group regulator to select a capital regime that reflects the risk-taking activities of the entity</li> </ul>
<b>2</b> Ensures sufficient capital in a severe stress	<ul style="list-style-type: none"> <li>Capital ratios are based on the measures of available and required capital that dictate in practice whether an insurer remains a going concern post stress</li> <li>Measures are compatible with a stress testing framework</li> </ul>
<b>3</b> Comprehensive	<ul style="list-style-type: none"> <li>Use of local regulatory frameworks evolved to the risk taking activities of the entities ensures that all risks are captured in the aggregated ratios</li> </ul>
<b>4</b> Comparable	<ul style="list-style-type: none"> <li>The proposed framework and ratios can be calibrated to allow for substantive comparability with banks</li> </ul>
<b>5</b> Feasible implementation	<ul style="list-style-type: none"> <li>Relies predominantly on existing measures, reducing the need to develop new measures or apply complex adjustments to existing measures in order to suit the insurer risk profile</li> </ul>

## Design Principle 1: Tailored and calibrated to the activities of the institution

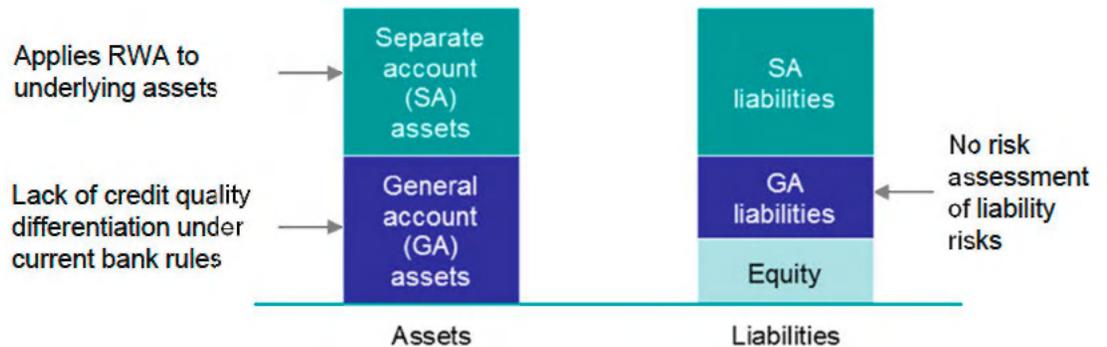
### Question and background information

1. Is the framework designed and calibrated to activities of each entity?
  - Calculations of available and required capital are tailored to the specific activities conducted at each legal entity

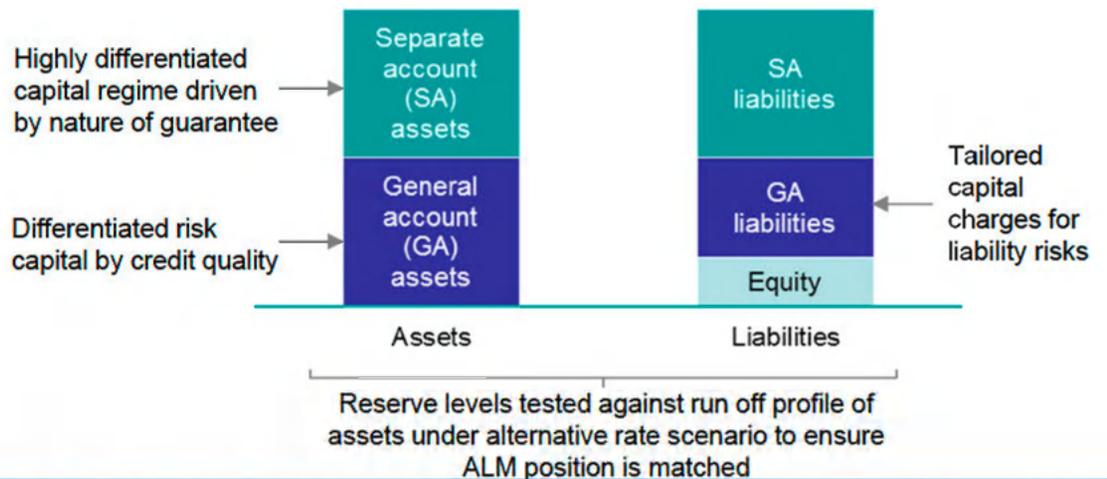
### How framework addresses the question

Illustration of select issues

#### Bank framework



#### Insurance regime synthesized in alternative framework



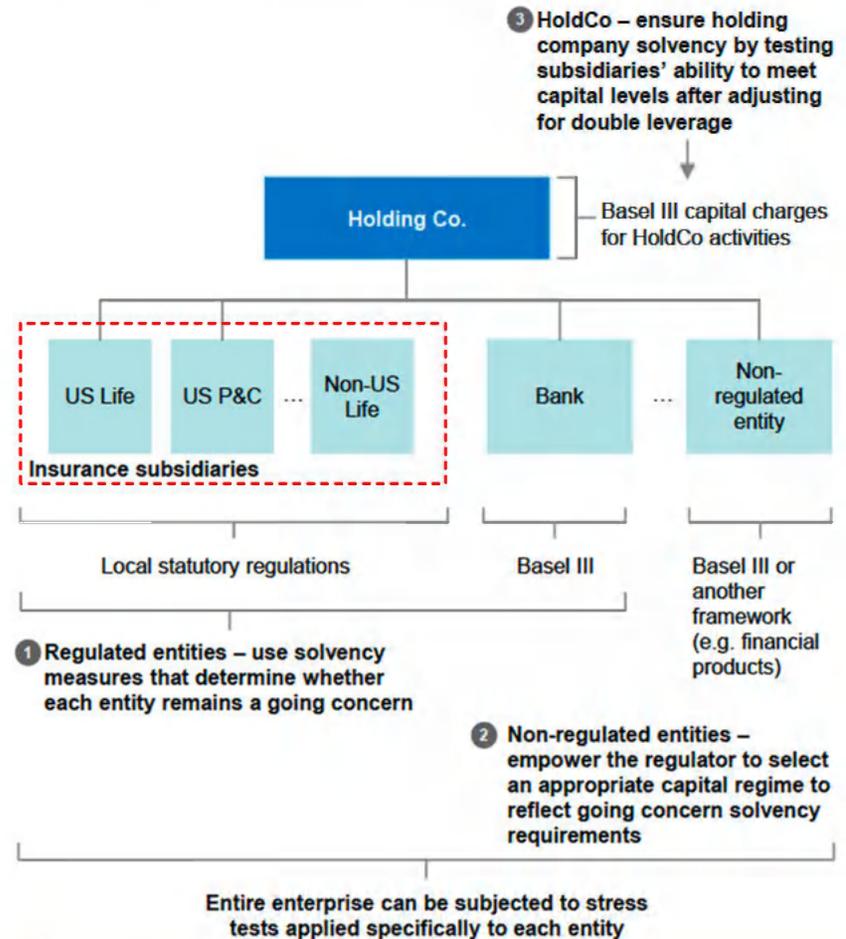
## Design Principle 2: Ensures sufficient capital to protect solvency even in a severe stress

### Question and background information

#### 2. What determines an insurer's ability to remain a going concern?

- The ability for insurers to maintain various business activities depends on measures of their “financial strength”
- The “financial strength” measures vary based on the entity and its activities
  - 1 Insurance subsidiaries: statutory risk-based capital ratios
  - 1 Banks: Basel capital ratios
  - 2 Non-regulated entities: varied based on activity of the entity
  - 3 Holding company: captures holding company activities based upon Basel measures and ensures double leverage is appropriately accounted for
- Holding company ability to meet contingent capital claims from its subsidiaries could be quantified

### How framework addresses the question



## Design Principle 3: Comprehensively captures entities and risks

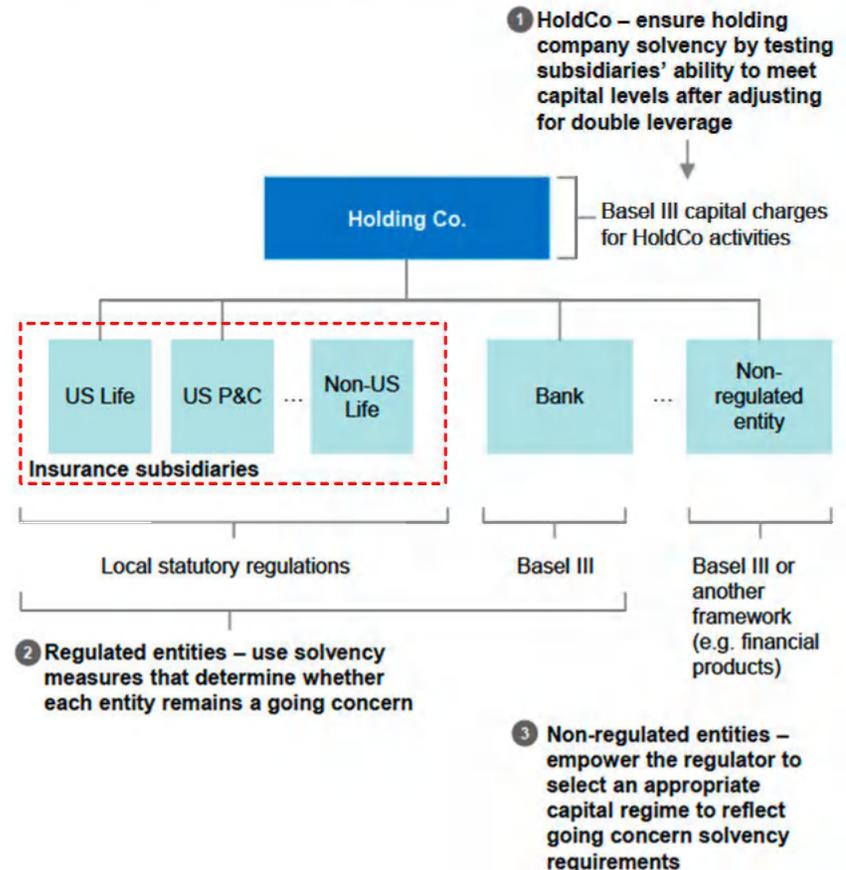
### Question and background information

#### 3. Does the framework capture all risks across activities of each entity?

- The ability to capture all risks in the enterprise requires the use of capital regimes that comprehensively cover the risks of each entity
- The framework uses capital regimes evolved to reflect the diverse risk-taking activities of Life/P&C/health insurers, banks, and non-regulated entities

- 1 Holding company: Basel framework (banking-like risks)
- 2 Insurance subsidiaries: statutory risk-based capital ratios
- 2 Banks: Basel capital ratios
- 3 Non-regulated entities: framework based on the risk-taking activities

### How framework addresses the question



## Design Principle 4: Provides comparability among banks, insurers and other financial institutions

### Question and background information

- 4. Are capital adequacy measures meaningfully comparable between banks and insurers, and across insurers?**
- Applying Basel capital ratios allows for structural comparability between banks and insurers
    - However, the comparison is not meaningful given the weaknesses in the application of Basel to insurers
  - The aggregated activities based capital ratio will not be directly comparable to banks (it will be denominated differently)
  - Through establishing minimum capital ratios that are equivalent between the Basel and activities based approach, the results will be substantively comparable

### How framework addresses the question

- Minimum capital ratios for the aggregated activities-based approach can be calibrated through triangulation of several approaches
- For example, by comparing similar triggers for regulatory intervention across banking and insurance

Tier 1 common capital ratios			RBC ratios	
7%	Minimum (starting ratio)	<>	Insurance parity	~175%
5%	Initial remediation (ratio post stress)	<>	Insurance parity	~125%
<i>Implied equivalents</i>				
4%	Recovery (starting ratio)	<>	Company action level (current ratio)	100% <b>Anchor</b>
3%	Resolution/ recovery (starting ratio)	<>	Regulatory action level (current ratio)	50%

## Design Principle 5: Feasible implementation with minimal complex adjustments

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### Question

5. How onerous and burdensome is the framework for the supervisor to implement and maintain?

**Core implementation is relatively straightforward...**

- Framework leverages existing audited financials (i.e. statutory for insurers, GAAP for banks)
- Few adjustments are required to satisfy objectives
  - Parameters and treatment are already largely calibrated to the activities of the legal entity

**...but with two key issues to be resolved**

- **Establish equivalency of capital measures** across the regulatory regimes (e.g. US RBC vs. Japan solvency margin ratio)
- **Calibrate capital thresholds** to ensure comparability across banking, insurance and other holding companies



**The alternative approach will require some framework development – but would be much less burdensome than applying the numerous required adjustments to Basel**



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## Section 1E – Compatibility with IAIS proposal for G-SIIs

## The IAIS proposes a capital buffer for higher loss absorption capacity applicable to non-traditional insurance and non-insurance activities

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- IAIS proposes a policy measure mandating higher loss absorption capacity (i.e. capital buffer) for a G-SII<sup>1</sup>
- The HLA buffer is applied to the base capital requirement of NTNIAAs only
  - For non-traditional insurance activities – an HLA buffer is applied to the required capital determined via local statutory rules
  - For non-insurance activities – an HLA buffer is applied to capital determined via Basel rules (or other regulatory frameworks in place)
- The size of the buffer depends on effective separation<sup>2</sup> of the NTNIAAs and degree of interconnectedness (if not effectively separated)
  - If effective separation can be demonstrated, a flat “X%” (exact buffer TBD) is applied, other than for entities under Basel III, which applies a 1% uplift<sup>3</sup>
  - If NTNIAAs are not effectively separated, an HLA buffer of “Y%” to “Z%” is applied<sup>4</sup>
    - Exact level depends on interconnectedness score or total score of Group excluding the NTNI score

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1. Source: IAIS memorandum from Paul Sharma to all IAIS observers; March 9, 2013; note that comments are being solicited and rule has not been finalized

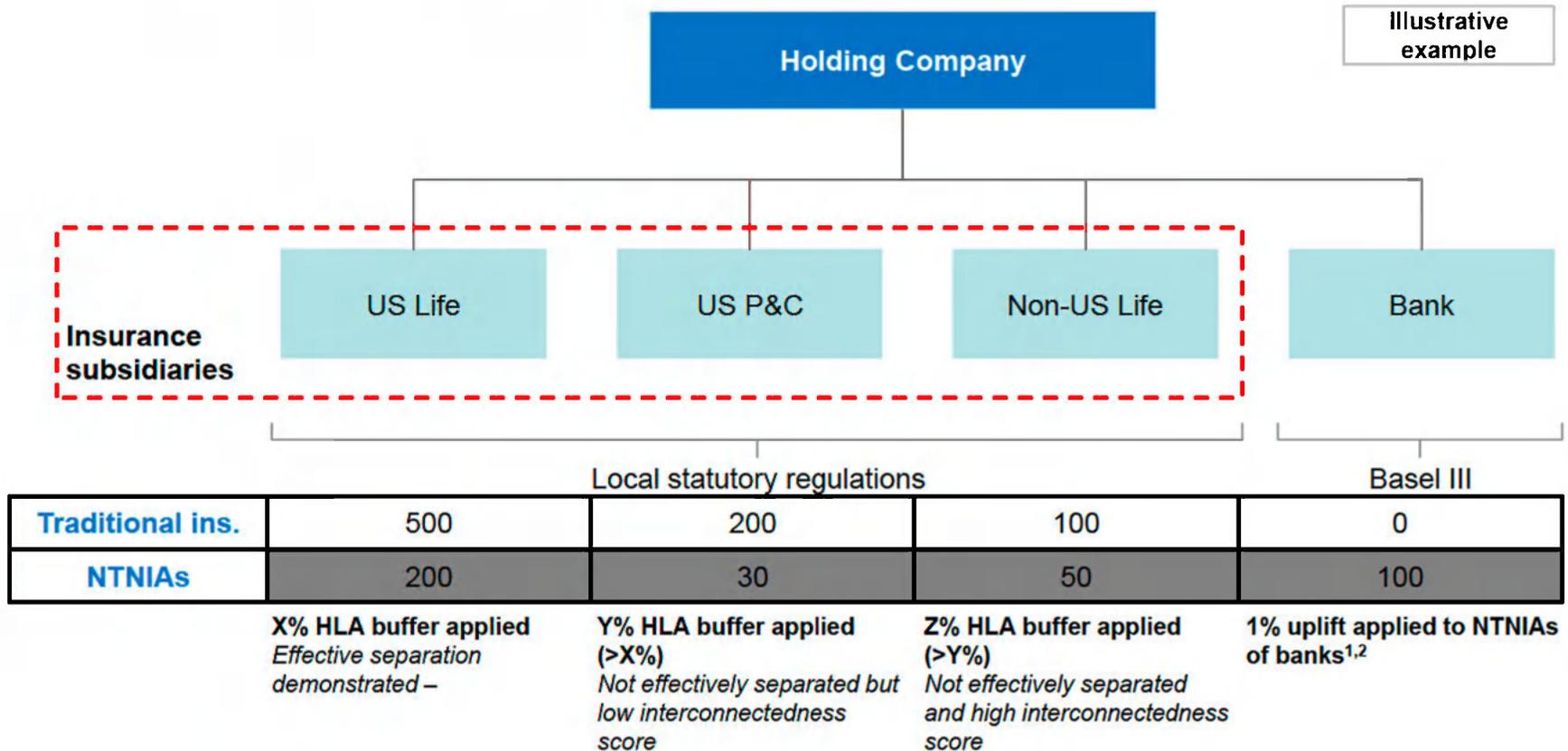
2. Proposed criteria for effective separation: i. Ability to operate on a standalone basis (including capital for self-sufficiency); ii. Adequate levels of independence in management and responsibility; iii. Separate entity should have its own solo or group prudential regulator; iv. Intra-group transactions at 'arm's length'; v. Acceptable corporate structure and ownership; additionally, the relevance of reputation risk is under discussion as a possible sixth criterion

3. 1% uplift corresponds to the lowest of the G-SIB buckets

4. Lower and upper bounds TBD, but are greater than X%

The aggregated activities based approach is compatible with the IAIS’s proposal for a higher loss absorption capacity buffer

## Application of the HLA buffer to the proposed framework



1. If effective separation cannot be demonstrated or if entity assessed is deemed a G-SII in its own right, HLA buffer of Y% to Z% would be applied (greater than X%) depending on the interconnectedness score of the activity  
 2. For any entity assessed under Basel III, 1% uplift would be applied; 1% uplift corresponds to the lowest of the G-SIB buckets (i.e. buffer applicable to lower quartile of global systemically important banks)



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## Section 2 – Separate Accounts

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## The Basel framework would require an extensive number of changes before being applied to insurers of which a subset is below

Issue	Description
<b>Risk weights</b>	
Separate accounts (risk weighting)	<ul style="list-style-type: none"> <li>Assets of the guaranteed separate accounts are assigned corresponding risk weights although the risk of the guaranteed accounts lies in its guarantee, not the notional value of the separate accounts. Furthermore, risk weight is applied independent of any actions the insurer may take to offload the exposure via hedging</li> </ul>
Differentiation by asset quality	<ul style="list-style-type: none"> <li>Risk weights do not distinguish between higher or lower credit quality of the holdings</li> </ul>
Closed blocks	<ul style="list-style-type: none"> <li>Assets supporting closed blocks are assigned full risk weights although credit risk is largely borne by policyholders</li> </ul>
Policy loans	<ul style="list-style-type: none"> <li>Policy loans are assigned a 20% risk weight although they pose no risk to the insurer</li> </ul>
<b>Capital</b>	
Insurance subsidiary capital deduction/Liability risk	<ul style="list-style-type: none"> <li>Capital requirements of insurance subsidiaries are deducted from total capital to account for liability risks and limited capital mobility in insurers; this deduction is punitive and is not calibrated meaningfully to either issue</li> </ul>
AOCI	<ul style="list-style-type: none"> <li>AOCI will be reflected in available capital, and may cause large variances in total capital for insurers</li> </ul>
Conservatism in GAAP reserves in capital calculation (PADs)	<ul style="list-style-type: none"> <li>PADs are treated as liabilities under GAAP; however, they provide an additional buffer for deviations away from expected loss, which is consistent with the definition of capital</li> </ul>
Separate accounts (leverage ratio)	<ul style="list-style-type: none"> <li>Tier 1 Leverage Ratio includes separate account assets where investment risks are borne by policyholder</li> <li>Assets backing reserves of guarantees on separate account are already included in the Leverage Ratio</li> </ul>
2.5% capital buffer/minimum requirement levels	<ul style="list-style-type: none"> <li>The 2.5% capital conservation buffer and minimum capital requirements were determined under the banking construct – a comparable analysis was not performed for the insurance sector</li> </ul>
<b>Stress testing</b>	
Insurance-specific stress scenarios	<ul style="list-style-type: none"> <li>Existing Fed scenarios are calibrated to stress the macroeconomic risk profile of a typical bank with little regard to macroeconomic sensitivity of insurers' books</li> </ul>



**Even after all specific risk weight, capital, and stress testing adjustments are completed, minimum capital requirement levels must be re-calibrated for insurers**

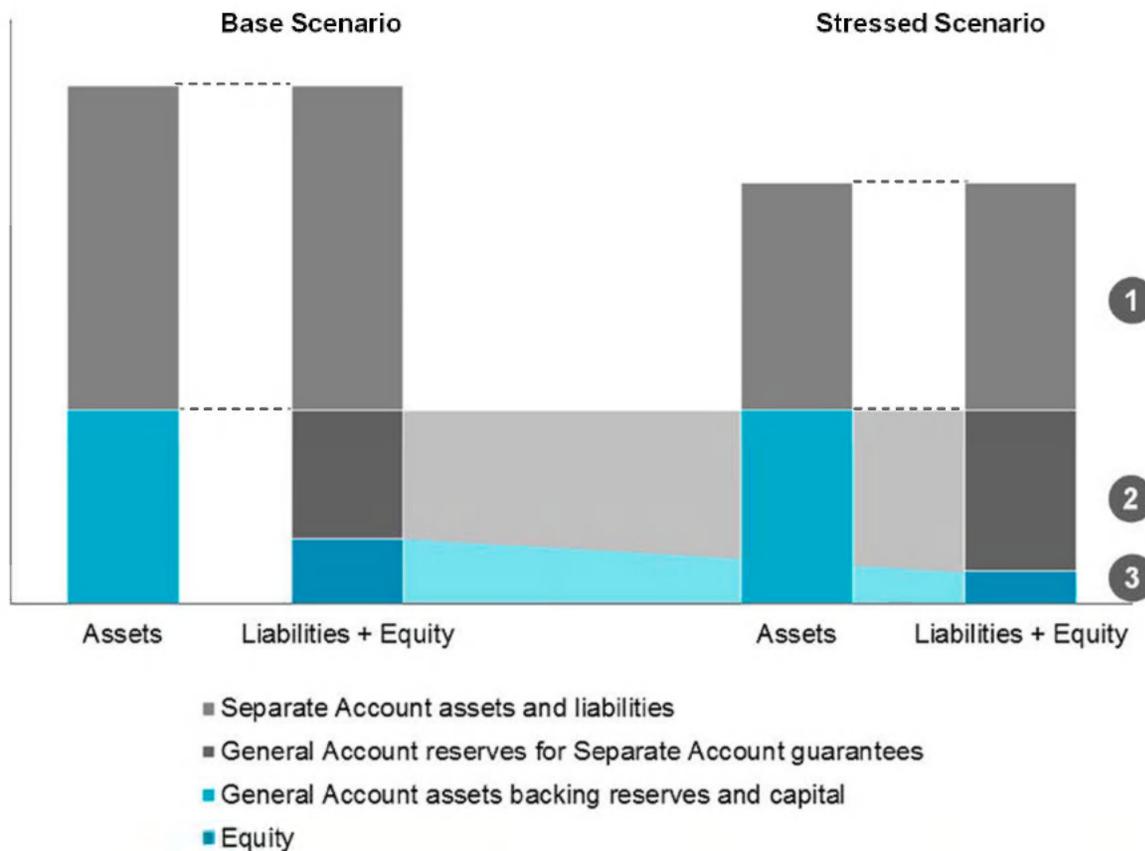
## Separate accounts – articulation of the issues

Facts	Implications for the regulatory approach
<p><b>1</b> <b>Separate account assets alone pose no risk to insurer capital; risk arises from the fluctuation in the value of the guarantee written on the separate account</b></p> <ul style="list-style-type: none"> <li>• The risk associated with separate account products does not originate from the separate account asset, which by definition is equal in value to the separate account liability</li> <li>• Risk to insurer equity arises from fluctuations in the required reserves to support guarantees written by insurers on policies invested in separate account assets</li> </ul>	<p><b>The proposed rule to set capital based on the separate account asset type and size is fundamentally flawed</b></p> <ul style="list-style-type: none"> <li>• Proposed method to set capital requirements based on the separate account asset type would grossly fail to measure the risk appropriately</li> <li>• Additionally, the fact that risk arises from the general account alone suggests the Separate Accounts should be removed from the leverage calculation</li> </ul>
<p><b>2</b> <b>The nature of the market risk arising from the separate account guarantees is analogous to that of a bank derivatives trading book with less liquidity risk</b></p> <ul style="list-style-type: none"> <li>• Separate account values are most closely related to a “notional” of an underlying derivative, albeit a unique derivative with life contingencies and much lower liquidity requirements</li> <li>• Basel uses VaR to measure market risk capital for trading books</li> </ul>	<p><b>VaR is a sensible framework to measure capital for separate account risk exposures but requires adjustment for separate accounts</b></p> <ul style="list-style-type: none"> <li>• The value-at-risk (VaR) framework applied to bank trading books is consistent with the nature of the risk</li> <li>• Given the lower inherent risk of a separate account compared to a trading book, the approach should be calibrated downward for separate accounts</li> </ul>
<p><b>3</b> <b>The magnitude of separate account guarantee exposure varies with many factors of which only one, asset type, is captured by the proposed framework</b></p> <ul style="list-style-type: none"> <li>• The magnitude of this exposure is a function of               <ul style="list-style-type: none"> <li>– Guarantee design and parameters</li> <li>– Composition/risk of the underlying SA and GA assets</li> <li>– “In-the-moneyness” of the guarantee</li> <li>– Policyholder characteristics and behavior</li> <li>– Extent of hedging activities</li> </ul> </li> </ul>	<p><b>The VaR framework should reflect the portfolio nuances and risk mitigation activities; a factor-based approach would be a feasible alternative but difficult to manage</b></p> <ul style="list-style-type: none"> <li>• Reliance on insurer internal models will be required, similar to the supervision of bank trading books</li> <li>• Translating the VaR-results to a factor based approach would require frequent recalibration and testing and may not be any simpler for regulators to maintain</li> </ul>

Separate account assets alone pose no risk to insurer capital; risk arises from fluctuation in value of the guarantee written on the separate account

## Hypothetical insurer balance sheet

Example



## Comments

- 1 Separate account asset and liability values are equal under both base and stress scenarios
- 2 In the stress scenario, there is an increase in reserves to support guarantees written on policies invested in Separate Accounts
- 3 The increase in guarantee reserves, if not hedged, reduces equity

The nature of the market risk arising from separate account guarantees is analogous to that of a bank derivatives trading book with less liquidity risk

Key characteristics	Trading books		Separate accounts with guarantees
<b>Source of risk exposure</b>	<ul style="list-style-type: none"> <li>Range from simple to complex options on the value of individual equities and indices</li> </ul>	≈	<ul style="list-style-type: none"> <li>Option-like guarantees written by insurers that provide minimum benefits to policyholders</li> </ul>
<b>Risk factors</b>	<ul style="list-style-type: none"> <li>Market risk (interest rates, equity returns, HPA, FX rates, etc.)</li> </ul>	≈	<ul style="list-style-type: none"> <li>Market risk (interest rates, returns of separate account mutual funds)</li> </ul>
<b>Risk management</b>	<ul style="list-style-type: none"> <li>Discretionary hedging</li> </ul>	≈	<ul style="list-style-type: none"> <li>Discretionary hedging</li> <li>Reinsurance</li> </ul>
<b>GAAP valuation</b>	<ul style="list-style-type: none"> <li>Mark-to-market or mark-to-model</li> </ul>	≈	<ul style="list-style-type: none"> <li>Model based approaches – mark-to-model or actuarial stochastic models</li> </ul>
<b>Liquidity</b>	<ul style="list-style-type: none"> <li>Requires significant liquidity due to tradable nature of positions and collateral requirements</li> <li>Trading book losses impact capital and market perception which can lead to further liquidity calls</li> </ul>	≠	<ul style="list-style-type: none"> <li>Requires little liquidity due to the following                             <ul style="list-style-type: none"> <li>– Long-term nature of guarantees (cash outflows are 5–10+ years in the future)</li> <li>– No collateral posting requirements</li> <li>– Inability for policyholder to “call” the guarantees (surrender improves insurer’s capital position and has no liquidity impact; exercise of guarantee has minimal liquidity impact)</li> </ul> </li> </ul>

## The magnitude of separate account guarantee exposure varies with many factors of which the proposed framework captures only one: asset type

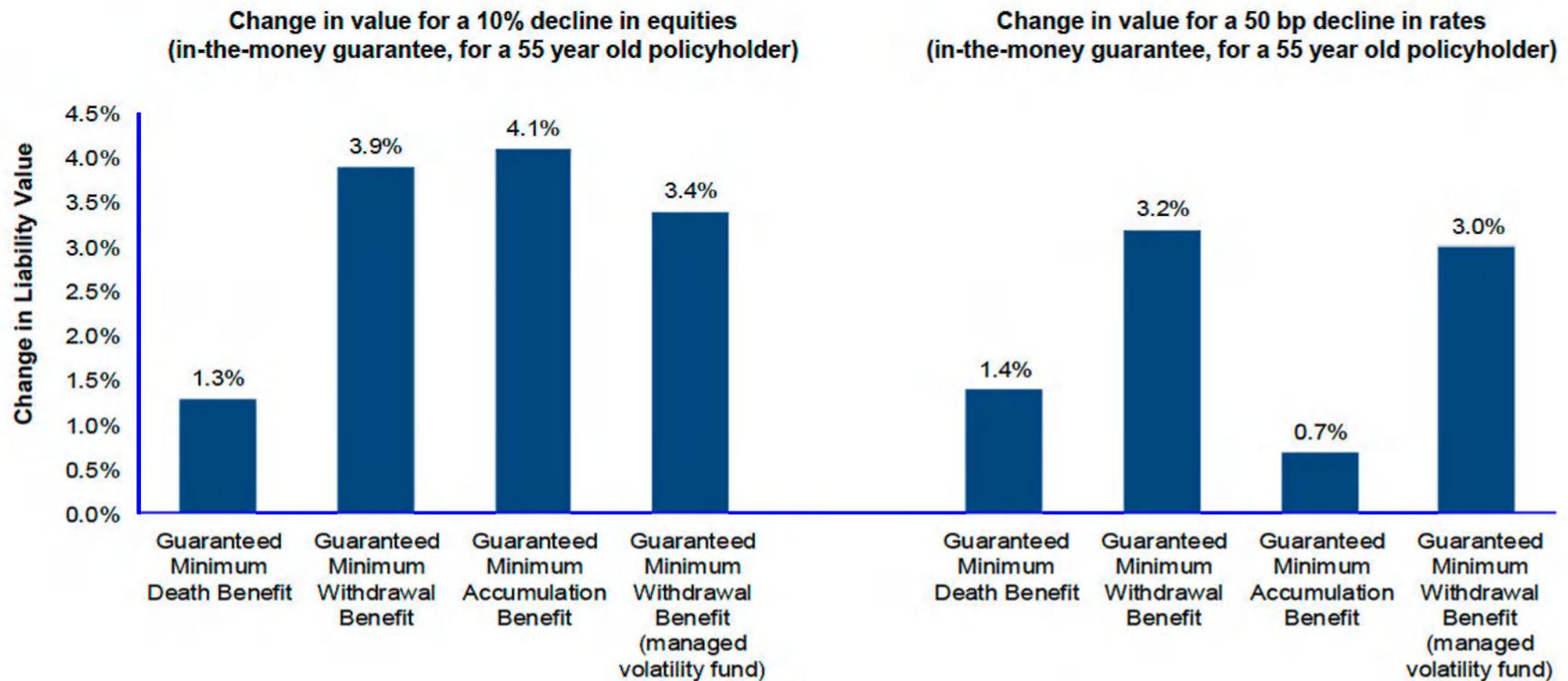
Factors	Description	Example parameters
<b>Guarantee design and parameters</b>	<ul style="list-style-type: none"> <li>Form and conditions required for payout of guaranteed minimums (e.g. minimum benefit payable on death, income installments for life)</li> <li>Parameters that specify the specific amount of the guarantee payments</li> </ul>	<ul style="list-style-type: none"> <li>Minimum income benefit, minimum accumulation benefit, minimum death benefit</li> <li>“High watermark” provisions, annual credits, etc.</li> </ul>
<b>Mix of policyholder asset types</b>	<ul style="list-style-type: none"> <li>Allocation of the underlying policyholder assets within the guaranteed policy (e.g. mix between equities, bonds and other investments)</li> <li>Asset mix determines account volatility which, in turn, affects risk profile</li> </ul>	<ul style="list-style-type: none"> <li>Investment choices may significantly vary in their allocation to fixed income vs. equities</li> <li>MetLife, and others, have introduced “Managed Volatility” funds which have reduced risk</li> </ul>
<b>“In-the-moneyness” of the guarantee</b>	<ul style="list-style-type: none"> <li>Prior performance of Separate Account determines how “in-the-money” the guarantee may be at a given time</li> <li>“Moneyness” is a driver of market and insurance risk exposure</li> </ul>	<ul style="list-style-type: none"> <li>Difference between account value and death benefit</li> <li>Ratio of account value to payout value on a lifetime income policy</li> </ul>
<b>Policyholder characteristics and behavior</b>	<ul style="list-style-type: none"> <li>Demographic and behavioral characteristics of the policyholder which influence guarantee value and risk exposure</li> </ul>	<ul style="list-style-type: none"> <li>Mortality rate for an 80-year old vs. 50-year old on a “death benefit” policy</li> </ul>

## The significant variation in risk exposure by factors other than separate account asset type underscore the flaws in the proposed framework

### Illustration of the magnitude of equity and interest rate exposure across different guarantee types

Change in economic value of reserve (% premium)

Examples from sample products



### Assigning a single risk-weight would fail to reflect the varying levels of risk

Note: See appendix for additional exposures by portfolio characteristics

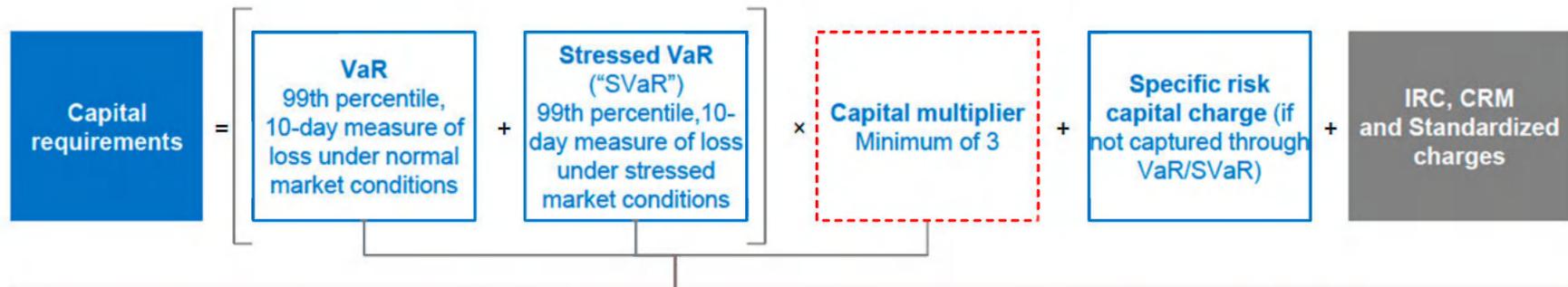
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Most insurers employ hedging programs to mitigate a portion or all of the market risk exposure arising from the guarantees

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- Hedging reduces the market risk that the insurer is exposed to and moves market risk to the capital markets
- Hedging is discretionary, but most insurers hedge most or all of the guarantees in the variable annuity business
  - Hedge programs will vary across insurers and differ as to the degree of hedging and the risk types covered (interest rates, equity markets, implied volatilities)
- Proposed treatment under a banking market risk approach improves incentives for prudent risk management
  - The proposed RWA approach treats the Separate Account assets as General Accounts and hence does not reflect risk mitigation actions

A “VaR” approach similar to that applied to bank trading books would be the best alternative measurement approach...



- The capital requirements framework is built upon Value-at-Risk, a measure of loss at a specific confidence interval
- The calibration of the approach for banks (Addition of S VaR, use of 10-day window, setting minimum multiplier at 3) has less theoretical footing – it has been determined experientially by regulators based upon experience in this and previous crises
- The current parameterization of the VaR approach results in at least a six times “multiplier” to the stand alone VaR
  - “Double counting” of loss through S VaR which is added to VaR (x2)
  - Multiplication of both VaR and S VaR by a multiplier with a minimum level of 3 (x3)
- The calibration for separate accounts should be set lower than for a typical trading book because of the lower inherent liquidity risk
  - This can be done through lowering the “multipliers” or by measuring the liabilities on a GAAP basis (see next slide), which already accounts for the longer term nature of some of these risks

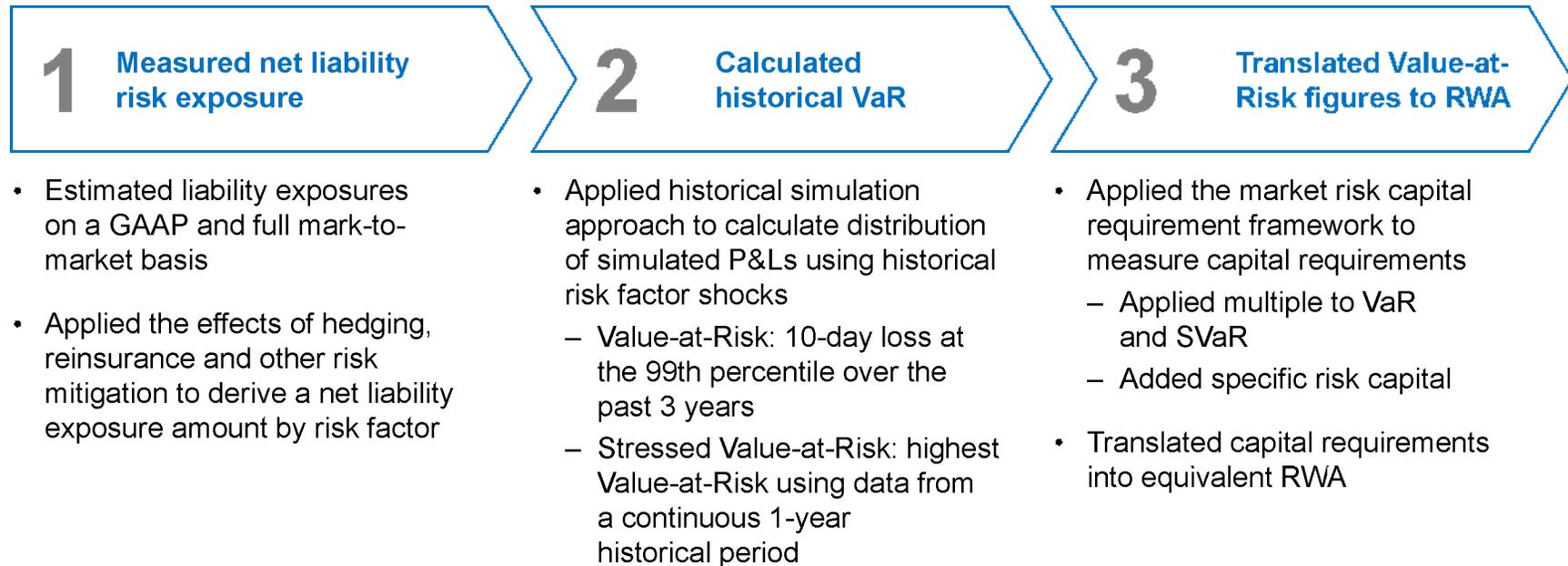
■ Not relevant for insurer separate account portfolios

...although the lower risk inherent in a separate account would suggest that separate accounts be given a lower “multiplier” through one form or another

## The Fed can reduce the conservatism present in the VaR framework by pursuing two approaches

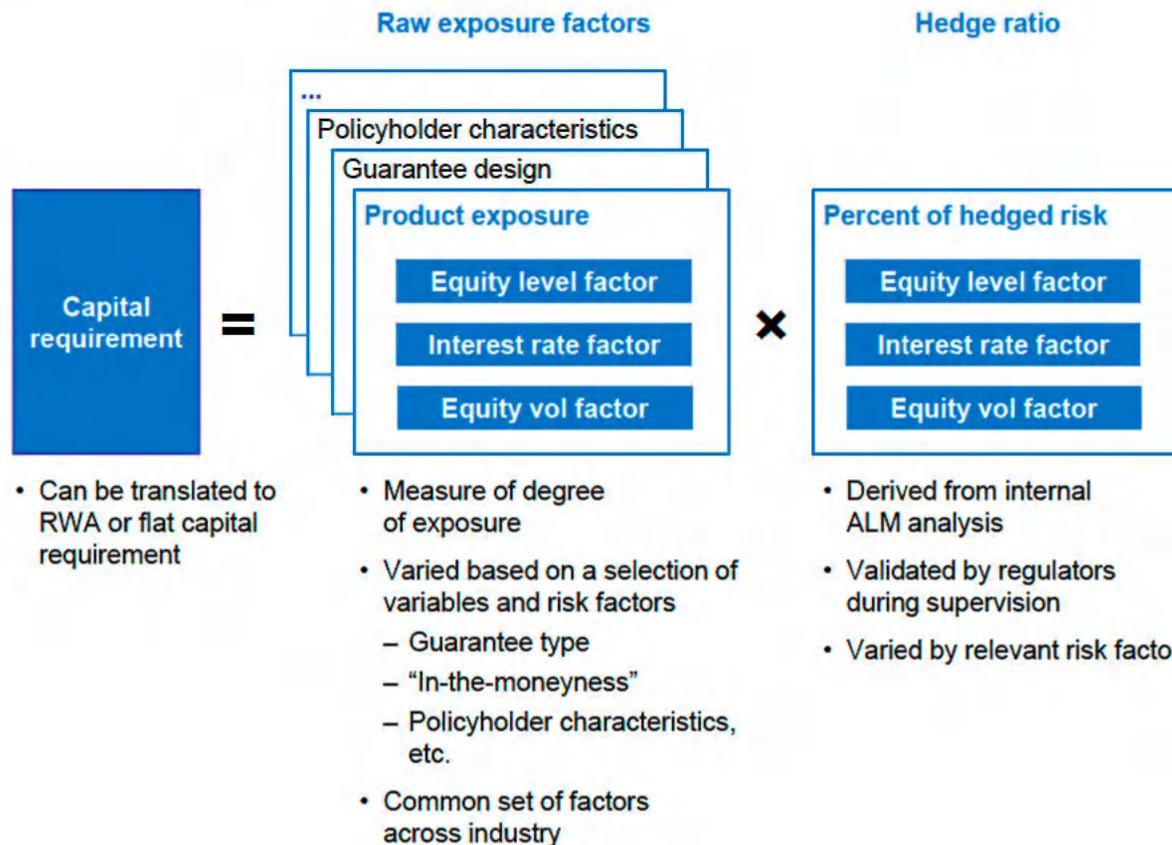
	<b>Approach A – “GAAP approach”</b>	<b>Approach B – “Mark-to-market”</b>
	<b>Apply VaR framework to GAAP measures of risk exposure that already reflect the lower liquidity requirements</b>	<b>Apply VaR framework to a mark-to-market measure of the exposure, but explicitly remove conservatism from the framework</b>
<b>Basis for measuring liability exposure</b>	<ul style="list-style-type: none"> <li>Existing GAAP reserving frameworks</li> </ul>	<ul style="list-style-type: none"> <li>Mark-to-Market framework</li> </ul>
<b>Adjustments to Basel market risk approach (“VaR/SVaR”)</b>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Apply a lower “multiplier”</li> </ul>
<b>Rationale for selecting approach</b>	<ul style="list-style-type: none"> <li>GAAP reserving standards already capture the long term nature of the liabilities; hence, no further adjustment is needed</li> <li>Measurement of liability exposure is consistent with how the risk manifests through the GAAP P&amp;L and capital and is typically captured by the Basel accords</li> </ul>	<ul style="list-style-type: none"> <li>Measurement of liability exposure is consistent across all guarantee types</li> <li>Reflects the nature of insurers’ liabilities                             <ul style="list-style-type: none"> <li>Long-term nature of the risks (cash outflows due to guarantees occur 5–10+ years in the future)</li> <li>No collateral posting requirements</li> <li>Exercise of living benefits has negligible liquidity impact on the General Account</li> <li>No liquidity impact should policyholders immediately surrender their existing policies</li> </ul> </li> </ul>

## The Basel market risk framework could be applied to MetLife



## A “factor based” formula could be used instead of VaR under either Approach A or B

### Illustration of “factor based” formula



- Can be translated to RWA or flat capital requirement

- Measure of degree of exposure
- Varied based on a selection of variables and risk factors
  - Guarantee type
  - “In-the-moneyness”
  - Policyholder characteristics, etc.
- Common set of factors across industry

- Derived from internal ALM analysis
- Validated by regulators during supervision
- Varied by relevant risk factor

### Comments

- Initially, the Fed could apply the bottom up approach to a hypothetical portfolio to generate risk factors
- A factor “look-up” table could then be constructed to quantify capital based on charges which vary by the key risk characteristics of the business
- Advantages of such an approach are
  - Simplicity of application
  - Less reliance on models
  - Lower resource intensity
- Disadvantages are
  - Look-up table would be complex, incorporating multiple factors to quantify portfolio risk appropriately
  - Re-calibration of the table would be required over time as the portfolio ages and market conditions change



## Appendix A – Separate Accounts: supporting materials

## Insurers' variable annuity liabilities are measured under one of two valuation standards under GAAP

### Summary of prevailing GAAP accounting standards for variable annuity guarantees

	FAS 133 ("Embedded derivative")	SOP 03-1 ("Best-estimate reserves")
<b>Applicable guarantee types</b>	<ul style="list-style-type: none"> <li>Living benefit = most GMWBs, all GMABs</li> </ul>	<ul style="list-style-type: none"> <li>Living benefit = some GMWBs, all GMIBs</li> <li>All death benefits</li> </ul>
<b>Objective of calculation</b>	<ul style="list-style-type: none"> <li>Measure the market value of the guarantee</li> </ul>	<ul style="list-style-type: none"> <li>Measure the expected value of the guarantee based on best-estimate equity market returns and interest rate changes</li> </ul>



Reflects the "market price" of the option in prevailing capital markets conditions



Reflects the "actuarial value", an expected value based on long-term expectations for the capital markets environment

## Broader illustration of the magnitude of exposure across influential factors

illustrative

### Change in economic value of reserve (% premium)

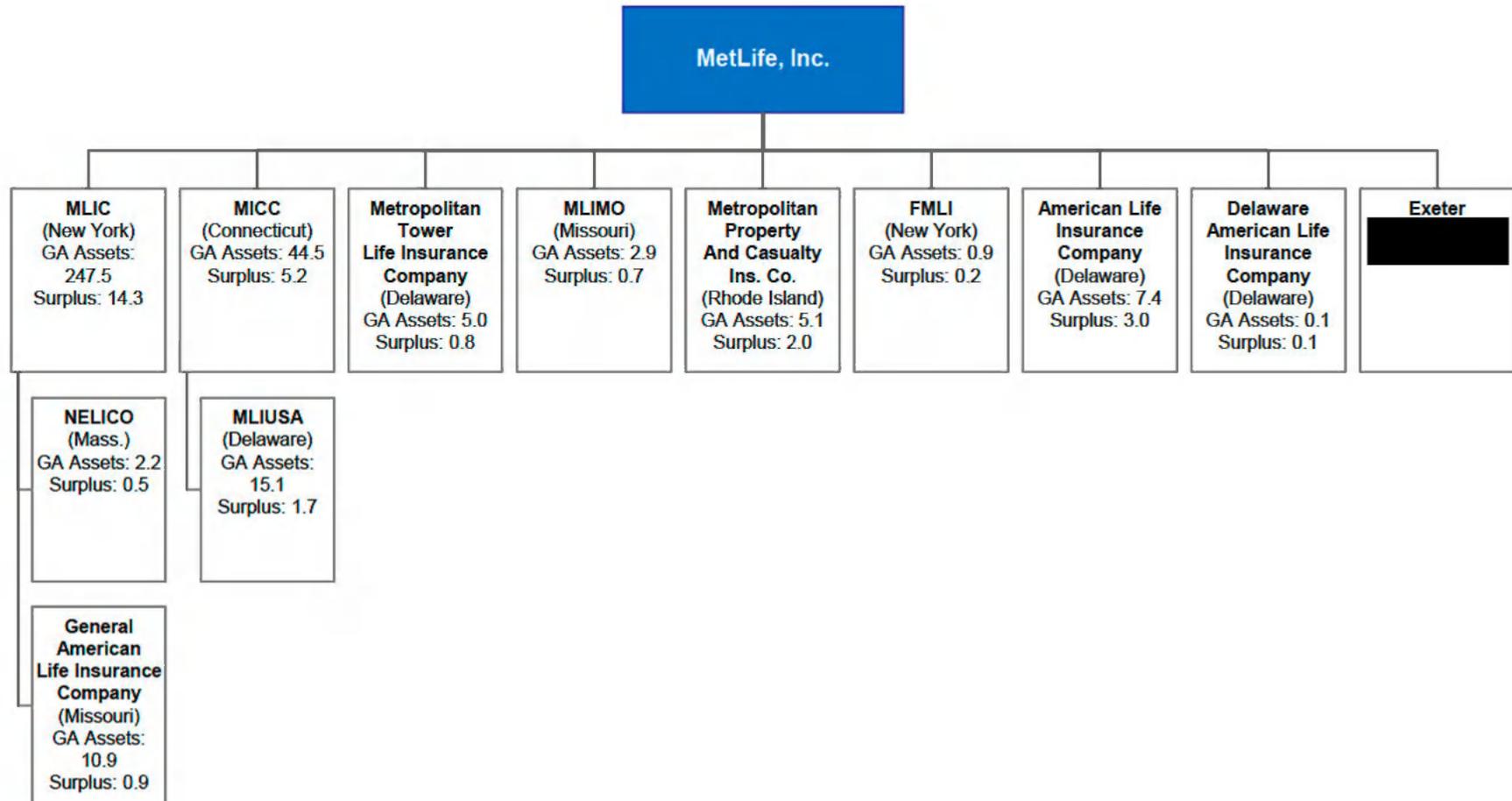
For a 10% decline in equities, 50 bps decline in rates, and 5% rise in equity volatility

Guarantee	Moneyiness	Policyholder age: 55			Policyholder age: 75		
		Equity market	Interest rates	Equity volatility	Equity market	Interest rates	Equity volatility
GMDB	At-the-money	0.8%	0.9%	1.5%	1.9%	0.5%	2.6%
	In-the-money	1.3%	1.4%	1.3%	3.5%	0.6%	1.6%
GMWB	At-the-money	3.1%	1.9%	1.7%	3.3%	0.8%	1.7%
	In-the-money	3.9%	3.2%	0.9%	4.1%	1.7%	0.7%
GMAB	At-the-money	3.4%	0.4%	1.9%	3.3%	0.4%	1.8%
	In-the-money	4.1%	0.7%	1.2%	3.9%	0.7%	1.1%
GMWB (managed volatility fund)	At-the-money	2.8%	1.7%	0.2%	3.0%	0.7%	0.1%
	In-the-money	3.4%	3.0%	0.1%	3.9%	1.6%	0.1%

■ High sensitivity ■ Moderate sensitivity ■ Low sensitivity

## Appendix B – MetLife organizational structure

## Simplified Organization Chart



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# Alternative Measurement Approach for Separate Accounts

May 2, 2013

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## Introduction

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- Discussion today will address solvency frameworks for SIFI-designated insurers
- However, we continue to emphasize that traditional life insurance generally, and MetLife in particular, does not pose systemic risk
- Naming just a handful of companies as SIFIS is not the best approach to regulating potentially systemic activities of insurers
- Because we recognize the possibility that FSOC may designate one or more insurers as non-bank SIFIs, and may not choose to adopt the aggregated activities based approach that we have proposed, we have prepared this outline of an alternative approach to capital measurement for Separate Accounts *(detailed slides provided in full deck)*
- We have worked with Oliver Wyman and Promontory to help us develop and flesh out proposals laid out in this document

## Separate account proposal

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### Facts

- Separate account assets pose no risk – risk is associated with the guarantee
- Nature of guarantee is analogous to a derivative trading book – with less liquidity risk
- Magnitude of risk is dependent on the type of guarantee and differs along a number of dimensions



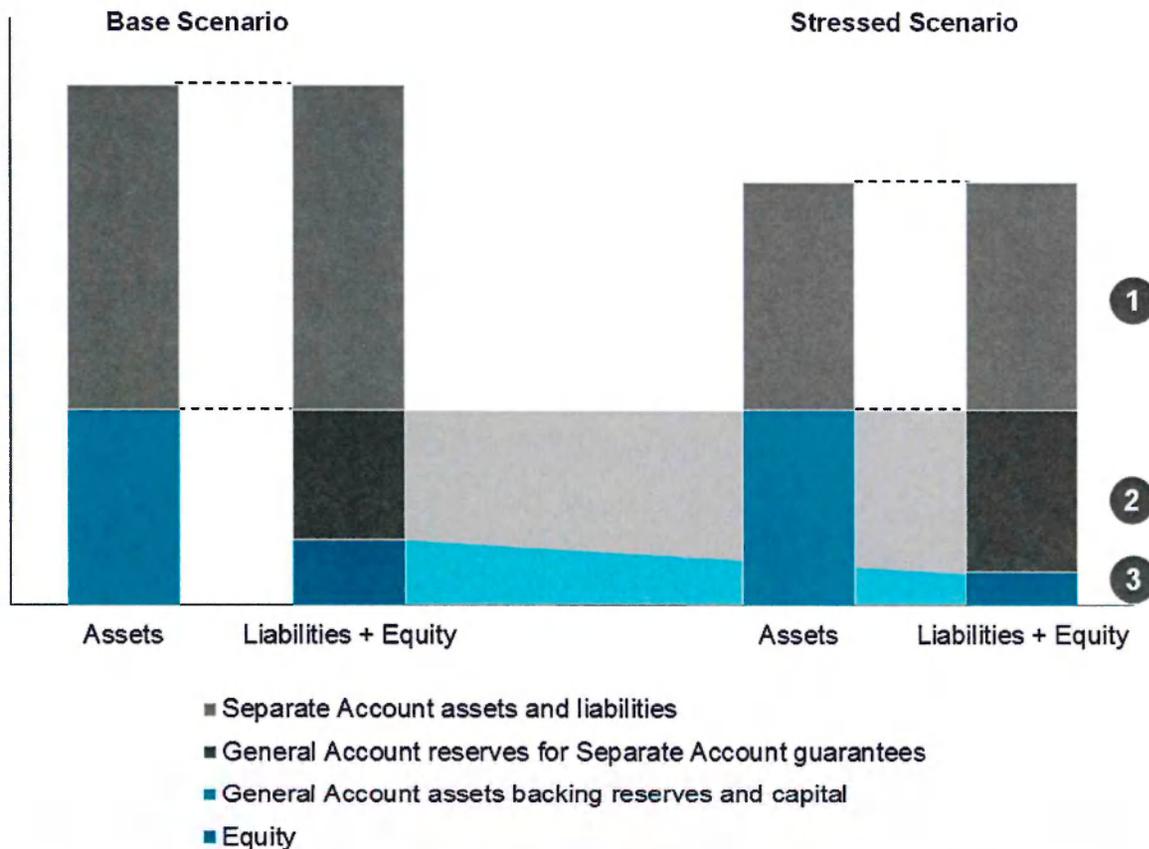
### Implications for regulatory approach

- Proposed rule to look through to assets is flawed
- A VaR approach applied to the guarantee is a sensible alternative – although with some tailoring for insurers
- A factor-based approach would be possible but complex given large number of dimensions which drive the risk profile

## Risk in separate accounts arise from fluctuation in value of the guarantees written on its policies

### Hypothetical insurer balance sheet

Example



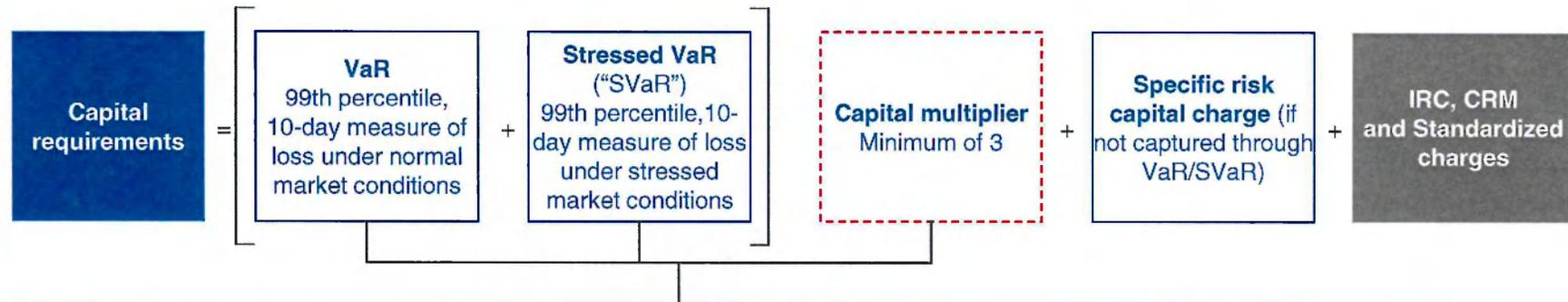
### Comments

- 1 Asset and liability values equal under base and stress cases
- 2 In stress scenario, increase in reserves to support guarantees on separate account policies
- 3 Increase in guarantee reserves reduces equity if not hedged

## Risk from separate account guarantees is analogous to that of bank trading books, but with less liquidity risk

Key characteristics	Trading books		Separate accounts with guarantees
<b>Source of risk exposure</b>	<ul style="list-style-type: none"> <li>Range from simple to complex options</li> </ul>	≈	<ul style="list-style-type: none"> <li>Option-like minimum benefit guarantees</li> </ul>
<b>Risk factors</b>	<ul style="list-style-type: none"> <li>Market risk (interest rates, equity returns, HPA, FX rates, etc.)</li> </ul>	≈	<ul style="list-style-type: none"> <li>Market risk (interest rates, returns of separate account mutual funds)</li> </ul>
<b>Risk management</b>	<ul style="list-style-type: none"> <li>Discretionary hedging</li> </ul>	≈	<ul style="list-style-type: none"> <li>Discretionary hedging</li> <li>Reinsurance</li> </ul>
<b>GAAP valuation</b>	<ul style="list-style-type: none"> <li>Mark-to-market or mark-to-model</li> </ul>	≈	<ul style="list-style-type: none"> <li>Model based approaches – mark-to-model or actuarial stochastic models</li> </ul>
<b>Liquidity</b>	<ul style="list-style-type: none"> <li>Requires significant liquidity due to tradable nature of positions and collateral requirements</li> <li>Trading book losses impact capital and market perception which can lead to further liquidity calls</li> </ul>	≠	<ul style="list-style-type: none"> <li>Requires little liquidity due to               <ul style="list-style-type: none"> <li>– Long-term nature of guarantees (cash outflows are 5–10+ years in the future)</li> <li>– No collateral posting requirements</li> <li>– Inability for policyholder to “call” the guarantees (surrender <b>improves</b> insurer’s capital position and has no liquidity impact; exercise of guarantee has minimal liquidity impact)</li> </ul> </li> </ul>

## The “VaR” banking approach will require significant tailoring and applied to insurers



- The current parameterization of the VaR approach results in at least a six times “multiplier”
- The calibration for separate accounts should be set lower than for a typical trading book because of the lower inherent liquidity risk
  - This can be done through lowering the “multipliers” or changing other parameters
  - We have also explored “factor” based approaches that can be developed further

■ Not relevant for insurer separate account portfolios

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