Comments on the Commission's Proposals

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Agenda

1. Background for the European Commission's Proposals
2. Our Comments on the European Commission's Proposals
3. Our Comments on the Luxembourg Presidency Compromise
4. Conclusion
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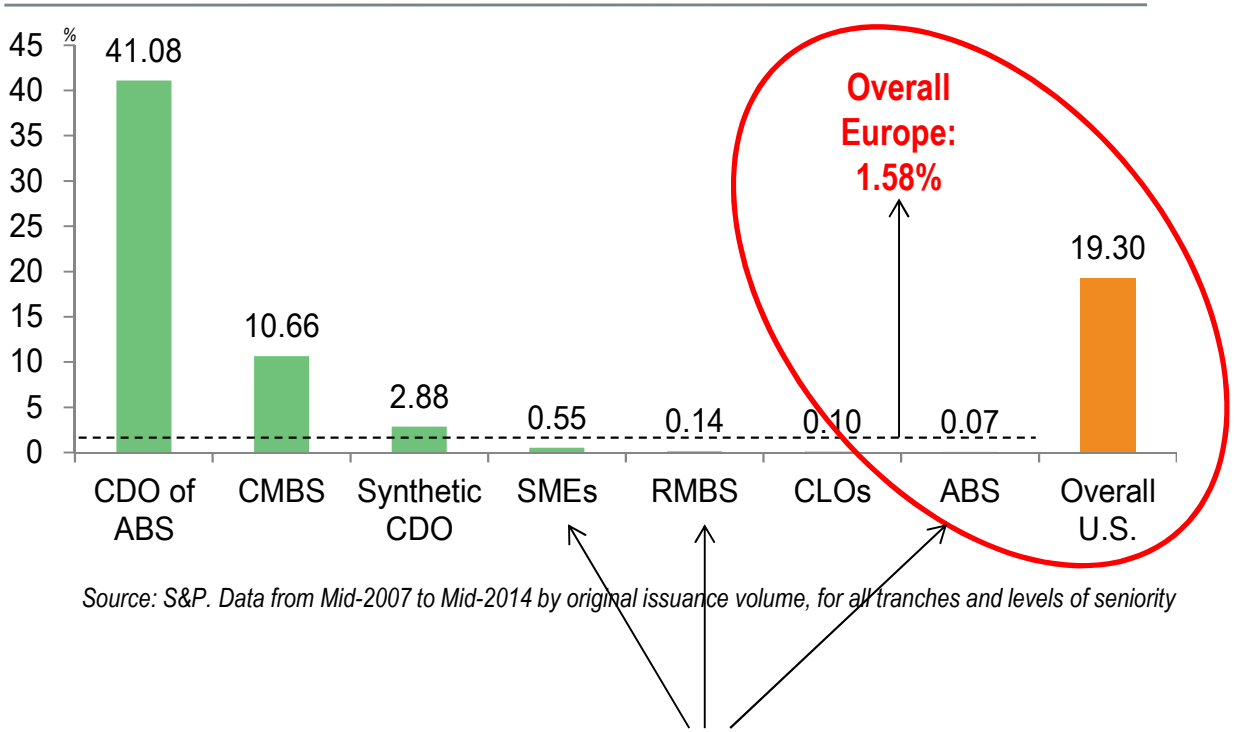
What is needed for the Revival of the European Securitisation Market?

To work properly at a macro level, the market needs the combination of **three ingredients**:

1. a **demand or need for funding/refinancing** which is mostly driven by macro-economic conditions (growth rate… long been subdued in Europe),
2. a **minimum of liquidity** with the intervention or the back-up of a last resort "lender" (largely addressed thanks to the ABS PP, CB PP bearing in mind that too much liquidity support is also impairing the re-start of the market) and
3. a **reasonable regulation** (capital, liquidity, investment policy…) with an holistic view of the market and its stakeholders. Two key ideas should drive the regulatory process:
   i. Regulatory consistency across the regulations applicable to:
      - different market players (investors, originators, banks, MMF and insurers…) and
      - different aspects of the regulation (regulatory capital, liquidity, UCITS…)
   ii. The regulatory framework should be suited for the market it is focusing on, i.e. we must acknowledge that Europe has a transition to adapt to, a different practice and framework and that the market has delivered very different results from the general perception of what securitisation has done. While a form of unicity or reciprocity could be observed, the convergence with Basel can't be a goal in itself…

The European Securitisation Market: Track Record

European Structured Finance cumulative default rate since mid-2007 (S&P)



Source: S&P. Data from Mid-2007 to Mid-2014 by original issuance volume, for all tranches and levels of seniority

Actual performance…

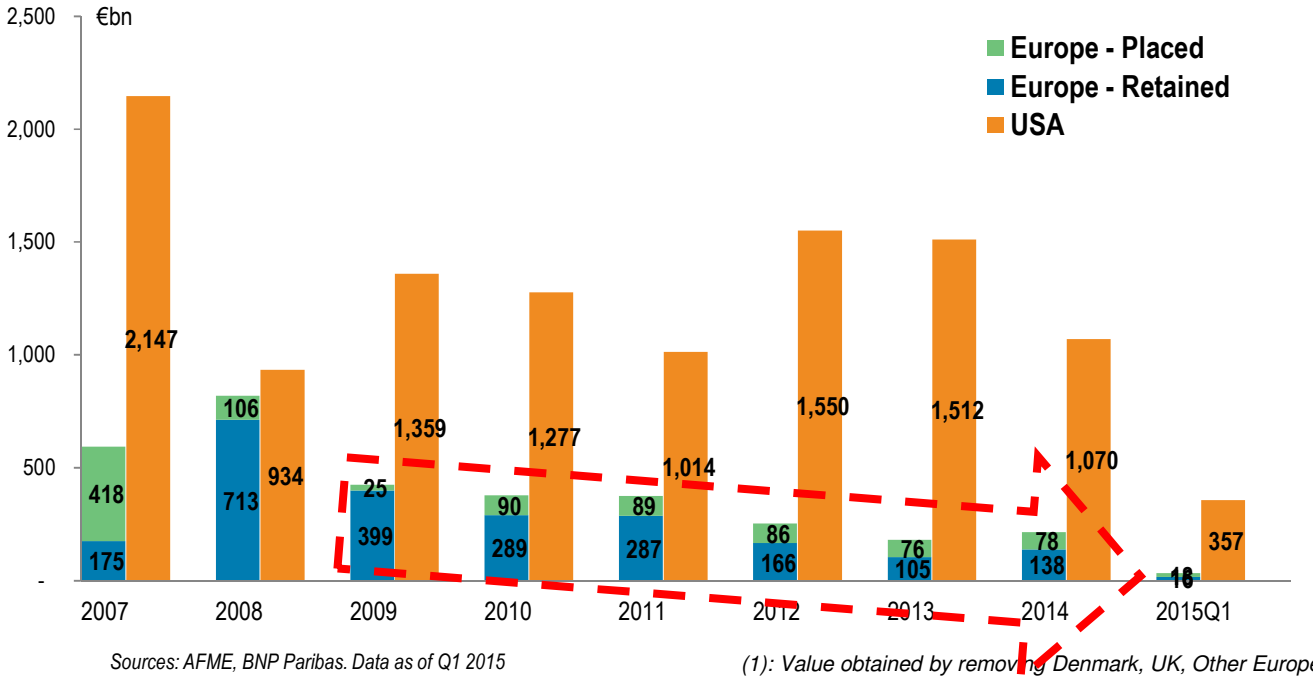
better than assumed and misrepresented!

- Resilient performance of European securitisations
- Overall European Structured Finance cumulative default rate since mid-2007 of 1.6%, far below US value of 19.3%

- RMBS, SMEs and ABS are the 3 main "real economy" assets classes in Europe, **with little or no losses**
  - European assets did not cause the financial crisis…
    - …but are bearing the brunt of the Basel regulation

EU and US: Different Market Structures, Different Regulations

European and US securitisation issuance



Sources: AFME, BNP Paribas. Data as of Q1 2015

(1): Value obtained by removing Denmark, UK, Other Europe and Multinational issuances from the total European issuance (AFME data)

US Securitisation Market:

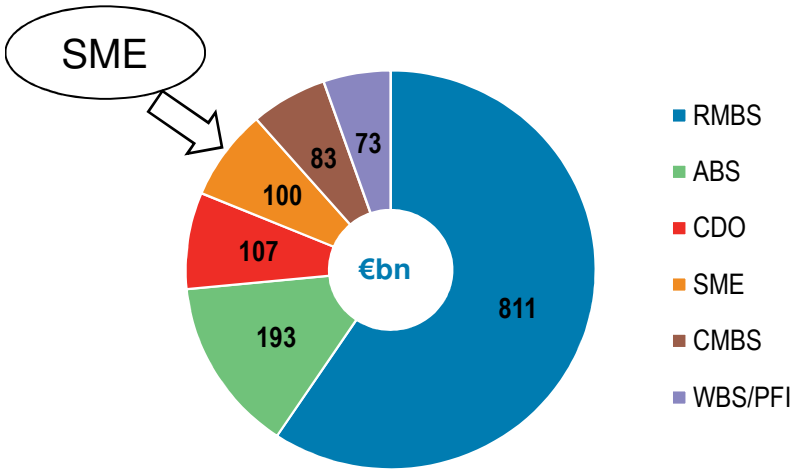
- € 11.3 trn since 2007
- ~80% of underlying assets are covered by government agencies (Fannie Mae, Freddie Mac, Sally Mae, SBA)
- 15% of assets covered by US-specific legislation (not Basel). Already implemented the G20 non-reliance of ratings. US Congress removed ratings as inputs for capital requirements

European Securitisation Market:

- € 3.3 trn since 2007
- No government agencies guaranteeing securitisation backed by "high quality" assets. 100% of the underlying assets impacted by securitisation legislation
- European regulation applies rigorously old ratings-dependent Basel rules which are highly detrimental to entire segments of the economy (SMEs in Europe in particular) and **the presence of ratings in the regulation plays an active role against an effective Capital Markets Union in Europe**

Overview of European Securitisation Outstanding Volumes

Breakdown by asset class

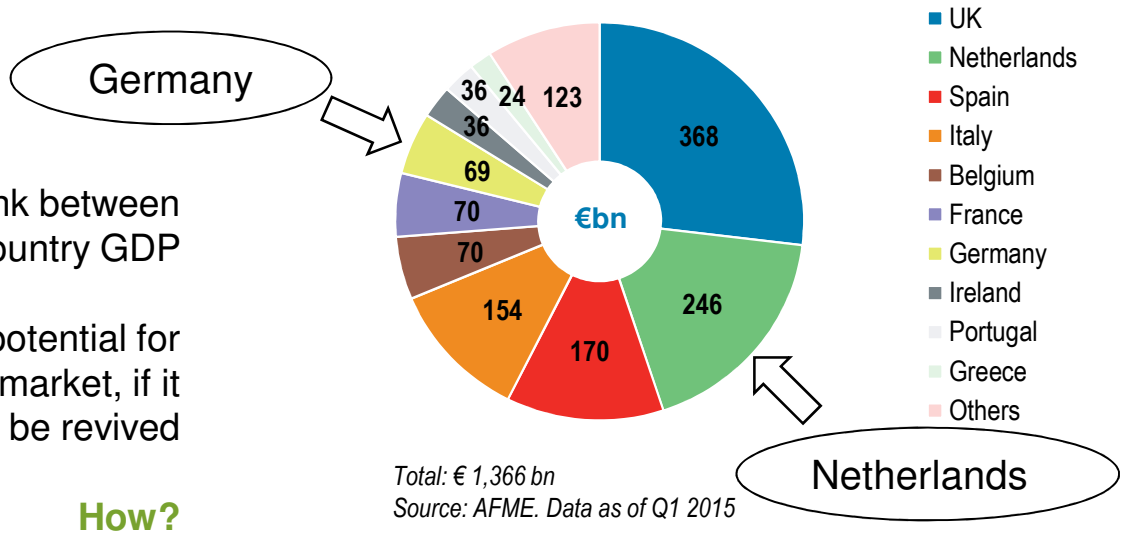


Total: € 1,366 bn
Source: AFME. Data as of Q1 2015

SME was pre-crisis the 2nd most important asset class (now in the 4th position)

Why?

Breakdown by country of assets



Total: € 1,366 bn
Source: AFME. Data as of Q1 2015

There is little link between issuance and country GDP

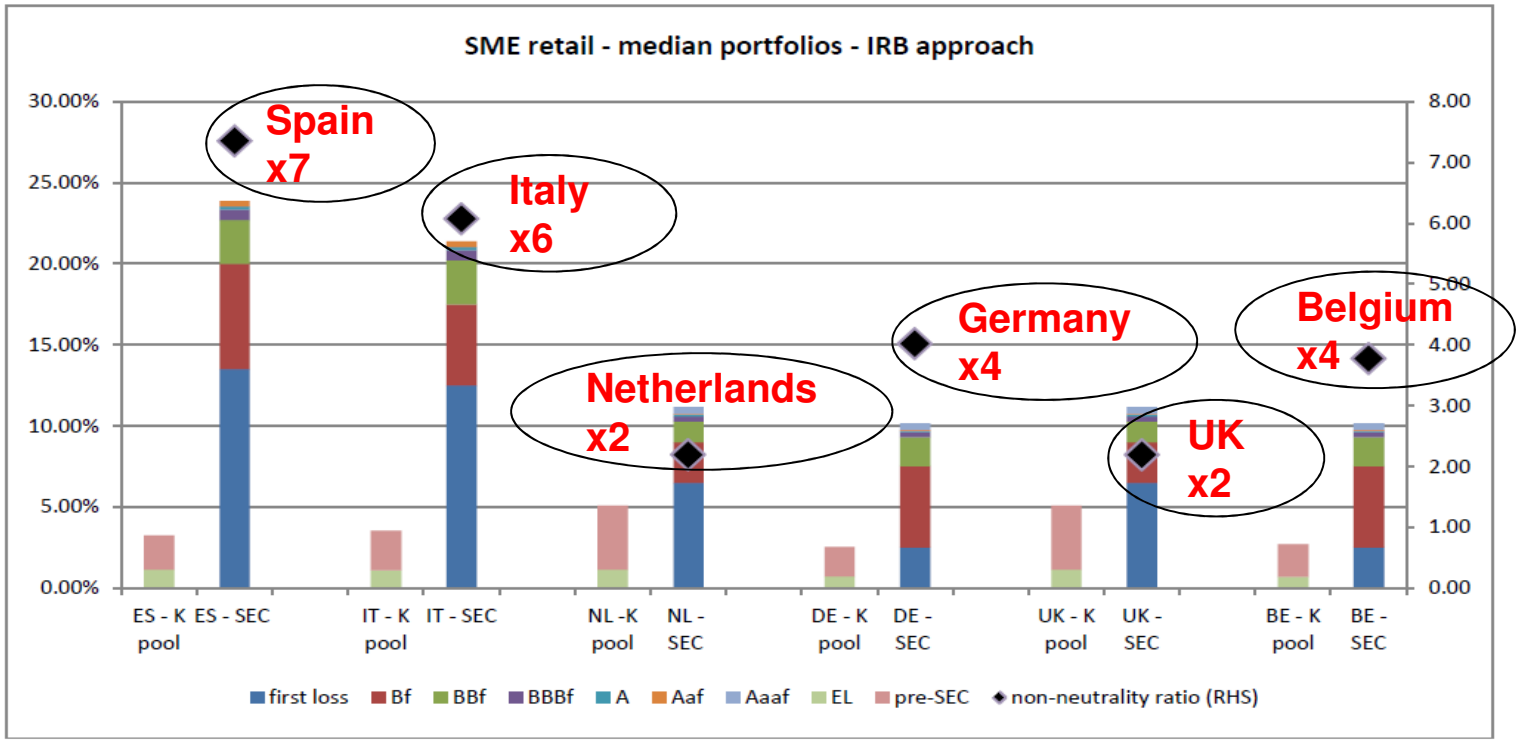
There is untapped potential for the securitisation market, if it can be revived

How?

Why? European Regulators Know about the Problem that Ratings Create…

Very large capital multiplier (after/before securitisation) when the risk of the pool (expressed by its capital requirement) is ignored and replaced with opinions of rating agencies

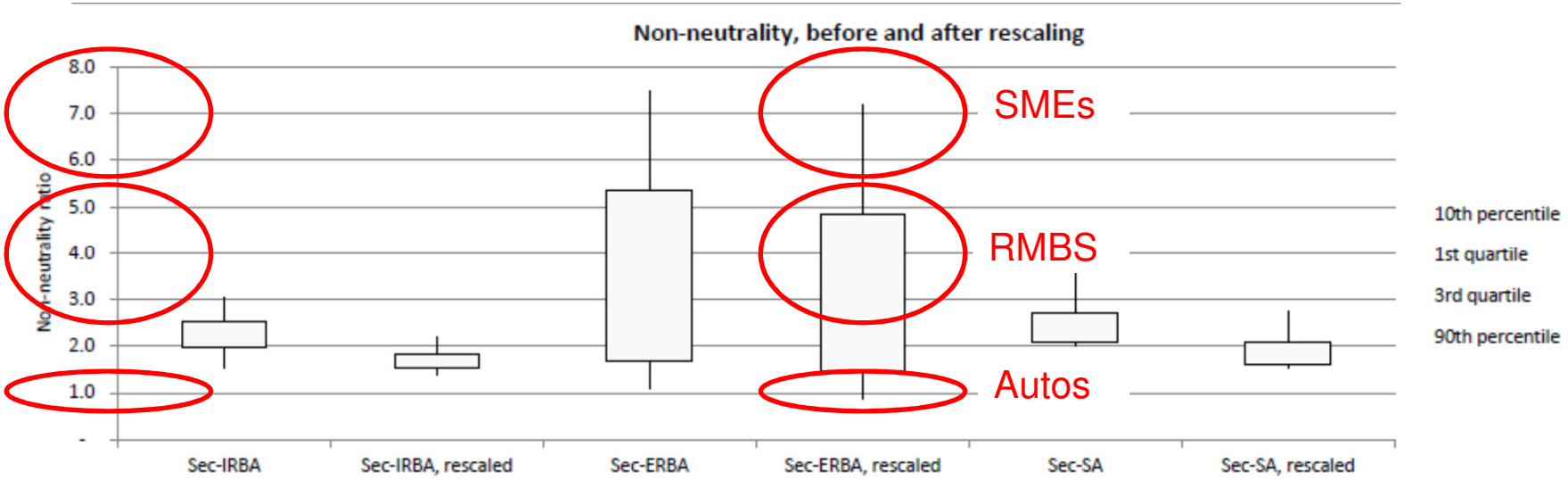
Country breakdown of capital increase in the European banking system when SME retail pools are securitised



Source: EBA Discussion Paper on Simple, Standard and Transparent Securitisations (October 2014)

…but do not have the Political Mandate to Depart from Basel

The Basel securitisation calibration is known for its absence of transparency, but the EBA is at least transparent in its advice to the European Commission on the effect of implementing the future Basel rules, even "rescaled" for Simple, Transparent and Standard securitisation



Non-neutrality ratio is a technical term for Capital Multiplier

Source: EBA technical advice on Qualifying Securitisations, 26th of June 2015
(Asset class highlights in red by BNP Paribas, based on EBA October 2014 data)

Capital Multiplier for Italian retail SME:
x6 with RBA (current rules),
x7 with ERBA (future Basel 2018 rules),
x6 with ERBA, rescaled (EBA recalibration of future Basel rules)

STS: a Basel rescaling exercise… rather than adapting the rules

The EBA calibration exercise was an approx. 30% (ERBA) to 50% (SSFA) rescaling of the problematic Basel 3 rules, rather than a simplification of the rules addressing the technical problems (see Appendix)

Convergence with Basel seemed to be higher priority than designing a dedicated set of rules adapted to the European economy, particularly apparent with the absence of changes to the Basel hierarchy

1 **SEC-IRBA:** Capital surcharge: $p_{STS} = \max(0.3,\ 50\% \times p_{IRBA})$

2 **SEC-ERBA:**

		Senior tranche				Non-senior (thin) tranche			
		1y		5y		1y		5y	
Credit Quality Steps	External Rating (*)	STS	Non-STS	STS	Non-STS	STS	Non-STS	STS	Non-STS
1	AAA	10%	15%	15%	20%	15%	15%	50%	70%
2	AA+	10%	15%	20%	30%	15%	15%	55%	90%
3	AA	15%	25%	25%	40%	20%	30%	75%	120%
4	AA-	20%	30%	30%	45%	25%	40%	90%	140%
5	A+	25%	40%	35%	50%	40%	60%	105%	160%
6	A	35%	50%	45%	65%	55%	80%	120%	180%
7	A-	40%	60%	45%	70%	80%	120%	140%	210%
8	BBB+	55%	75%	65%	90%	120%	170%	185%	260%
9	BBB	65%	90%	75%	105%	155%	220%	220%	310%
10	BBB-	85%	120%	100%	140%	235%	330%	300%	420%
11	BB+	105%	140%	120%	160%	355%	470%	440%	580%
12	BB	120%	160%	135%	180%	470%	620%	580%	760%
13	BB-	150%	200%	170%	225%	570%	750%	650%	860%
14	B+	210%	250%	235%	280%	755%	900%	800%	950%
15	B	260%	310%	285%	340%	880%	1050%	880%	1050%
16	B-	320%	380%	355%	420%	950%	1130%	950%	1130%
17	CCC+	395%	460%	430%	505%	1250%	1250%	1250%	1250%
All other	Below CCC+	1250%	1250%	1250%	1250%	1250%	1250%	1250%	1250%

(*) Assuming mapping is redefined for ERBA

3 **SEC-SA:** Capital surcharge: $p = 50\% \times 100\%$

→ No revival of the European securitisation market was expected with the June 2015 EBA's Basel rescaled rules without changes to the hierarchy

→ It is vital for the European Commission, Member States and European Parliament to tackle head-on this issue

The most problematic feature for Europe of future Basel capital rules: the hierarchy of approaches with reinforcement of the roles of external ratings

Current Basel 2 hierarchy applied in Europe

❶ External Ratings
(RBA or RB-SA)

❷ SFA
- About 10% surcharge,
- IRB originators / sponsors only
- Use of IRB proxies not authorised in Europe

Current hierarchy applied in the US

~~External Ratings~~
~~(RBA or RB-SA)~~

❶ SFA
- About 10% surcharge,
- Major US banks only
- Use of IRB proxies authorised in the US

❷ SEC-SA
- 50% surcharge
- Almost all US banks, bar the major ones

Future Basel 3 hierarchy applied in Europe

❶ SEC-IRBA
- Surcharge between 30% and 150% (penalises high quality pool)
- In practice, IRB originators / sponsors only

❷ SEC-ERBA
- Out-of-control surcharge between 0% and 700%
- In practice, almost all European banks

❸ SEC-SA
- 100% surcharge
- In practice, almost no European banks will reach this stage

This should be in last position, for complex structures that need a rating to calculate capital!

Future Basel 3 hierarchy applied in the US

❶ SEC-IRBA
- Surcharge between 30% and 150% (favours subprime pool)
- In practice, major US banks only

~~SEC-ERBA~~

The US already has, and will have a competitive advantage: thanks to US Congress, they do not apply ERBA

❷ SEC-SA
- In practice, almost all US banks, bar the major ones
- 100% surcharge

(notwithstanding a future US Congress amendment)

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Summary Comments

- Commission's 30th September Capital Markets Action Plan included proposals aimed at reviving the European securitisation market
- Our October paper commented on the proposals and argued that they contained flaws that were likely to vitiate the effort to restore the market
- In particular, (i) the hierarchy of approaches and (ii) obstacles preventing use of the SEC-IRBA meant that the dominant approach would remain the SEC-ERBA
- While the EBA's suggested recalibration of the SEC-IRBA and SEC-SA for STS securitisations was reasonably effective, the SEC-ERBA remained much too conservative especially for southern European and SME-backed transactions

Obstacles preventing use of the SEC-IRBA

- To use the SEC-IRBA, IRB banks would need to have approved credit policies and models in place to calculate K_{IRB} (either on a top-down or bottom-up basis)
- For retail pools, IRB banks have typically approved policies only for the products and countries where they act as originators
- In addition, the information required under such policies is only available to the originator
- So, it is difficult to see how IRB banks can calculate K_{IRB} on securitisation pools when acting as investors, for example, in securitisations originated by another bank in another European country
- Even in the case where IRB banks have a purchased receivables policy approved allowing the use of the top-down approach on pools they have not originated, there is currently very little clarity about the burden of effort that would be required to satisfy the requirements specified in CRR Article 184 under Chapter 3
- Given these major obstacles, it seems unlikely, without further changes, that the SEC-IRBA will be accessible to most European banks and that the SEC-ERBA would remain the dominant approach

Use of the SEC-IRBA: What Should Be Done?

To broaden the use of the SEC-IRBA in Europe, two steps could be taken:

1. Banks could be permitted to employ risk parameters supplied by other IRB banks acting as originators, so long as those IRB banks satisfied the common IRB standards stipulated in the CRR

    - This might be feasible thanks to the regulatory PD/LGD data posted in the European Data Warehouse (EDW) by originating banks

    - This would allow investors to have access to a minimum of 5 years (for retail exposures) to 7 years (for non-retail exposures) of performance data that may allow IRB banks to check the calculation of the IRB risk parameters

2. European regulators could allow the general use of the top-down approach as a way to derive K_{IRB} for securitisation pools

    - If regulators wish to expand the use of the purchased receivables approach, they must provide explicit assurance that, in this application, banks may dispense with most of the conditions of use of the approach described in Article 184

    - Such explicit assurances could take the form of a new paragraph in Article 255 of the Commission's proposals together with new technical standards from the EBA

The Hierarchy

- If the SEC-IRBA remains largely inaccessible to European banks acting as securitisation investors, the conservatism of the SEC-ERBA can only be mitigated by altering the hierarchy of approaches

- The 30th September proposals contained the striking introduction of a derogation in Article 254, paragraph 3, permitting use of the SEC-SA above the SEC-ERBA if all the positions a bank holds in a securitisation generate a capital requirement under SEC-ERBA that is "not commensurate to the credit risk embedded in the exposures underlying the securitisation"

- The introduction of this provision is an important step in that it demonstrates that policy-makers take seriously some of the flaws in agency ratings when applied to European pools, notably sovereign rating caps and conservatism when applied to particular asset classes such as SME loans

- But the terms "not commensurate" were not defined and the "burden of proof" to demonstrate this remained with the banks

- To make the provision effective, we argued that a clarification of what is meant by "not commensurate" was crucial

Our Suggestion on the Hierarchy

- We argued for a straightforward reversal of the positions of the SEC-ERBA and the SEC-SA in the hierarchy
- The SEC-SA is risk sensitive because the attachment and detachment points adjust as defaults accumulate in the pool and is reasonably consistent with the SEC-IRBA
- Raising the SEC-SA in the hierarchy would, hence, make the capital treatment of IRB banks more coherent
- This approach would restore the level playing field in Europe between IRB and SA banks which would potentially have market liquidity and efficiency benefits
- It would also partly restore a level playing field between US banks using the SEC-IRBA and European banks using the SEC-SA

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Will New Rules Achieve Intended Goals?

1. Findings from new/old rules impact study

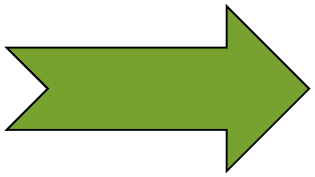
2. Will the new rules enable revival of the public securitisation market for funding securitisation pools?
   - More public transactions instead of retained ones?
   - More investors?
   - Better funding spreads?

3. Will the new rules enable banks to free capital to lend more?
   - More SRT with new rules?
   - More asset sales financed through securitisation with new rules?

Senior Tranche Risk Weight Comparisons

Average risk weights for 550 senior tranches in different asset class based on different risk weight calculation approaches

		SENIOR TRANCHES							
		RBA	SFA	BCBS 303 SEC-IRBA	BCBS 303 SEC-ERBA	BCBS 303 SEC-SA	STS SEC-IRBA	STS SEC-ERBA	STS SEC-SA
Average European countries where AAA is achievable	A	10%	7%	15%	28%	16%	10%	20%	10%
Average European countries where AAA not achievable (excluding Greece and Ireland)	B	33%	7%	15%	70%	23%	10%	48%	11%
Average Ireland		597%	7%	20%	206%	15%	10%	164%	10%
Average Greece		1250%	7%	17%	448%	15%	10%	380%	10%
Ratio B/A		3.4	1.0	1.0	2.5	1.4	1.0	2.4	1.1

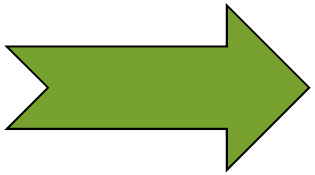


- General increase under new rules more pronounced under the ratings-based approach especially for countries where AAA is not achievable
- Ratings overestimating senior tranche risk especially in peripherals

Mezzanine Tranche Risk Weight Comparisons

Average risk weights for 944 mezzanine tranches in different asset class based on different risk weight calculation approaches

		MEZZANINE TRANCHES							
		RBA	SFA	BCBS 303 SEC-IRBA	BCBS 303 SEC-ERBA	BCBS 303 SEC-SA	STS SEC-IRBA	STS SEC-ERBA	STS SEC-SA
Average European countries where AAA is achievable	A	200%	47%	147%	278%	208%	92%	236%	140%
Average European countries where AAA not achievable (excluding Greece and Ireland)	B	310%	63%	185%	376%	409%	126%	308%	298%
Average Ireland		1250%	192%	737%	1140%	83%	505%	1081%	24%
Average Greece		1250%	78%	285%	942%	301%	179%	860%	201%
Ratio B/A		1.6	1.3	1.3	1.4	2.0	1.4	1.3	2.1



- The increase compared to current framework is more pronounced for the formula-based approaches than for the rating-based one
- The STS SEC-ERBA calibration broadly maintains capital requirements at the same level as the current RBA

Junior Tranches Risk Weight Comparisons

Average risk weights for 278 junior tranches in different asset class based on different risk weight calculation approaches

		JUNIOR TRANCHES							
		RBA	SFA	BCBS 303 SEC-IRBA	BCBS 303 SEC-ERBA	BCBS 303 SEC-SA	STS SEC-IRBA	STS SEC-ERBA	STS SEC-SA
Average European countries where AAA is achievable	A	264%	407%	602%	396%	623%	524%	339%	546%
Average European countries where AAA not achievable (excluding Greece and Ireland)	B	872%	379%	569%	795%	801%	486%	736%	714%
Average Ireland		1250%	604%	1051%	1247%	228%	924%	1247%	105%
Average Greece		1250%	489%	793%	1124%	729%	662%	1052%	549%
Ratio B/A		3.3	0.9	0.9	2.0	1.3	0.9	2.2	1.3

The increase compared to current framework is more pronounced for the formula-based approaches

Hierarchy Inversion Under the New Proposals

- **Senior**: Flexibility to use the lower of SEC-ERBA and SEC-SA (even with a margin of 25%) could lead to a systematic inversion of the hierarchy with SEC SA being used instead of SEC-ERBA. The STS designation results in a massive 50% capital reduction for senior tranches
- **Mezzanine**: the inversion of the hierarchy would be more on a case by case basis
- **Junior**: the SEC-ERBA would remain the main approach as it systematically results in lower Risk Weights than the SEC-SA

	SEN			
	BCBS 303 SEC-ERBA	BCBS 303 SEC-SA	STS SEC-ERBA	STS SEC-SA
Average Risk Weights	53%	20%	32%	11%
Average difference	165%		191%	

	MEZ			
	BCBS 303 SEC-ERBA	BCBS 303 SEC-SA	STS SEC-ERBA	STS SEC-SA
Average Risk Weights	332%	259%	284%	244%
Average difference	28%		16%	

	JUN			
	BCBS 303 SEC-ERBA	BCBS 303 SEC-SA	STS SEC-ERBA	STS SEC-SA
Average Risk Weights	589%	867%	506%	788%
Average difference	-32%		-36%	

Luxembourg Compromise on IRBA Use

Extract from Compromise

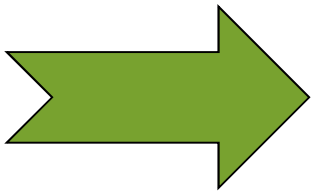
- *EBA shall develop draft regulatory standards to specify in greater detail the conditions to allow institutions to calculate K_{IRB} for the underlying pools of securitisation in accordance with paragraph 4, in particular with regard to:*
  - *a) internal credit policy and models for calculating KIRB for securitisations;*
  - *b) use of different risk factors on the underlying pool to estimate PD and LGD; and*
  - *c) due diligence requirements to monitor the actions and policies of receivables sellers.*

- *EBA shall submit those draft regulatory standards to the Commission by [one year] after entry into force of this Regulation*

- *Power is delegated to the Commission to adopt the regulatory technical standards referred to this paragraph in accordance with the procedure laid down in Articles 10 to 14 of Regulation (EU) No 1095/2010*

Revival of Public Placement for Funding Pools?

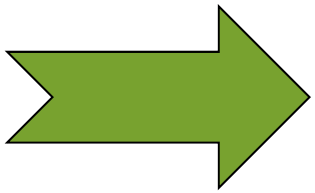
Bank type	Current Capital Rules	Future Capital Rules	Comments
IRB	• Cheaper funding options through Covered Bonds and ECB • Securitisation is currently a marginal tool	• No improvement for issuers • Higher capital for bank investors	• Will IRB banks be allowed to use SEC-IRBA as investors?
STANDARD	• Cheaper funding options and retained deals less costly in capital than placed deals	• Overall cap is beneficial for issuers. • Higher capital would be less detrimental if bank investors can use formula approach	• Derogation to use the SEC-SA for investors instead of SEC-ERBA is welcome but STS condition too restrictive



Crucial that bank investors can use formula approach SEC-IRBA or SEC-SA instead of SEC-ERBA

Freeing up Capital through SRT

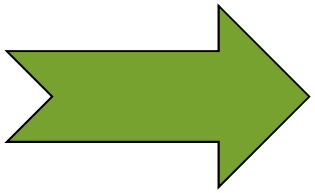
Bank type	Current SRT Rules	Future SRT Rules	Comments
IRB	• SFA • ≈ 20 transactions p.a. in Europe	• SEC-IRBA penalising as more capital surcharge makes capital relief more costly to achieve	• Change of formula negative • Harmonisation positive (Article 254 2c)
STANDARD	• RBA approach • No transaction done in Europe	• ERBA approach • No transaction done in Europe except if SEC-SA used for non rated tranches	• Will regulators allow deals with no ratings? • Impact of revision of SA RW?



SRT will remain marginal tool

Freeing up Capital trough Asset Sales?

Warehouse Bank type	Current Capital Rules	Future Capital Rules	Comments
European IRB	• RBA • Few banks allowed to use SFA for non-originated assets (need to have IRB purchase receivables policy approved)	• ERBA • Potential widening usage of SEC-IRBA not happening before 2017 at best	• Change of formula negative • Widening use of SEC-IRBA positive (Article 255 9)
US IRB	• SFA on non-originated assets using the proxy approach	• SEC-IRBA not implemented before at least 2018	• Massive competitive advantage for US banks



European bank deleveraging financed by US banks in the absence of a level playing field

Key Issues and Solutions (1/2)

- The requirement of **1250% RW up to Pool Capital** appears conservative, when in fact it is a source of regulatory capital arbitrage opportunity
  - An Adjustment Factor ought to be introduced in the formula (see Appendix)

- **Tranche Maturity**, as currently defined and used in SEC-IRBA and SEC-ERBA is not a relevant risk factor for tranche credit loss. Pool Weighted Average Life is. Furthermore, tranche maturity has anti-European features. SEC-SA does not contain this incorrect parameter
  - Tranche maturity should be replaced by Pool Weighted Average Life in the framework

- SEC-IRBA contains a **Reward for Poor Asset Performance**: the coefficient "C" in the p-formula is negative
  - SEC-SA does not have this effect. The STS SEC-IRBA should be simplified to remove this effect

- **Conditions of use of the formula SEC-IRBA should be extended to SEC-SA**
  - The reasons in article 258, paragraph 2, are also valid for limiting the use of SEC-SA. (This is another reason why SEC-SA should be above SEC-ERBA, with SEC-ERBA as fall-back position, instead of the 1250% RW penalty)

Key Issues and Solutions (2/2)

- **Securitisation IRB is very restricted in Europe, and will remain so with SEC-IRBA.** IRB European banks are at a competitive disadvantage compared to US banks
  - SEC-IRBA needs to be allowed for IRB banks on non-originated pools with an adapted framework for banks acting as sponsors or investors

- **Derogation to use the SEC-SA instead of SEC-ERBA is too restrictive** with the STS requirement on senior tranches
  - Need to broaden this derogation to non-STS tranches that are "senior enough". This can be defined as tranches with a risk weight from the SEC-SA not exceeding a threshold (e.g. 25% as proposed in 254 -3) and also an attachment point at origination being at least a certain multiple of the pool capital (e.g. 3 or 4 times)

- **Transparency rule for all transactions** (Article 5): disclosing transaction documents at pricing stage is not in line with current market practises
  - Should be brought back to closing date

- **Sanctions for getting STS wrong** (Articles 16 to 19) are not only on the legal entity but also on individuals with fines up to Euro 5m and criminal punishments
  - Sanctions should only be triggered in cases of "bad faith" failures

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Conclusion

- STS is perceived by regulators as the key to revive the market. However:
  - Use of STS remains highly uncertain given complexity of implementation and fear of potential sanctions
  - The European securitisation market as a whole will see a general increase in capital requirements compared to the current framework
  - Capital benefit for STS in itself is not sufficient to revive the market

- In order to achieve the stated goal of reviving the market what is needed is not only STS but also a more general use of formulas for capital:
  - Wider usage of the SEC-IRBA for IRB banks
  - Wider usage of the SEC-SA for SA banks

- In order to achieve the stated goal of freeing capital to enable more lending, what is needed is:
  - Harmonisation and greater flexibility in SRT rules
  - Allowing standard banks to use the SEC-SA for SRT

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Appendix

1. Explanations of the Issues with the Basel III approaches
    - SEC-IRBA and SEC-SA explained
    - SSFA explained
    - SEC-ERBA explained
2. After Basel III: building capital rules that make sense

SEC-IRBA Explained

❶ $UL_{Pool} = f_{IRB}(PD, LGD, \rho_A, M_A)$

Article 255 (3) (b):
This item is the Unexpected Losses (UL) of the pool, i.e. the **IRB pool capital before securitisation**. For IRB banks, this value depends on the characteristics of the assets in the pool which are: Probability of Default (PD), Loss Given Default (LGD), their systemic asset correlation (ρ_A) and Asset Maturity (M_A). ✓

❷ $K_{IRB} = UL_{Pool} + EL_{Pool}$

Article 255 (3) (a):
This item is the Expected Losses (EL) of the pool, including defaulted exposures. The addition of Expected Losses transform the pool capital from Unexpected Loss to Marginal Value at Risk (MVaR). This is an important step to allocate capital to securitisation tranches. The inclusion of defaulted exposures is a welcome clarification to harmonise practices. ✓

❸ $p_{IRBA} = A + B \times \left(\frac{1}{N}\right) + C \times K_{IRB} + D \times LGD + E \times M_T$

Article 257 and Article 259 (1):
The badly calibrated anti-European component
1) The Tranche Maturity (M_T) is a notion used in trading books, not banking books for which this regulation is designed. The risk driver is Asset Maturity (M_A) . The "switch" from M_A to M_T is a flawed financial concept. ✗
2) The definition of Tranche Maturity in Article 257 is Anti-European, as it generates long maturities based on the length of the legal process in a given jurisdiction. It favours the UK. It is damaging for Italy and Portugal, where M_T will almost always be at 5 years. ✗
3) The difference in calibration of E in Article 259 (1) between the Wholesale framework (7% surcharge per year) and the Retail framework (27% surcharge per year) cannot be explained. For example, SME retail will be heavily penalised compared to SME wholesale. ✗

Article 259 (1):
The Poor Performance reward component
The coefficient C was made by the Basel RSW to be negative: this means that a pool of poor credit quality (such as subprime) with a higher value of K_{IRB} will have a lower capital surcharge p_{IRBA} than a good credit quality pool. This is not prudent. ✗

Article 259 (1):
The coefficient D is positive, and increases the surcharge as the average loss given default of the pool increases. This is how it should be. ✓

Article 259 (1):
The coefficient B is positive. It increases the surcharge as the pool granularity decreases. ✓

Article 259 (1):
The coefficient A is an adjustment so that the Basel RSW can "target" an average value of p_{IRBA}, once B, C, D and E have been taken into account. ✓

❹ $p = \max(p_{floor};\ \beta_{STS} \times p_{IRBA})$

Article 259(1) for Non-STS and Article 260 for STS:
For STS, the coefficient β_{STS} is set explicitly at 0.5. Its effect is to divide by 2 the surcharge calculated by p_{IRBA}. For Non-STS, this value is implicitly equal to 1.0. This is how it should be, with STS capital surcharges to be less than Non-STS ones. ✓

Article 259 (1):
Because of the effect of the negative B coefficient for many poor credit quality pools, or the effect of the E coefficient for very short term securitisations with creditor friendly jurisdictions, the p_{IRBA} can be very low. So a p_{floor} of 0.3 has been set by the Basel RSW, to have a minimum capital surcharge. ✓

SEC-SA Explained

❶

$K_{SA} = RW_{SA} \times 8\%$

Article 255 (6):
This item is the **SA pool capital before securitisation**, before any effect of provisions and other adjustments.

✓

❷

$K_A = (1 - W) \times K_A + 625\% \times 8\% \times W$

Article 263 (2):
The pool capital is adjusted with the proportion W of assets in default. It is a proxy for provisions and aligns K_A closer to K_{IRB}. The defaulted assets are risk weighted at 625%. Multiplied by the capital ratio of 8%, this gives the coefficient 0.5. This step increases the risk sensitivity of SEC-SA.

✓

❸

Article 263 (2):
An additional penalty is added for those situations where a subpool does not allow the determination of W, with such subpool risk weighted at 1250%. Potentially performing assets are risk weighted at 1250%, double the risk weight of defaulted assets at 625%. This is not logical.

✗

$$K_A = \left(\frac{EAD_{Subpool\ 1\ where\ W\ known}}{EAD\ Total} \times K_A{}^{Subpool\ 1\ where\ W\ known} \right) + 1250\% \times 8\% \times \frac{EAD_{Subpool\ 2\ where\ W\ unknown}}{EAD\ Total}$$

❹

$p = 0.3$. For information, this corresponds to the p-floor in SEC-IRBA

$p = 0.5$

Article 264 (STS):
This is the value for STS securitisations. Having p as a constant is both Simple and Transparent. It is fit for purpose for a framework that is itself Simple, Transparent and Standardised (STS).
Numerically, the capital surcharge of 50% is greater that p-floor of 30% in IRB. The value might be still high but it is logical.

✓

$p = 1.0$

Article 263 (Non-STS):
This is the value for Non-STS securitisations. The value is higher than for STS, as it should be. But the calibration is very high, as the capital surcharge is 100%. (By comparison, the US version of SEC-SA currently in force and voted by the US Congress fixed it at 50% ($p = 0.5$). It is not sure that the US Congress will accept the proposed calibration from the Basel RSW without exercising their oversight).

✗

$p = 1.5$

Article 269 (Resecuritisation):
This is the value for Resecuritisation. It is more than for Non-STS securitisation, as it should be.

(However, 1.5 is very close to the high credit quality non-STS retail mortgages securitisations under SEC-IRBA. This is due to the combined impact of the C coefficient and E coefficient in p_{IRBA}. This shows the problem with the design of SEC-IRBA, not that the capital surcharge is too high for resecuritisation).

✓

Article 259 (1):
Because of the effect of the negative B coefficient for many poor credit quality pools, or the effect of the E coefficient for very short term securitisations with creditor friendly jurisdictions, the p_{IRBA} can be very low. So a p_{floor} of 0.3 has been set by the Basel RSW, to have a minimum capital surcharge.

✓

❺ SSFA Explained (for SEC-IRBA and SEC-SA)

Article 259 (SEC-IRBA) and Article 263 (SEC-SA) share the **same** formula of capital allocation the SSFA (Simplified Supervisory Formula Approach). It allocates capital with the exponential function e. The only difference is the input the pool capital, which is $K_{Pool} = K_{IRB}$ for SEC-IRBA and $K_{Pool} = K_A$ for SEC-SA.

Article 256 defines the Attachment point A and Detachment point D of a given tranche T. They are adjusted in the SSFA formula to give the parameters Lower point l and Upper point u of the tranche to be used in the formula.

$$u = D - 100\% \times K_{Pool}$$

$$l = \max(A - 100\% \times K_{Pool}; 0)$$

$$K_{SSFA} = \frac{e^{a \cdot u} - e^{a \cdot l}}{a(u - l)}$$ ✓

$$a = -\frac{1}{p \times K_{Pool}}$$

The variable a is the amount of capital allocated with the exponential function e. ✓

The SSFA inherits the problems of the existing SFA.

Requiring 1250% RW up to 1 times K_{Pool} gives the appearance of conservatism, when in fact it is the primary source of regulatory arbitrage in capital relief transactions, as it puts the maximum amount of risk weight of 1250% in a area with medium risk around K_{Pool}. ✘

(The solution would have been to replace this implicit 100% by an adjustment factor AF less than 100% in exchange of a better allocation via the capital surcharge)

❻ $RW_T = 1250\% \times 1$ ✓
$when\ D \leq 100\% \times K_{Pool}$

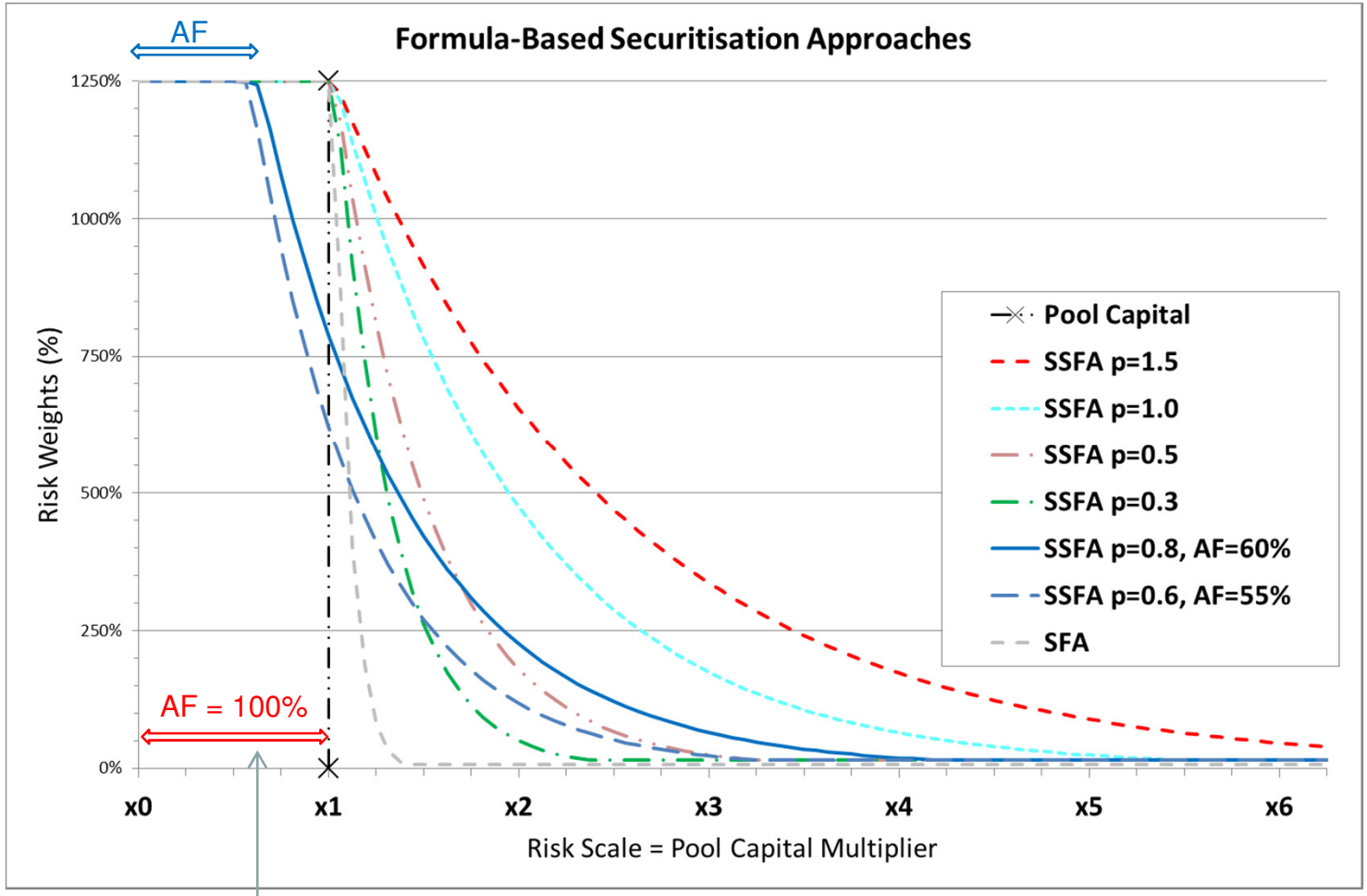
❼ $RW_T = 1250\% \times \left[\left(\frac{100\% \times K_{Pool} - A}{D - A}\right) \times 1\right] + \left[\left(\frac{D - 100\% \times K_{Pool}}{D - A}\right) \times K_{SSFA}(K_{Pool})\right]$ ✓
$when\ A \leq 100\% \times K_{Pool} \leq D$

❽ $RW_T = 1250\% \times K_{SSFA}(K_{Pool})$ ✓
$when\ A \geq 100\% \times K_{Pool}$

❾ RW_T subject to a RW floor of 15% (10% for STS) ✓

Comparison of Formula-Based Approaches

The SSFA should have an adjustment factor that it not equal to 100%. An appropriate value is 55% in IRB, 60% in SA



The SSFA inherits the problems of the existing SFA, by having an implicit adjustment factor AF of 100% in the formula.

SEC-ERBA Explained

Article 261 (SEC-ERBA) defines the rules to follow to obtain a risk weight of a tranche RW_T.

❶

$M_T = 1 + (M_L - 1) \times 80\%$

Min 1 year, Max 5 years

Article 257:

An anti-European component

1) The Tranche Maturity (M_T) is a notion used in trading books, not banking books for which this regulation is designed. The risk driver is Asset Maturity (M_A) . The "switch" from M_A to M_T is a flawed financial concept.
2) The definition of Tranche Maturity in Article 257 is Anti-European, as it generates long maturities based on the length of the legal process in a given jurisdiction, embedded in the final legal maturity M_L. It favours the UK. It is damaging for Italy and Portugal, where M_T will almost always be at 5 years.

❷

$$RW_{Adj} = \frac{(5-M_T)}{4} \times RW_{1Y} + \frac{(M_T-1)}{4} \times RW_{5Y}$$

Article 261 and 262

The 1 year Risk Weigh RW_{1Y} and the 5 year Risk Weight RW_{5Y} are provided based on seniority and STS status and ratings agencies external rating. The external rating is mapped to a Credit Quality Step.

❸

$$A = \left(\frac{EAD_{Pool} - EAD_{All\ tranches\ ranking\ senior\ and\ pari-passu)}}{EAD_{Pool}}\right)$$

$$D = \left(\frac{EAD_{Pool} - EAD_{All\ tranches\ ranking\ senior)}}{EAD_{Pool}}\right)$$

Min 0.0, Max 1.0

Article 256

This defines the Attachment point A and Detachment point D of a given tranche T.

❹

$RW_T = RW_{Adj} \times [1 - min(D - A;\ 50\%)]$

For non-senior tranches

Article 261

This way of taking into account tranche thickness ($Thickness = D - A$) is clumsy. Furthermore thickness is not taken into account for senior tranches.

The SSFA, in contrast takes the thickness properly into account, for both non-senior and senior tranches. This is another reason to have SEC-SA as a priority over SEC-ERBA.

❺ RW_T subject to a RW floor of 15% for non−senior

SEC-ERBA Explained: Major Calibration Issues (but some progress on rating cliff)

	Senior tranche		Non-senior (thin) tranche	
External Rating (*)	1y	5y	1y	5y
AAA	15%	20%	15%	70%
AA+	15%	30%	15%	90%
AA	25%	40%	30%	120%
AA-	30%	45%	40%	140%
A+	40%	50%	60%	160%
A	50%	65%	80%	180%
A-	60%	70%	120%	210%
BBB+	75%	90%	170%	260%
BBB	90%	105%	220%	310%
BBB-	120%	140%	330%	420%
BB+	140%	160%	470%	580%
BB	160%	180%	620%	760%
BB-	200%	225%	750%	860%
B+	250%	280%	900%	950%
B	310%	340%	1050%	1050%
B-	380%	420%	1130%	1130%
CCC+	460%	505%	1250%	1250%
Below CCC+	1250%	1250%	1250%	1250%

SEC-ERBA: Securitisation External Ratings Based Approach

Using **a risk weight mapping** based on:

- External rating agencies tranche rating
- Seniority and tranche maturity
- Tranche thickness (for non-senior tranches)

SEC-ERBA calibration:
Clearly an issue for tranches with high ratings

- For most asset classes, at those rating levels SEC-IRBA or SEC-SA produces lower risk weights

SEC-ERBA conceptual improvement:
the RBA rating cliff has been addressed

- The current ratings-based approaches (RBA for IRB banks and RB(SA) for SA banks) required 1250% RW up to BB- for seniors and mezzanines
- This has been removed and more risk-sensitivity introduced

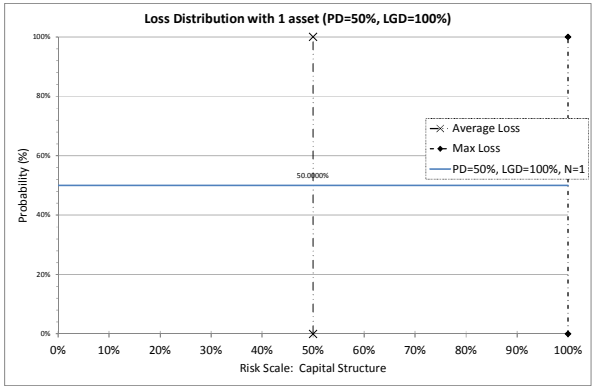
No such conceptual improvements has been implemented on the formula based methods SEC-IRBA and SEC-SA for mezzanine tranches, with 1250% RW still required up to x1 pool capital. (This could have been addressed with an Adjustment Factor AF)

Appendix

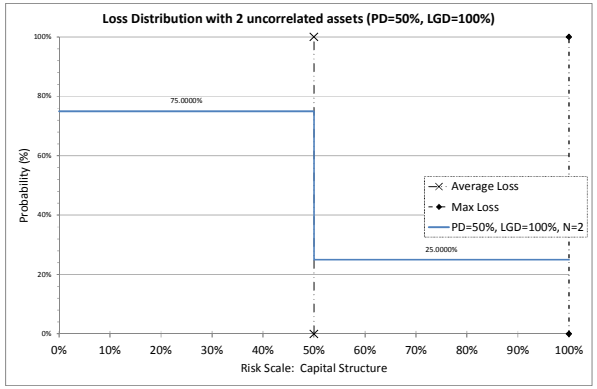
1. Issues with the Basel III approaches
2. After Basel III: building capital rules that make sense
   - Analysis of key components of securitisation risks
   - Expected Loss, Unexpected Loss
   - Capital for Real Risk (Economic Capital)
   - Regulatory Capital and Misalignment with Real Risk
   - Possible ways to align Real Risk with Regulatory Capital
   - PCMA: Simple, Transparent and Comparable

1: Granularity (N) Effect on Loss Distribution

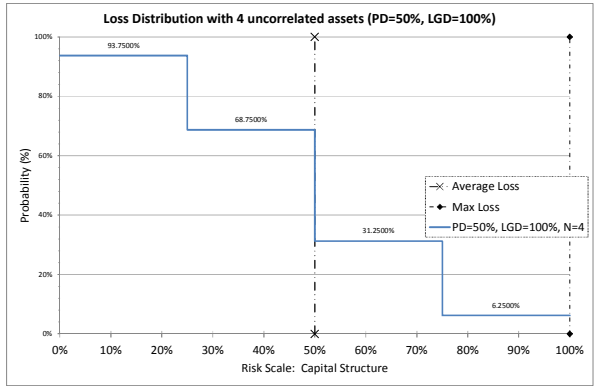
1.1: N = 1 asset (with PD = 50% and LGD = 100%)



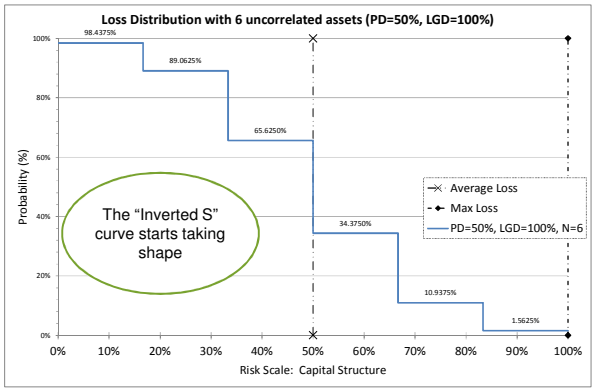
1.2: N = 2 assets



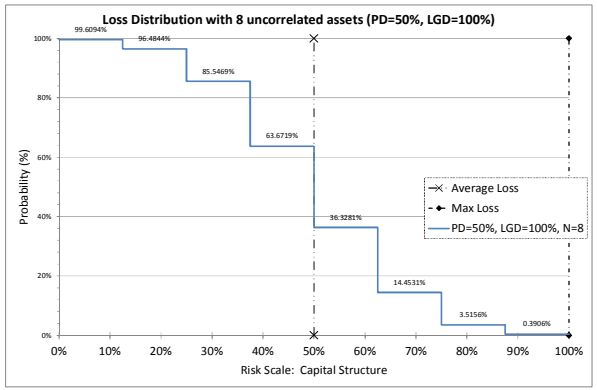
1.3: N = 4 assets



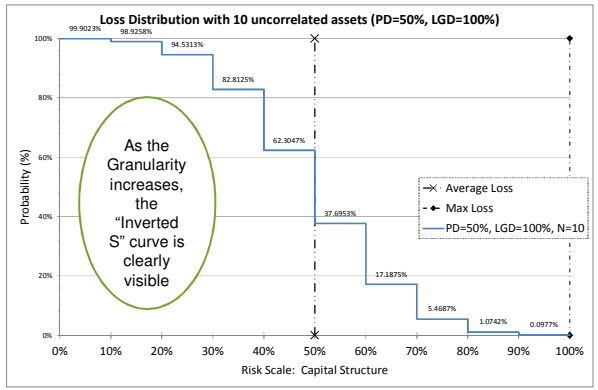
1.4: N = 6 assets



1.5: N = 8 assets

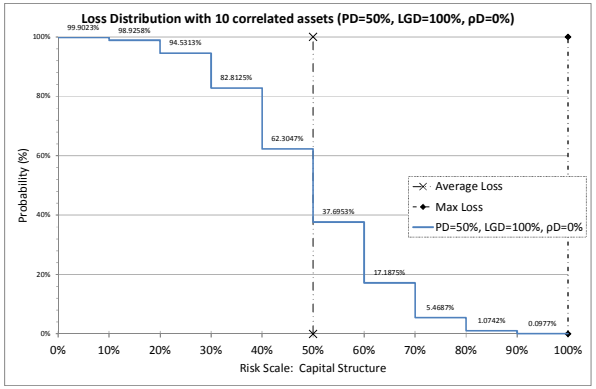


1.6: N = 10 assets

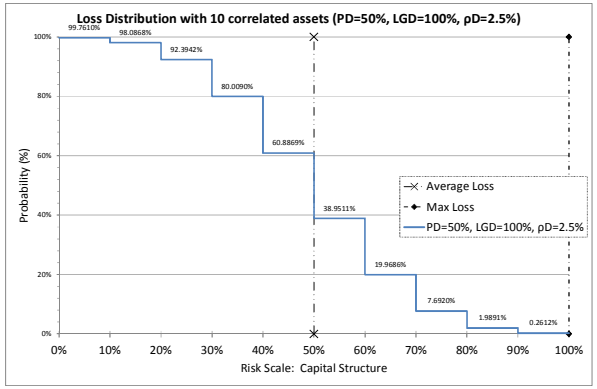


2: Default Correlation (ρ_D) Effect on Loss Distribution

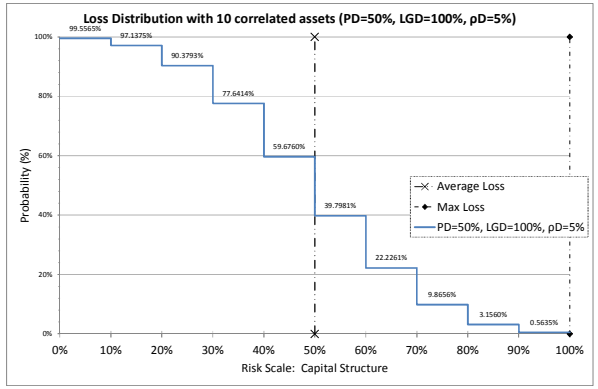
2.1: ρ_D = 0%



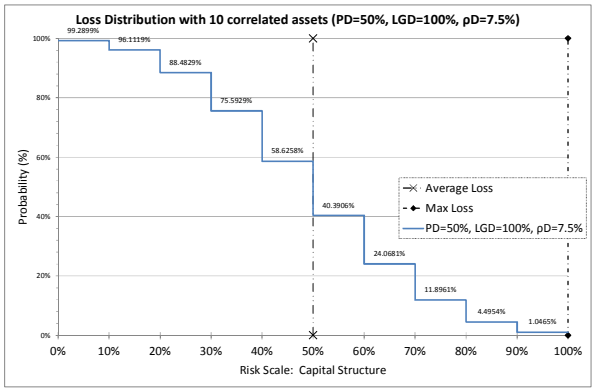
2.2: ρ_D = 2.5%



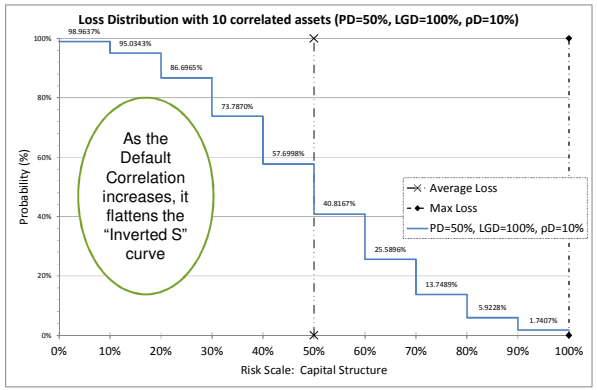
2.3: ρ_D = 5%



2.4: ρ_D = 7.5%

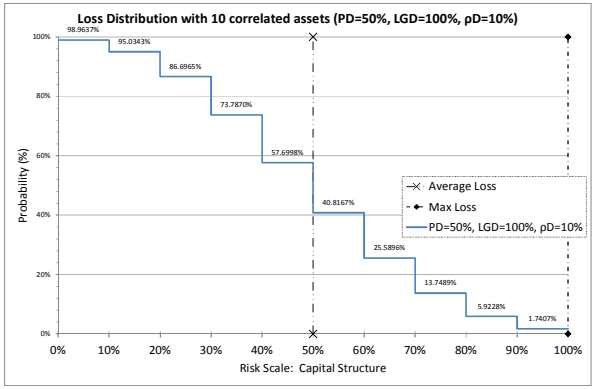


2.5: ρ_D = 10%

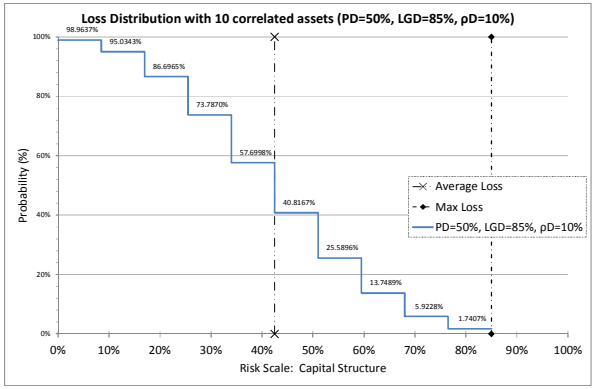


3: Loss Given Default (LGD) on Loss Distribution

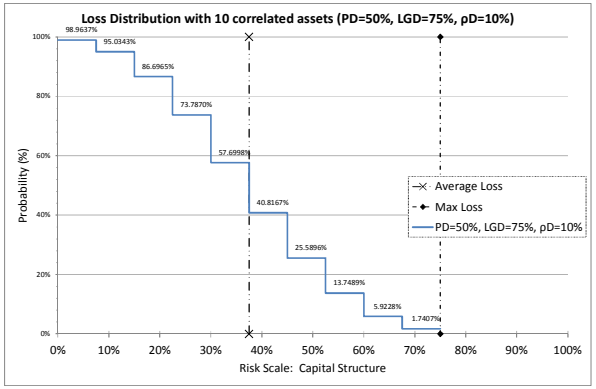
3.1: LGD = 100%



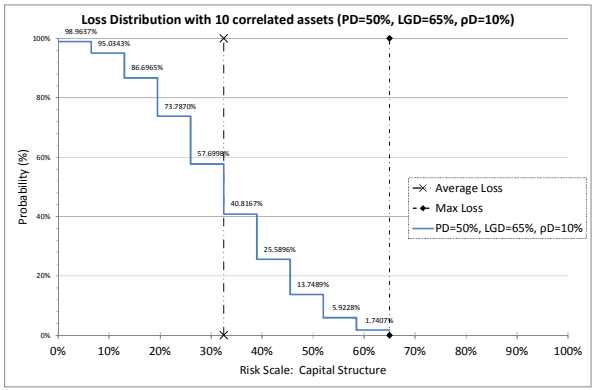
3.2: LGD = 85%



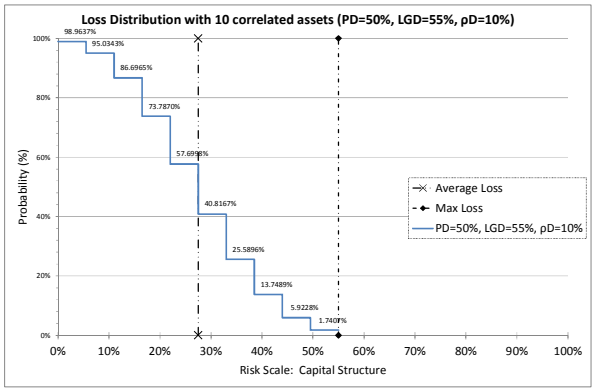
3.3: LGD = 75%



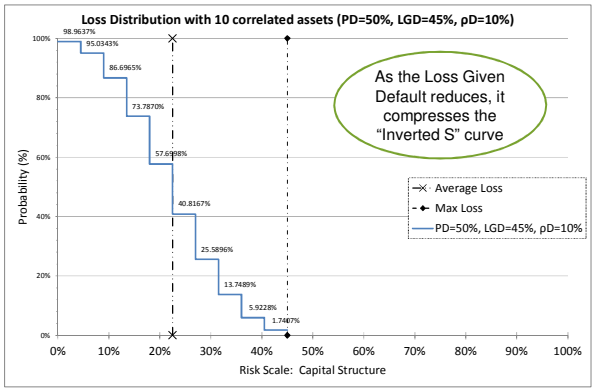
3.4: LGD = 65%



3.5: LGD = 55%

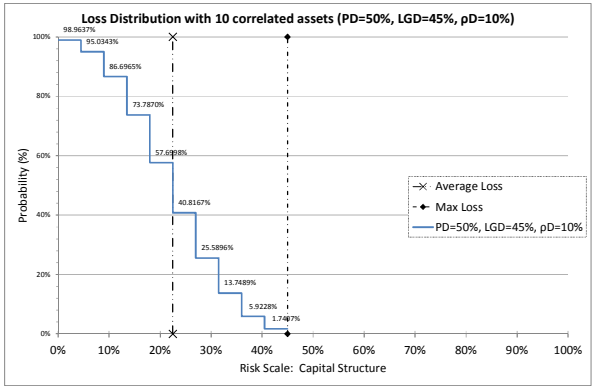


3.6: LGD = 45%

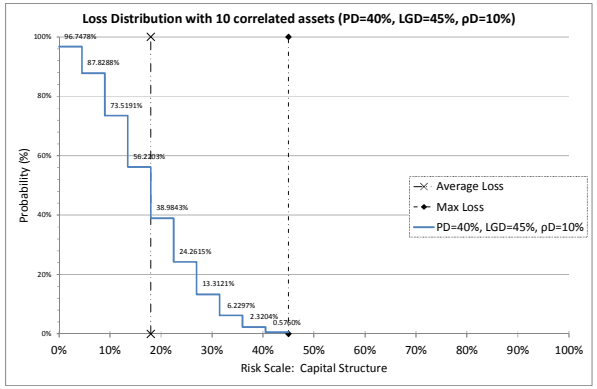


4: Probability of Default (PD) on Loss Distribution

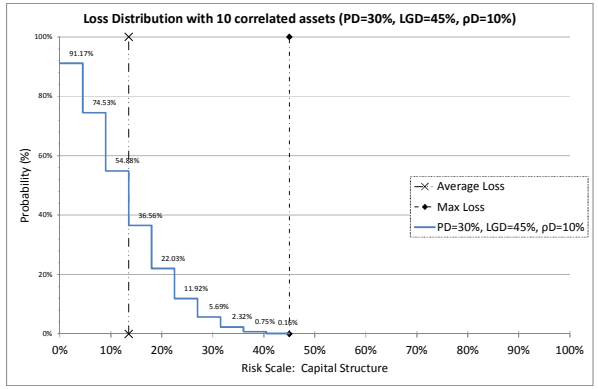
4.1: PD = 50%



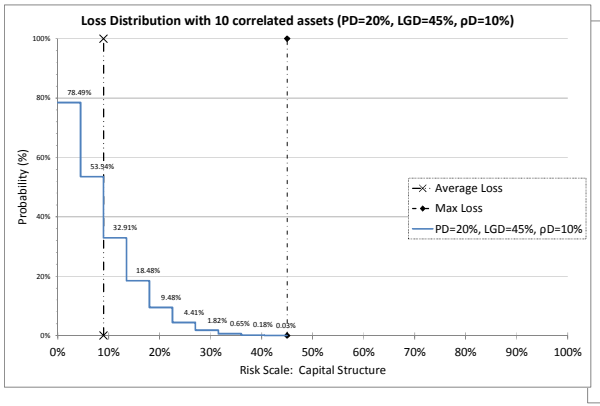
4.2: PD = 40%



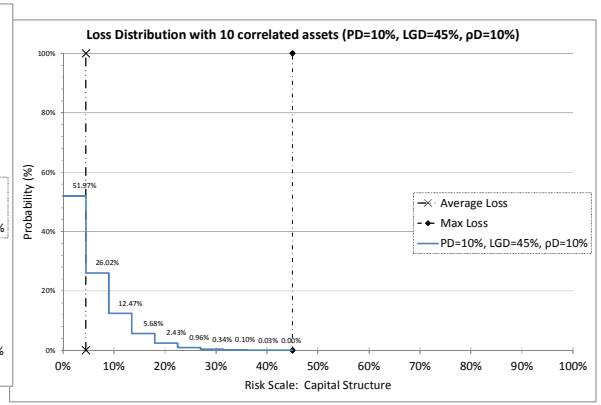
4.3: PD = 30%



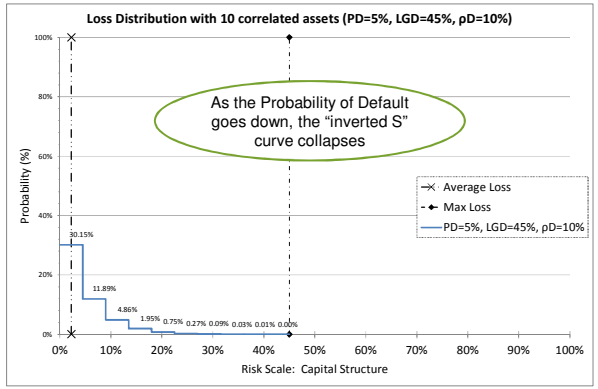
4.4: PD = 20%



4.5: PD = 10%

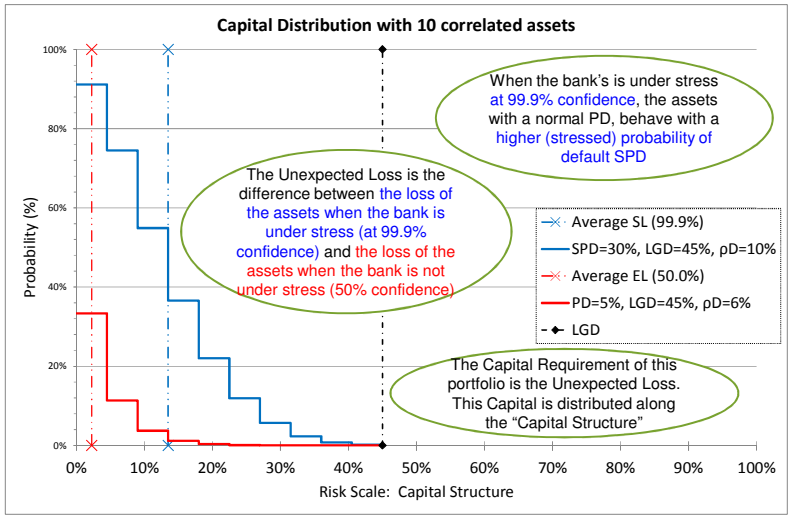


4.6: PD = 5%

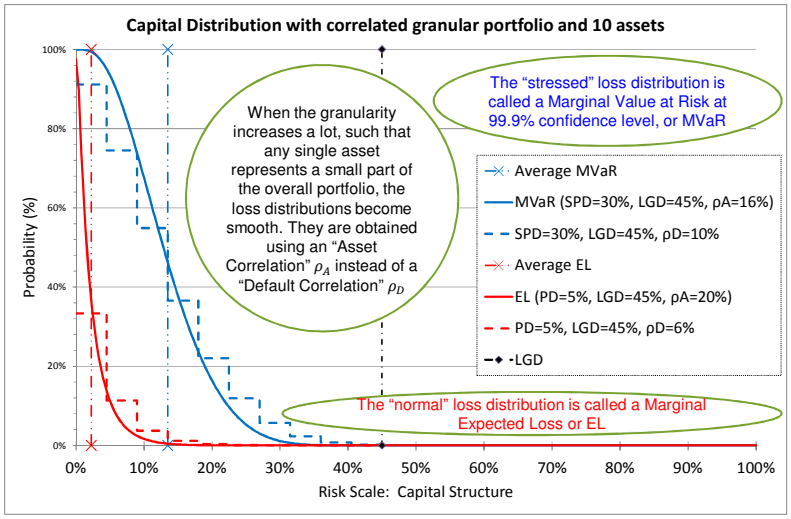


5: Securitisation Capital – The Basics

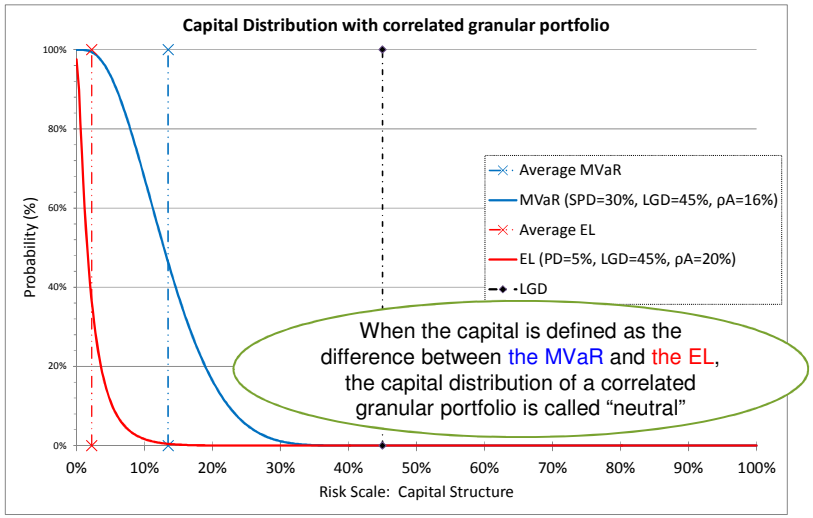
5.1: Unexpected Loss = Stressed (99.9%) Loss – Expected (50.0%) Loss



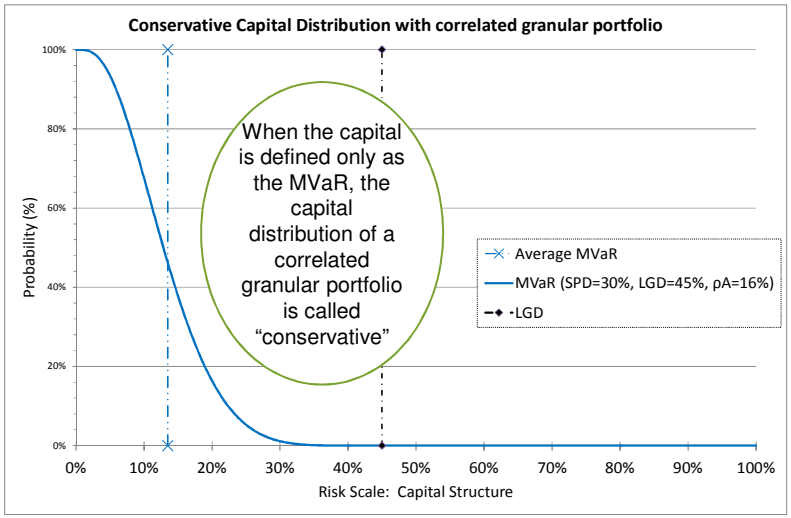
5.2: Pool Capital = MVaR - EL



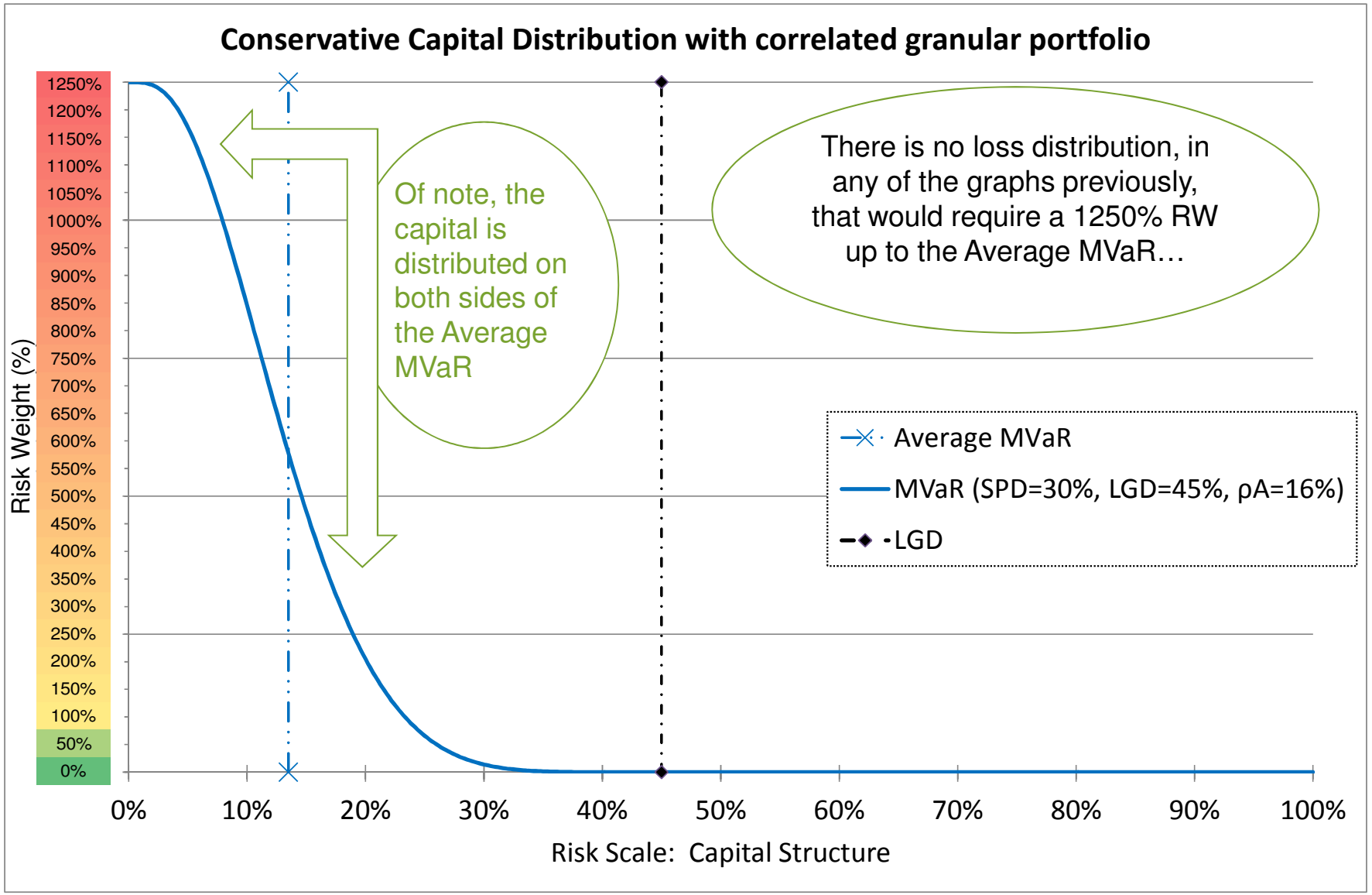
5.3: Capital Neutrality



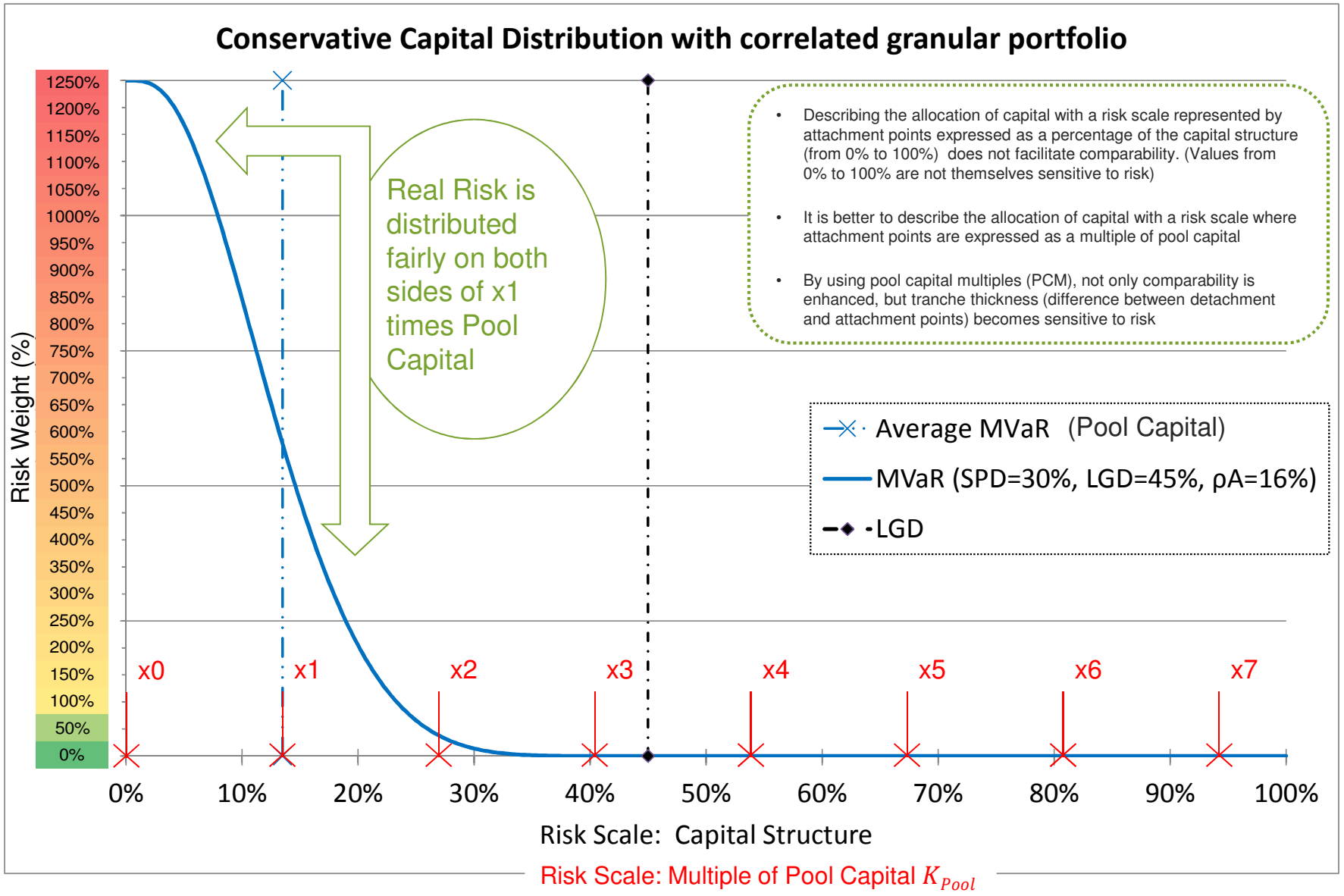
5.4: Conservative Pool Capital = MVaR



Y-axis: Converting Capital into Risk Weight (RW)

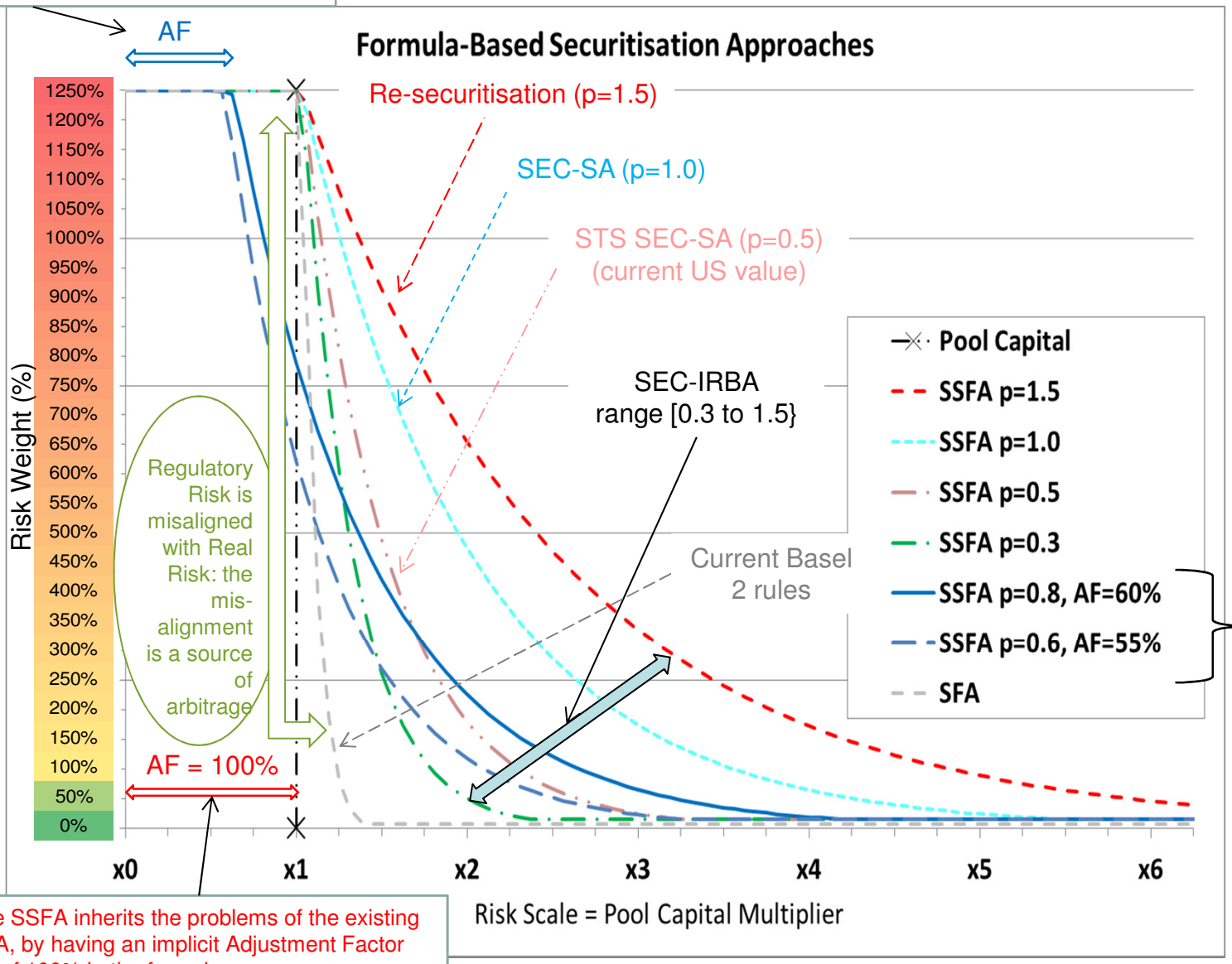


X-axis: Risk Scale as Pool Capital Multiplier (PCM)



The Regulators' View of Risk (RW vs PCM)

The SSFA should have an Adjustment Factor AF that is not equal to 100%. An appropriate value is 55% in IRB, 60% in SA



Industry SA and IRB proposals to realign Regulatory Risk and Real Risk using an Adjustment Factor (AF) (as described in the "European SSFA" paper by Duponcheele, Linden & Perraudin)

The SSFA inherits the problems of the existing SFA, by having an implicit Adjustment Factor AF of 100% in the formula

Basel IV… or V…: a Future Opportunity to Correct Basel III?

There is no need to replicate the errors of the SFA (Basel 2) or SSFA (Basel 3) by requiring 1250% RW up to Pool Capital. Requiring this implies either cliff effects and consequent capital arbitrage (Basel 2) or big deviations from capital neutrality (Basel 3). Both create negative distortions in the market.

To avoid those negative effects, adopting a formulaic approach such as the “European SSFA” or a non formulaic approach such as the “Pool Capital Multiplier Approach” would address the problems at their core.

There will be a point in the future where (European?) policy makers will realise that to have a proper functioning market, one will either need to have a nationalised state-backed guaranteed market (such as in the US, by ignoring the securitisation framework altogether) or a market where the rules themselves need to be simple, transparent and comparable.

Such simple, transparent and comparable rules could look like that:

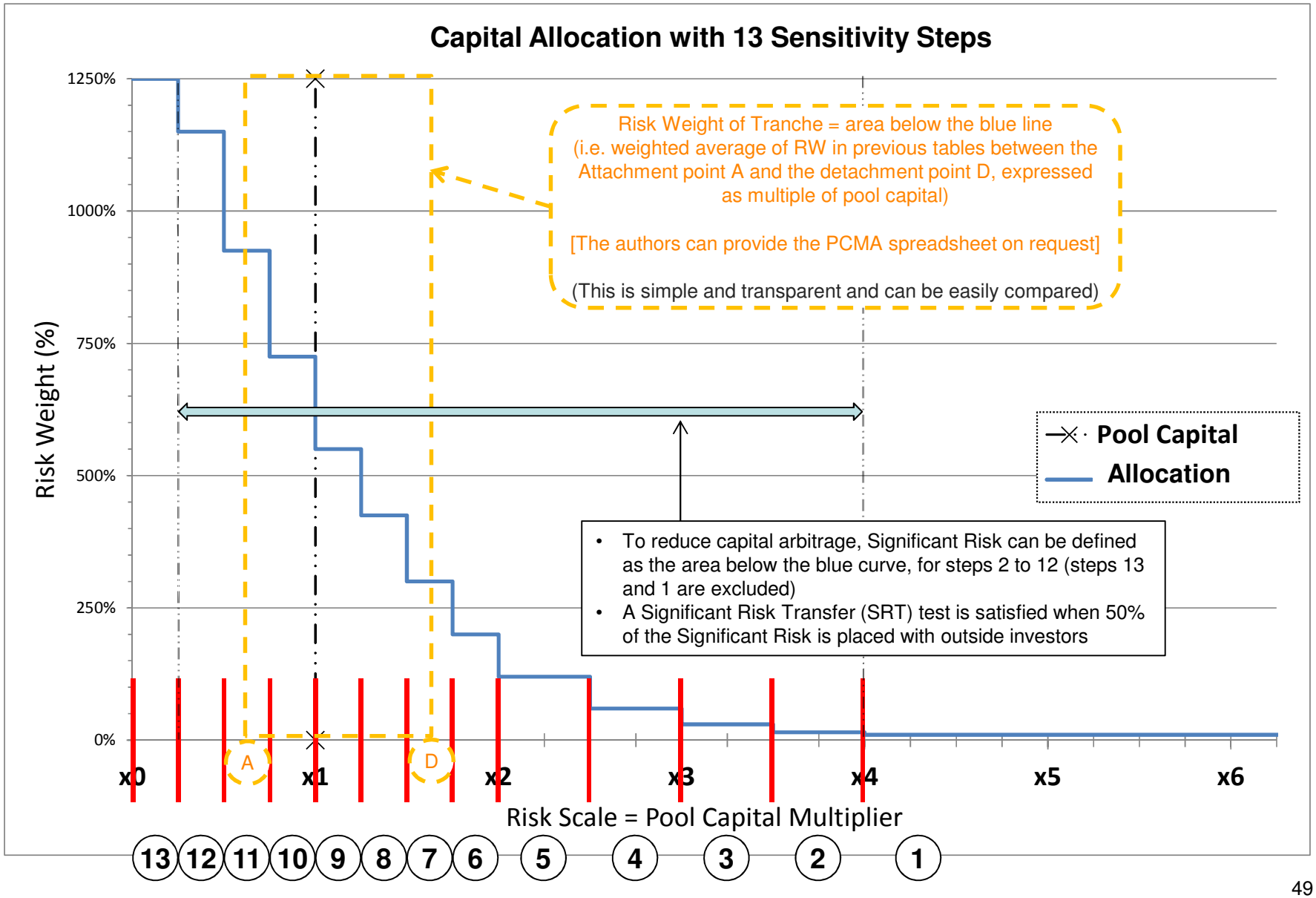
Example for IRB

Sensitivity Steps	Pool Capital Multiplier	Relevant RW
1	x4.00 and above	7%
2	x3.50 - x4.00	12%
3	x3.00 - x3.50	25%
4	x2.50 - x3.00	55%
5	x2.00 - x2.50	115%
6	x1.75 - x2.00	185%
7	x1.50 - x1.75	280%
8	x1.25 - x1.50	400%
9	x1.00 - x1.25	525%
10	x0.75 - x1.00	700%
11	x0.50 - x0.75	900%
12	x0.25 - x0.50	1100%
13	x0.00 - x0.25	1250%

Example for SA

Sensitivity Steps	Pool Capital Multiplier	Relevant RW
1	x4.00 and above	10%
2	x3.50 - x4.00	30%
3	x3.00 - x3.50	60%
4	x2.50 - x3.00	100%
5	x2.00 - x2.50	200%
6	x1.75 - x2.00	300%
7	x1.50 - x1.75	400%
8	x1.25 - x1.50	550%
9	x1.00 - x1.25	700%
10	x0.75 - x1.00	850%
11	x0.50 - x0.75	1000%
12	x0.25 - x0.50	1150%
13	x0.00 - x0.25	1250%

Basel IV… V...? Pool Capital Multiplier Approach (PCMA)

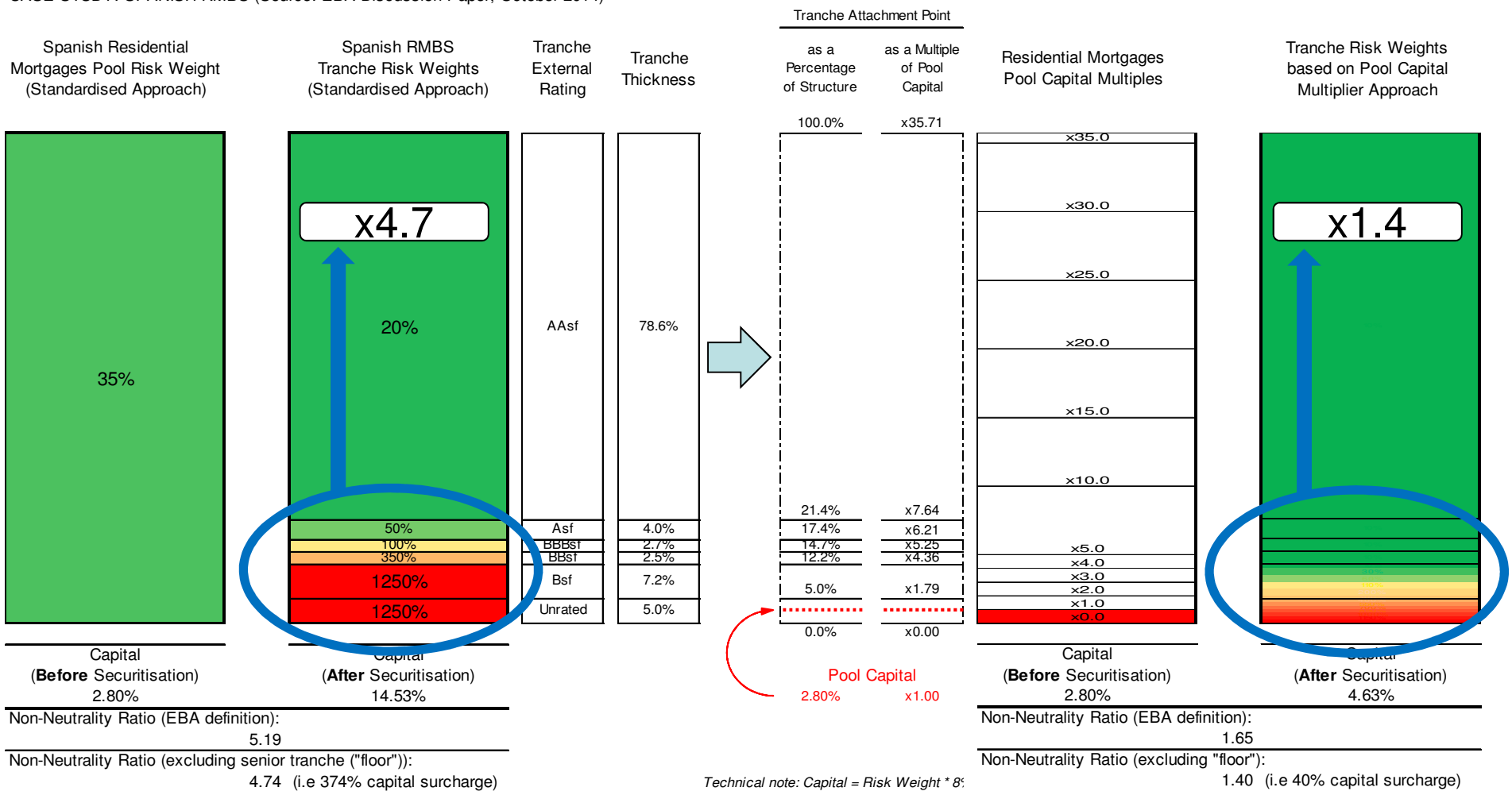


Pool Capital Multiplier Approach (PCMA): a practical example

Basel 2 rules with SA ratings

Solution without ratings and without formulae

CASE STUDY: SPANISH RMBS (Source: EBA Discussion Paper, October 2014)



*Technical note: Capital = Risk Weight * 8*

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The paper "Comments on the Commission's Proposals for Reviving the European Securitisation Market" may be found at:

http://www.riskcontrollimited.com/insights/comment-commission-proposals-securitisation/

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