

15 June 2022

CONSULTATION PAPER ON THE ADVICE ON THE REVIEW OF THE SECURITISATION PRUDENTIAL FRAMEWORK IN SOLVENCY II

EIOPA(2022)0026630
Policy Department
EIOPA REGULAR USE
EIOPA- BoS-22/341
07 June 2022

Handling instructions for documents with security markings:

https://www.eiopa.europa.eu/sites/default/files/publications/other_documents/summary_eiopa_information.pdf



eiopa

European Insurance and
Occupational Pensions Authority

CONTENTS

Introduction	4
1. Investment Behaviour of insurance undertakings	5
1.1. Extract from the Call for Advice	6
1.2. Definition of securitisation	7
1.3. Solvency II prudential treatment within the standard formula	8
1.4. EIOPA Analysis	9
2. Assessment of the securitisation capital framework	17
2.1 Extract from the Call for Advice	18
2.2 EIOPA ANALYSIS - Spread Risk calibration	18
2.2.1. Background	18
2.2.2. Calibration for STS and Non-STS securitisation	19
2.2.3. Non-STS Securitisation	23
2.2.4. Comparison with non-securitised assets with similar risk characteristics	24
2.2.5. Advice on improved risk sensitivity	24
2.3 Recommendations laid out in the High level forum (HLF) report	25
3. Treatment of securitised products within CRR and comparison with Solvency II	27
3.1 Differentiated treatments for STS vs. non-sts securitisations	29
3.1.1 Description in differentiated treatments for STS vs Non STS	29
3.1.2 Analysis	30
3.1.3 Policy Options	31
3.1.4 Conclusion	33
3.2 Securitisation and underlying exposures	33
3.2.1 Description of the link between capital requirements for securitisations and the capital requirements for the underlying exposures under CRR	33
3.2.2 Analysis	33
3.2.3 Conclusion	34
3.3 Granularity of the treatment of tranches under CRR	34

3.3.1	Description of attachment and detachment points within the CRR	35
3.3.2	Analysis	36
3.3.3	Policy Options	36
3.3.4	Conclusion	38
3.4	Hierarchy of approaches	38
3.4.1	Description of the hierarchy of approaches within the CRR framework	38
3.4.2	Analysis	40
3.4.3	Conclusion	40
3.5	Agency and modelling risk	40
3.6	Additional information	42
4.	Questions to stakeholders	45

INTRODUCTION

On 18th October 2021, the European Commission (COM) sent a Call for Advice¹ (CfA) to the Joint Committee (JC) of the ESAs for the purposes of the securitisation prudential framework review. The CfA seeks the JC's assistance to assess the recent performance of the rules on capital requirements (for banks and (re)insurance undertakings) and liquidity requirements (for banks) relative to the framework's original objective of contributing to the sound revival of the EU securitisation market on a prudent basis.

Regarding the insurance sector, the calibration of capital requirements for investments in securitisation tranches was revised (with the adoption of COM Delegated Regulation (EU) 2018/1221) to reflect the new securitisation framework in the banking sector and creating a specific framework for simple, transparent and standardised securitisation.

Indeed, in 2019, the calculation of the capital requirements for securitisations held by insurance and reinsurance undertakings was modified and the introduction of simple, transparent and standardised securitisations (STS securitisations) taken into account. The stress factors were modified by replacing the previous categorisation according to type 1, type 2 and re-securitisations with the new classification in senior STS, non-senior STS, non-STS and re-securitisations. Exposures to STS securitisations receive favourable capital treatment under the new regulation if certain conditions are met (STS eligibility criteria). Investors would need to carry out due diligence prior to holding a securitisation position.

For the purpose of the review of the framework, the Commission would need to receive the JC's advice no later than by 1 September 2022.

EIOPA has launched a data collection which includes a questionnaire in order to gather information that will be included in the final advice. This consultation paper seeks views from stakeholders on the main components of the call for advice.

¹ Available under this [link](#)

1. INVESTMENT BEHAVIOUR OF INSURANCE UNDERTAKINGS

Key findings of this section:

- A small number of solo standard formula undertakings (12% in the EU for 2020) have investment positions on securitisation.
- Approximately 60% of those undertakings hold securitisation positions below 1% of their total investment assets.
- Investments on securitisation have been relatively stable across Europe since the introduction of Solvency II (12.8 billion or 0.34% of total investment assets – 2020 numbers).
- 14 countries have undertakings with securitisation positions over 30 million euros.
- Since the introduction of the STS label in 2019, a small decrease in investments can be observed in the STS segment of the securitisation market (figure 6).
- Comparing the investment behaviour of insurers and the treatment of securitisation within SII one can observe:
 - (i) The capital charges for Senior STS and assets with a similar risk profile (corporate bonds, covered bonds) are broadly comparable. However, insurers seem to show a preference in investing in more traditional asset classes such as (covered) bonds and loans. This could be attributed to reasons other than the current calibration of Solvency II.
 - (ii) The capital charges for non-senior STS are much lower than the non-STs. However, insurers seem to prefer the latter asset category. A possible explanation lies outside the current calibration of Solvency II.

In the final advice, this information will be enriched with the input of the questionnaire. The industry is specifically asked what other factors than regulation impact their investment behaviour. Additionally, the industry is asked for additional historical data before the introduction of Solvency II.

1.1. EXTRACT FROM THE CALL FOR ADVICE

Extract from the CfA covered in this section:

Page 4 of the CfA

Insurance and reinsurance undertakings

The Commission services seek advice primarily on the impact of the following provisions on the investment behaviour of insurance and reinsurance undertakings which set out the key parameters for the calculation of capital requirements on spread risk for securitisation positions

- the determination of risk factor stress for senior STS securitisation positions in Article 178(3) and 178(5) of Commission Delegated Regulation (EU) 2015/35;
- the determination of risk factor stress for non-senior STS securitisation positions in Article 178(4) and 178(6) of Commission Delegated Regulation 2015/35;
- The determination of risk factor stress for non- STS securitisation positions in Article 178(8) and 178(9) of Commission Delegated Regulation (EU) 2015/35;

The analysis should consider the information gathered under the previous section as well as the evolution of the share of investments in tranches of STS and Non-STS Securitisation positions on the balance sheet of insurance and reinsurance undertakings in recent years. It should also take into account the capital requirements on spread risk for comparable instruments, such as corporate and covered bonds.

Page 6 of the CfA

Despite the revisions to the capital treatment of securitisation positions implemented in the Solvency II framework following the entry into force of the STS regime, insurance and reinsurance undertakings' participation in the EU securitisation market remains low. As previously explained, the Commission services request the JCs' advice:

(a) as to whether the Solvency II capital framework has been a significant driver for insurance and reinsurance companies' investment activity in EU securitisation markets in recent years, and whether other factors, including regulatory rules other than capital requirements, should be regarded as having had major impact;

1.2. DEFINITION OF SECURITISATION

According to Article 2(1) of Regulation (EU) 2017/2402, a securitisation is defined as a transaction or scheme, whereby the credit risk associated with an exposure or a pool of exposures is tranced, having all of the following characteristics:

- a) Payments in the transaction or scheme are dependent upon the performance of the exposure or of the pool of exposures;
- b) The subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme;
- c) The transaction or scheme does not create exposures which possess all of the characteristics listed in Article 147(8) of Regulation (EU) No 575/2013².

On the EU COM website³, one can read that ‘when banks and other credit institutions package loans into securities and then sell them to investors, it is called “securitisation”. It lets banks transfer the risk of some loans to other banks or long-term investors such as insurance companies and asset managers. This allows banks to use the capital that was set aside to cover the risk in those loans to create and sell new loans’.

Securitisation allows investors exposures to different types of risks and thus offers potentially increased diversification. Compared with a direct investment in the underlying asset pool structuring the loans into various tranches can also reduce the risk for investors. However, the riskiness of a securitisation depends also on the risk characteristics of the underlying asset pool as well as how the cash flows from the pool are divided among investors. Also, the financial crisis has revealed the potential dangers and risks embedded in securitisations: the interests of originators and investors may not always be aligned. The originator is also typically better informed about the quality of the underlying assets. In addition to these complexities, transactions may be structured so as to lack a sufficient degree of transparency towards investors and other market participants.

² (a) the exposure is to an entity which was created specifically to finance or operate physical assets or is an economically comparable exposure; (b) the contractual arrangements give the lender a substantial degree of control over the assets and the income that they generate; (c) the primary source of repayment of the obligation is the income generated by the assets being financed, rather than the independent capacity of a broader commercial enterprise.

³ [Securitisation | European Commission \(europa.eu\)](https://ec.europa.eu/eiopa/eiopa-regular-use/eiopa-regular-use-2022-0026630)

1.3. SOLVENCY II PRUDENTIAL TREATMENT WITHIN THE STANDARD FORMULA

Securitised products

Within the Standard Formula of Solvency II, securitised products are in the scope of the spread risk sub module of the market risk module (article 178 DR⁴), together with bonds/loans and credit derivatives. The risk factor (*stress_i*) of securitised products depends on several factors. For each securitised product, the level of shocks are defined in the regulation based on:

- modified duration;
- whether the products meet a set of criteria for "high quality securitisations", attracting the designation Simple, Transparent and Standardised (STS). STS securitisations satisfy a long list of requirements covering multiple aspects of the transactions involved.
- seniority⁵ (only if the products qualify as STS securitisation, for non-STS the shocks applied do not differentiate between senior and non-senior tranches);
- Credit Quality Step (CQS) from 0 to 6. The link between the CQS and the corresponding credit assessments are provided by the External Credit Assessment Institutions (ECAIs) through a provided mapping⁶.

Details on the capital requirements for securitisations in the Delegated Regulation can be found in Annex 1.

The new segmentation used to produce the Quantitative Reporting Templates (QRTs) since the introduction of the STS label in 2019 is the following:

- Senior STS
- Non-senior STS
- Re-securitisations
- Other
- Transitional type 1 securitisation
- Guaranteed STS securitisation

Senior STS securitisations are subject to the lowest capital charges, but still higher than the ones applied to bonds and loans (please refer to page 15).

⁴ As replaced due to the COMMISSION DELEGATED REGULATION (EU) 2018/1221 of 1 June 2018 amending Delegated Regulation (EU) 2015/35 as regards the calculation of regulatory capital requirements for securitisations and simple, transparent and standardised securitisations held by insurance and reinsurance undertakings

⁵ The word 'senior' indicates that the exposure is the most senior tranche of a given securitisation structure.

⁶ [ESAs publish amended technical standards on the mapping of ECAIs | Eiopa \(europa.eu\)](#)

Non-senior STS capital charges are around two to three times higher than Senior STS securitisations.

Re-securitisation and “other” securitisations are not distinguished by their seniorities and are assigned a capital charge higher than Non-senior STS securitisations.

Securitisations issued before 1 January 2019⁷ that qualify as type 1 securitisations in accordance with Article 177(2) in the version in force on 31 December 2018 are defined as the “**Transitional type 1 securitisation**” (article 178a DR) category and apply the same capital charges that the Senior STS securitisations, even where those securitisations are not STS securitisations.

Finally, regarding **guaranteed STS securitisation**, the positions that fulfil the criteria set out in Article 243 DR and which are fully, unconditionally and irrevocably guaranteed by the European Investment Fund or the European Investment Bank, where the guarantee meets the requirements set out in Article 215DR, apply a risk factor stress of 0 %.

1.4. EIOPA ANALYSIS

Data description

Data used in this section are based on template S.26.01.01 of the QRT dataset for solo undertakings which use the standard formula since the introduction of SII. This template provides information on the investments in securitisation based on the breakdown mentioned in the previous section: Senior STS, Non-Senior STS, Re-securitisations, Other Securitisation, Transitional type 1 securitisation and Guaranteed STS securitisation. During the quality check performed a small number of undertakings (outliers) were removed from the sample⁸.

Participation in securitisation investments

Figures 1 and 2 demonstrate that the number of solo undertakings investing in securitisation is relatively low compared to the total number of undertakings in Europe. One can observe a small increase of 2% since the introduction of SII over the last 5 years.

⁷ And where no new underlying exposures were added or substituted after 31 December 2018.

⁸ Mainly undertakings whose securitisation position exceeded the threshold of 100% to total investment assets.

Figure 1 – Number of Solo undertakings in the sample

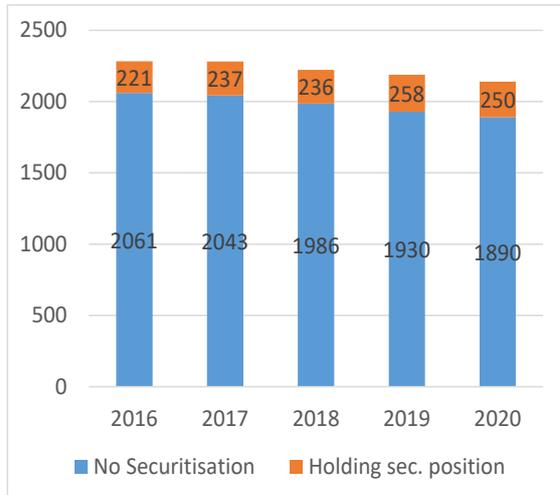
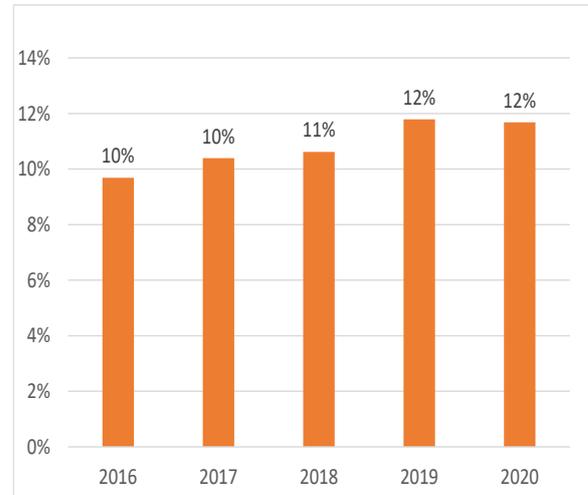
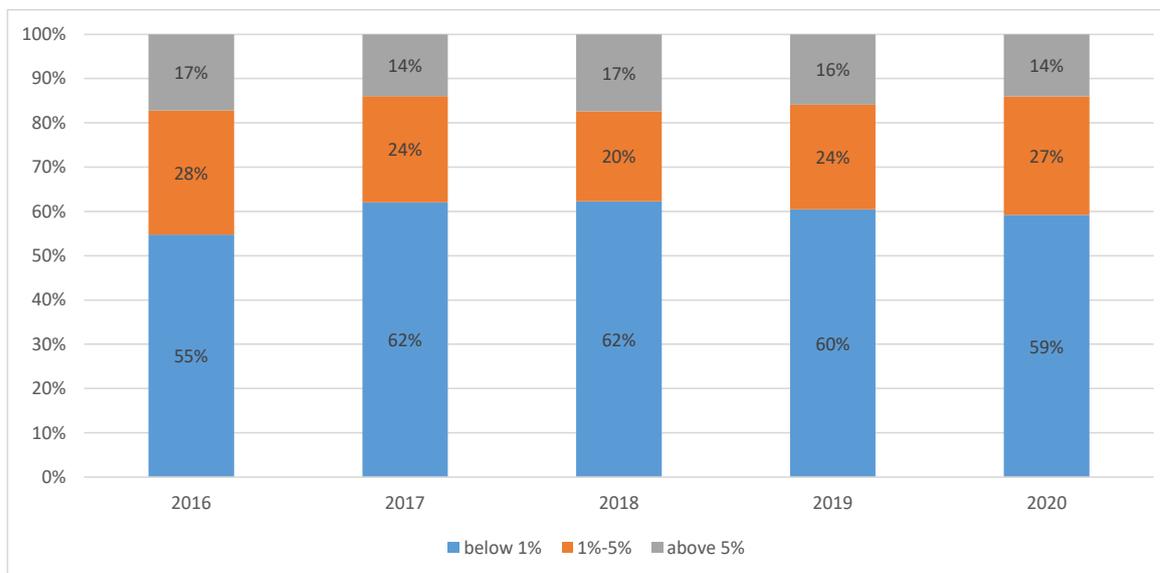


Figure 2 - Percentage of Solo undertakings who invest in securitisation out of total sample over time



However, as shown in Figure 3, approximately 60% of the undertakings which invest in securitisation, invest in amounts below 1% of their total investment assets. Approximately 25% of the undertakings invest amounts between 1% to 5% and only 15% invest in amounts more than 5%. This investment trend is relatively stable since the introduction of SII.

Figure 3 – Investment in securitisation as a percent to total i investments per undertaking



Overview of the European securitisation market

As shown in figures 4 and 5 the volume of investments in securitisation is very small among EEA insurers: 0.34% (12.8 billion) of total investment assets in 2020. More importantly the number is also relatively stable since the introduction of SII. A small drop can be observed for the years 2017 and 2018 but the volume stabilizes to approximately 12.5 billion euros for the next two years. In the banking sector the total outstanding amount invested in securitisation in 2020 was approximately 800 billion euros (source: EBA).

Figure 4 – Securitisation positions in Europe (in EUR bn)

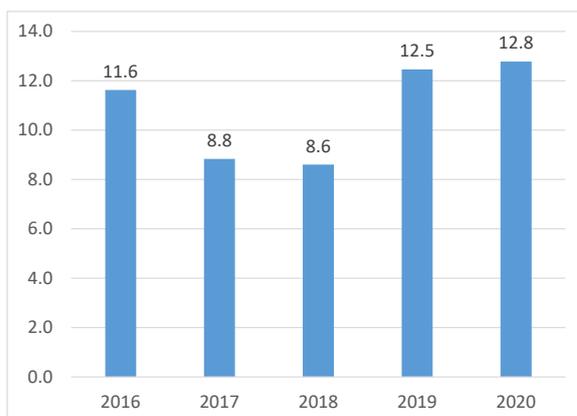


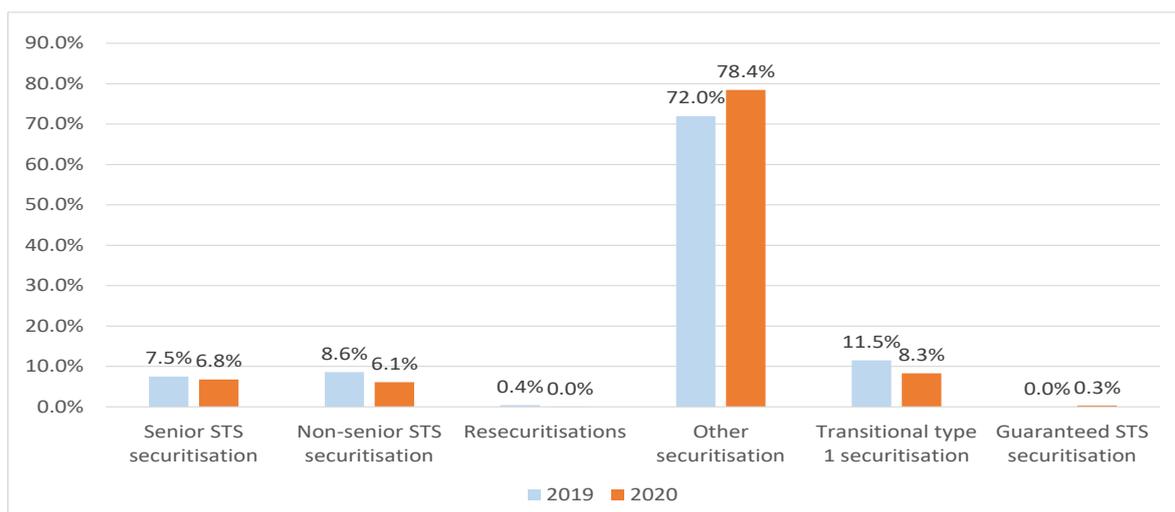
Figure 5 – Securitisation positions in Europe (in % to total investments)



Securitisation by type

Since 2019, the STS breakdown has become available. Based on figure 6, one can observe that the sum of Senior and Non-senior STS is 16% in 2019 and 13% in 2020 indicating a small decrease. The vast majority of securitisation investments is in the ‘Other securitisation’ (Non-STS) category, where an increase of 6.4% is observed from 2019 to 2020.

Figure 6 – Investment in securitisation by type



Prior to 2019 no breakdown for the type of securitisation has been available. From 2016 until 2018, 99% of the assets are under securitisations and approximately 1% under re-securitisations.

Securitisation by country and by type of business

In figures 7 and 8, one can observe the country breakdown of securitisation investments. When looking at country data, only 14 countries have position over 30 million euros (DE-PT). In terms of

percentage to total investment assets only IE (with 2.5%) and DK (1.3%) stand out compared to others. Overall, percentages across countries are low.

Figure 7 – Securitisation positions per country for 2020 (in EUR bn)

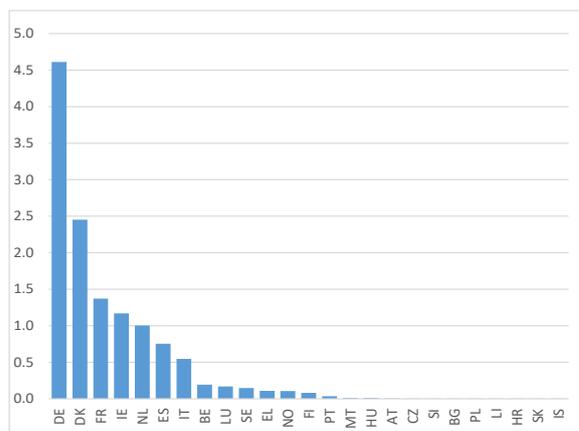
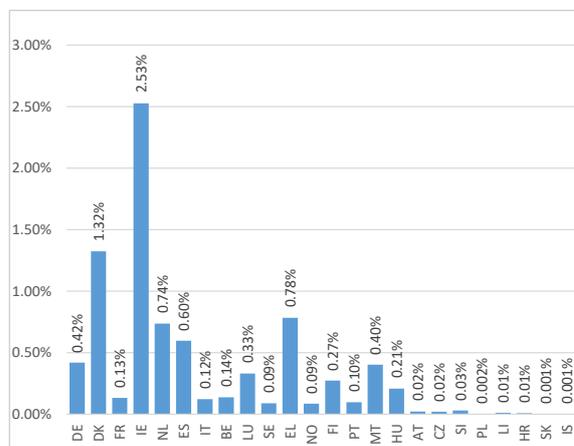


Figure 8 – Securitisation positions per country for 2020 (in % to total investments)



When looking at the data by line of business, approximately half of the assets are in life business (Figures 9 and 10). In terms of percentage to total investments, in relative terms the highest concentration can be seen in the re-insurance sector.

Figure 9 – Securitisation positions by line of business (in EUR bn)

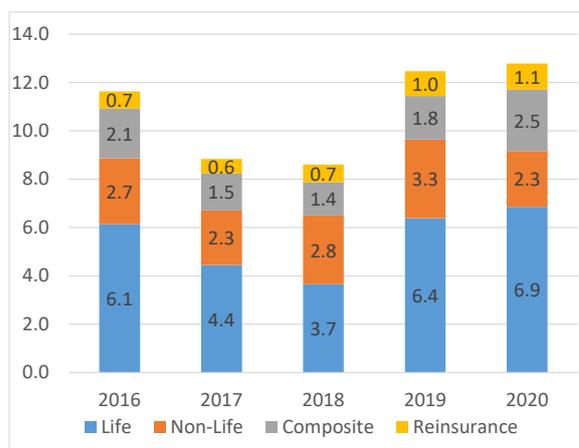
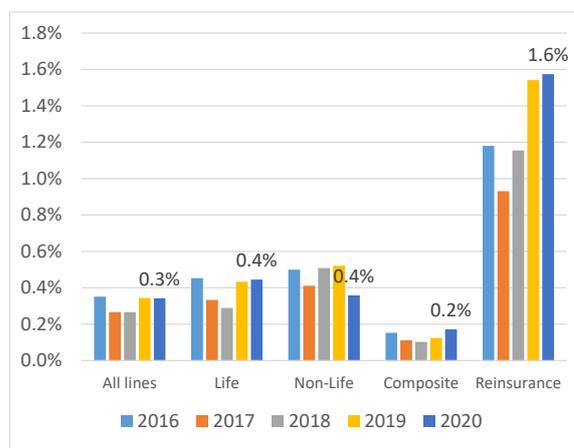


Figure 10 – Securitisation positions by line of business (in % to total investments)



Investments of European insurers in Corporate and Covered bonds against Securitisation

In the figures below, one can assess the developments in the holdings of comparable instruments to securitisation instruments, such as corporate and covered bonds.

Figure 11 shows the holdings of insurers in corporate bonds as well as for two types of corporate covered bonds⁹ available in the QRT dataset. In terms of percentage to total investment assets, the proportion of these two instruments is significantly higher than the proportion of securitisation. However, it is important to mention the downward trend since the introduction of Solvency II (5% for corporate bonds and 3% for covered as a percent to total investments).

Figure 11 – Corporate and Covered bonds (in % to total investments)

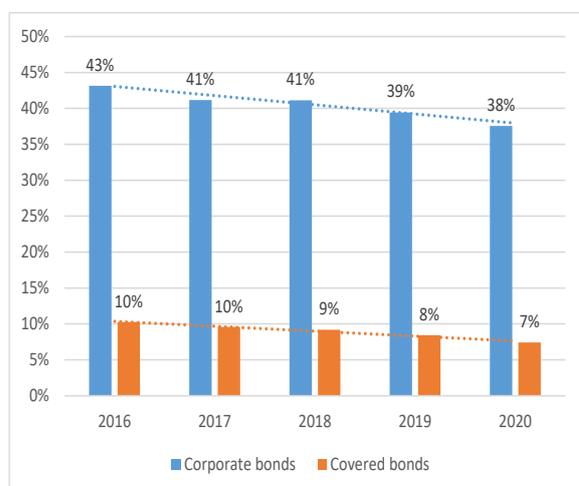
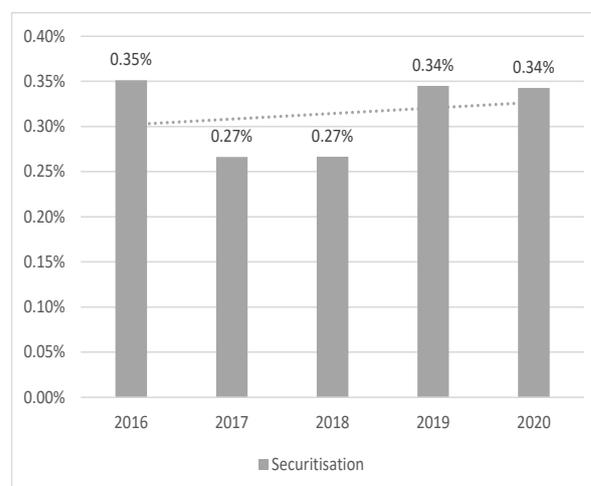


Figure 12 – Securitisation positions (in % to total investments)



A comparison of the securitisation positions of insurers against those of banks will be added in the next version of this report.

Comparison of capital charges for covered bonds, corporate bonds and various securitisation categories within Solvency II

Tables 1, 2 and 3 include the capital charges to be applied for covered bonds, “bonds and loans”¹⁰ and securitisation categories for the selected durations of 5, 10 and 15 years. As requested in the Call for Advice “the analysis [...] should also take into account the capital requirements on spread risk for comparable instruments, such as corporate and covered bonds”.

⁹ Corporate covered bonds include Common Covered bonds and Covered bonds under Spec Law, data from template S06

¹⁰ This category includes corporate bonds

Table 1 – Capital charges for duration of 5 years for three indicative credit quality steps

	CQS 1	CQS 3	CQS 5
Covered bonds	4.5%	-	-
Bonds/loans	5.5%	12.5%	37.5%
STS senior	6.0%	14.0%	47.0%
STS non senior	17.0%	39.5%	100.0%
non STS (other)	67.0%	98.5%	100.0%

Table 2 – Capital charges for duration of 10 years for three indicative credit quality steps

	CQS 1	CQS 3	CQS 5
Covered bonds	7.0%	-	-
Bonds/loans	8.5%	20.0%	58.5%
STS senior	9.5%	22.5%	73.5%
STS non senior	26.5%	63.0%	100.0%
non STS (other)	100.0%	100.0%	100.0%

Table 3 – Capital charges for duration of 15 years for three indicative credit quality steps

	CQS 1	CQS 3	CQS 5
Covered bonds	9.5%	-	-
Bonds/loans	11.0%	25.0%	61.0%
STS senior	12.0%	28.0%	76.5%
STS non senior	34.0%	79.0%	100.0%
non STS (other)	100.0%	100.0%	100.0%

Table 4 – Capital charges for equity and comparison of those to securitisation

	Equity risk - shocks applied (Art. 169)
Type 1 equity	39%
Type 2 equity	49%

According to the delegated regulation (Article 180.1), only covered bonds assigned to a credit quality step 0 or 1 receive a differentiated treatment. For CQS 3 and 5 covered bonds have the same treatment as “normal” bonds.

When looking at the credit quality step 1, the capital charges for covered bonds, “bonds and loans” and senior STS are approximately of the same magnitude. For all the three durations, the capital charges for covered bonds are slightly lower than the ones applied to “bond and loans” which are subsequently slightly lower than the ones applied to senior STS positions. The same conclusion also holds for credit quality steps 3 and 5, although for these steps the absolute differences between the risk charges for senior-STS and the other securitisations are much higher.

Regarding equity risk, shocks are approximately of the same magnitude with the non-senior STS or the senior STS senior with high credit quality steps on table 1. Despite the relatively high shocks compared to the shocks applied to STS securitisation products with a good credit quality step, the proportion of equity in the insurers’ portfolio is high significant. This comparison could imply that the level of capital requirements is not the main factor in the disinterest of insurer’s investment in securitisation products. For instance, higher returns from equity which are not available through securitisation could be a reason why.

When comparing the risk charges applied to senior and non-senior STS positions, as well as between non senior STS and Other Securitisation (non-STS) positions, one can observe the following:

- i. The risk charges applied to the Non-Senior STS positions are approximately 2.8 times higher than the ones applied to the Senior STS positions.

- ii. The risk charges applied to the Non-STS positions are approximately 3.8 times higher than the ones applied to the Non-Senior STS positions for a duration of 5 and 10 years; and 3 times higher for a 15 years duration.

Question to stakeholders

Q1: Do you have any comment on the comparison of the securitisation capital charges with other asset classes with similar characteristics?

Preliminary conclusions based on the investment behaviour of insurers and the current calibration of Solvency II

- i. The treatment of Senior STS in terms of capital requirements is broadly similar to asset classes such as covered bonds or “bonds and loans”. However, this is unlikely to explain the small amounts of investments made by insurers in this particular asset category relative to investments in covered and corporate bonds. Other reasons also have to be taken into account such as the complexity of this asset product or legal provisions that make such investment more complicated than in other asset classes.
- ii. The Non-senior STS category is subject to lower capital charges than the Non-STS category. However, evidence suggests, as shown in figure 6, that the vast majority of investments in securitisation for 2019 (72%) and 2020 (78%) are in the Non-STS segment, where a small increasing trend is also observed. Insurers seem to be indifferent to the additional capital charges of non-STS versus the non-senior STS. This could also be attributed to the complexity of STS given the legal provisions that are attached to it.

Based on evidence available so far, it is possible that insurers have practical or legal difficulties in investing in securitisation with the STS label.

Question to stakeholders

Q2: Do you see practical or legal difficulties in investing in securitisation with the STS label? Are you aware of any other factors, including regulatory rules other than capital requirements that could have a major impact on securitisation investment levels?

2. ASSESSMENT OF THE SECURITISATION CAPITAL FRAMEWORK

Key findings of this section:

- Overall EIOPA considers that the current framework is fit for purpose. At this stage, the evidence is not sufficient to justify a change in the calibration for securitisations which meet the STS criteria.
- For STS securitisation, the assessment is based on STS information received from ESMA, enriched by data downloaded from Bloomberg. The main conclusion is that there are not enough observations to perform a proper assessment of all credit quality steps and durations. Nevertheless,
 - The data analysis corroborates the current calibration of Solvency II for senior STS securitisation, credit quality steps 0 and 1¹¹, and durations between 0-5 years.
 - For unrated STS securitisation¹² with short (0-5 years), the data analysis results in lower capital charges than the ones in the current calibration.
- Due to the small number of observations, the distinction between senior and non-senior STS was made possible only through proxies.
- For the securitisations, which do not benefit from the STS standard (non-STS), the analyses focuses on the spread volatility of securitisation investment during the Global Financial Crises. The results indicate that a change in the calibration is not warranted.
- The High Level Forum¹³ (HLF) report proposes different recommendations which are broadly aligned with the policy options and the calibration analysis envisaged by EIOPA.

¹¹ It is assumed that STS with credit quality steps 0 and 1 can be a proxy to senior STS

¹² It is assumed that unrated STS can be a proxy for to non-senior STS

¹³ https://ec.europa.eu/info/sites/default/files/business_economy_euro/growth_and_investment/documents/200610-cmu-high-level-forum-final-report_en.pdf

2.1 EXTRACT FROM THE CALL FOR ADVICE

Extract from the CfA sections covered in this section:

[...] the Commission services request the JCs' advice:

(b) whether the current calculation for capital requirements for spread risk on (i) securitisation positions in Solvency 2 for the senior tranches of STS, (ii) non-senior tranches of STS and (iii) non-STs securitisations are proportionate and commensurate with their risk. The JC should take into account the capital requirements for non-securitised assets with similar risk characteristics, comparing the capital requirements for such assets with senior and non-senior tranches of securitisations;

(c) whether the risk sensitivity of the capital calibration framework could be improved in order to increase investor demand and, in particular, whether Solvency II capital requirements for spread risk should differentiate between (i) mezzanine and junior tranches of STS securitisations, and (ii) senior and non-senior tranches of non-STs securitisations.

2.2 EIOPA ANALYSIS - SPREAD RISK CALIBRATION

2.2.1. BACKGROUND

The current calibration on securitisation is based on Art 178 of the [latest delegated act of 2019](#) which is an amendment of the previous Art 178 of the [delegated act from 2015](#).

The main difference is that the latest version includes risk charges for more securitisation categories (taking into account the STS label introduced in 2019) and is more sophisticated in terms of calculation of the risk charges based on the duration. The calibration proposed in the delegated act of 2015 was directly based on the calibration [work performed by EIOPA in 2013](#).

It has to be noted that if the amendment from 2015 to 2019 introduced structural changes to the prudential framework for securitisation, the level of the risk factors themselves were not in substance radically modified.

EIOPA is asked to assess whether the existing calibration, originally performed in 2013, is still plausible and appropriate after the 2019 update. The analysis performed is described in the following paragraphs.

The way forward is complementary to the explicit request by the EC to account for the capital requirements for non-securitised assets with similar risk characteristics, comparing the capital requirements for such assets with senior and non-senior tranches of securitisations. The details of this comparison can be found in section 1.4 page 15.

2.2.2. CALIBRATION FOR STS AND NON-STIS SECURITISATION

STS Securitisation

Overview

In this section, EIOPA presents the results from the empirical 99.5% Value at Risk based on information from the [ESMA STS register¹⁴](#) available from this location ([LINK](#)) which includes data until the beginning 2022. Non-public transactions (the ones which do not have an ISIN) and cancelled ones were excluded from the sample. The data used captures all available STS transactions notified to ESMA since the introduction of the STS label.

Based on the ISINs available in the ESMA STS register, the rating, the duration and the spread for the majority of sample (326 ISINs) were extracted from Bloomberg. Given the poor data quality, information after March 2022 was excluded from the sample.

Data and Methodology

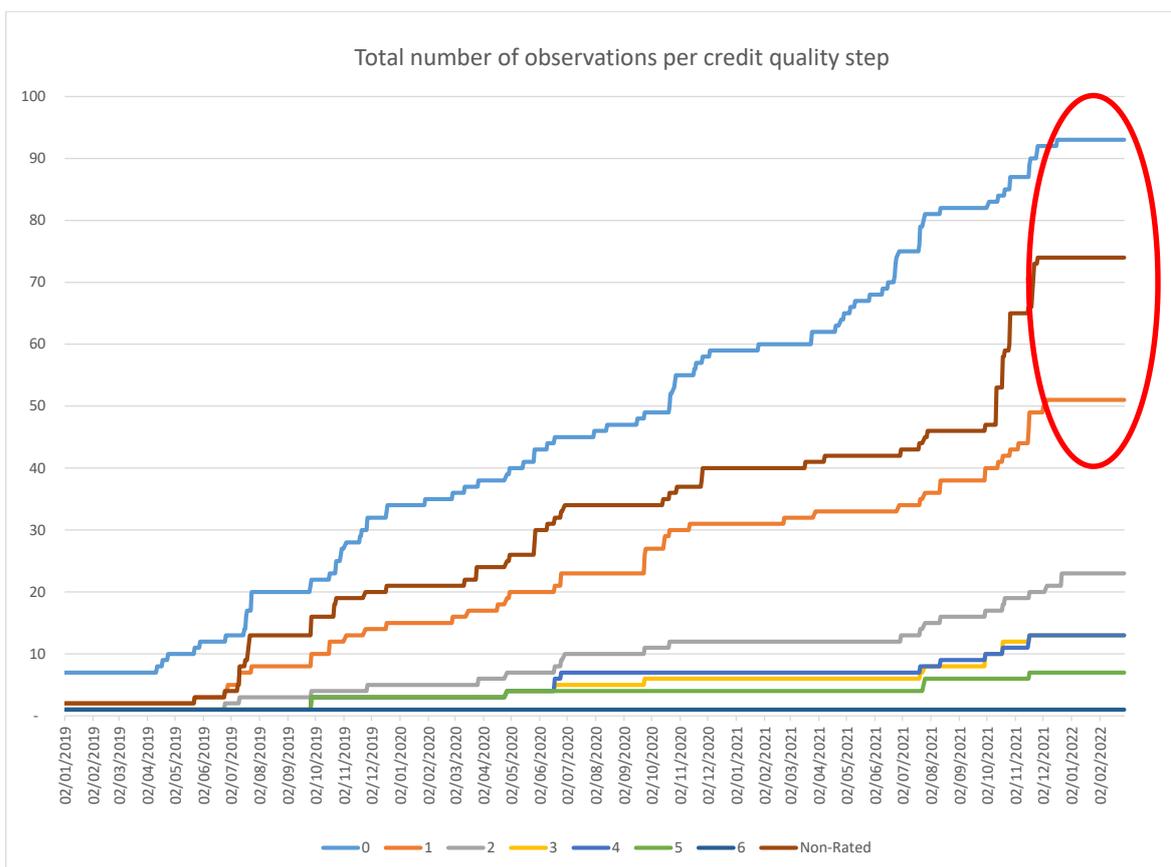
Raw data were cleaned and checked for inconsistencies. What became obvious was the overall lack of observations.

CQS	0	1	2	3	4	5	6	Non-Rated
Total number of observations	101	53	25	16	15	7	1	109
average duration	1.86	2.11	3.44	2.74	2.54	1.79	1.59	2.69

In the above table, one can easily observe that for credit quality steps 0, 1 and non-rated, the number of observations is adequate for the assessment. However, for credit quality steps 2 to 6 there are too few observations, available only since 2019, to perform any analysis and draw any meaningful conclusions. Furthermore, it has to be noted that the total number of observations is not constant over the considered period. Indeed, in early 2019, there were very few ISINs with spreads and the STS label available. This imposed an additional issue to the analysis since the period from spring 2019 until the spring 2020 when the COVID crisis culminated could be considered a 'stress' period. Data used in the calibration become more available right after the 'stress' period.

This information on the observations can be summarised in the figure below.

¹⁴ [ESMA Registers \(europa.eu\)](#)



Limitations

From the above information, it can be inferred that the data available with the STS label are simply not enough for any proper STS calibration exercise for all credit quality steps. The focus of the analysis is directed on information from credit quality steps 0, 1 and non-rated where the number of observations during the stressed Covid period is also too low to derive any robust conclusions. This accounts also for the very low empirical calibration values.

In addition to this, one can see in table 1 that the durations are quite low. That is the reason why, for the purpose of the analysis when calculating risk charges, the reference is only on the low duration category of Solvency II (0-5 years) which is sufficient but does not fully capture the duration range available in Solvency II. One might argue that not looking at higher durations may not be fully representative.

Results of the calibration

The results of the analysis, based on the ESMA dataset, are summarized in the table below:

	CQS		
	0	1	Non-Rated
Empirical VaR 99.5% based on ESMA STS Register*	0.3%	0.4%	1.0%
Solvency II senior STS	1.0%	1.2%	4.6%
Solvency II non senior STS	2.8%	3.4%	26.7%

*Note: Value of shock = 0.995th percentile value (in percent)

- It can be assumed that the values under high credit quality steps (0 and 1) can be used as a proxy for senior STS given their high quality. Based on this assumption, the results obtained through the current calibration are close to those of Solvency II for senior STS for short durations (0-5 years).
- It can be assumed that non-rated STS can be a proxy for non-senior STS. Based on this assumption, the current calibration of Solvency II seems quite high for short durations (0-5 years).

The second point requires careful attention and needs to be monitored. At this stage and based on the low information available, it is too soon to propose changes in the risk charges for the non-senior STS segment. Longer time series along with a higher number of observations are needed to make such a conclusion.

Association for Financial Markets in Europe (AFME) paper overview

In March 2022, AFME published a paper¹⁵ which analysed the relative risk of European Asset Backed Security (ABS) tranches and Covered Bonds. More specifically, the paper compares the risk of: Senior STS, Non-Senior STS, Non STS, and covered bonds by calculating VaR statistics similarly with the method used by EIOPA in 2013¹⁶. Additional indices were constructed with data available from the Bloomberg platform.

The main findings of the report are that for both Non-senior STS and for Non-STS, the capital charges implied by the analysis are substantially lower than those in the current Solvency II rules.

It seems plausible to assume that AFME¹⁷ faced similar challenges as the ones mentioned in the previous section regarding the calibration of the STS part of the market (Senior and non-senior) due to lack of available observations. As the STS framework is relatively recent, STS data are available for the last three years and it is not possible to acquire longer time series. Like in the calibration

¹⁵ [ABS and CB Risk and SII Capital Charges 21-161a 08-11-2021 v25 \(003\).pdf \(afme.eu\)](#)

¹⁶ Report available at: [EIOPA Technical Report on Standard Formula Design and Calibration for certain Long-Term Investments 2 \(europa.eu\)](#)

¹⁷ This is an assumption made. EIOPA has not had the chance yet to review the dataset used by AFME.

exercise described above, it can also be assumed that the number of observations for the early years of the STS implementation were relatively low and that the number increased with time.

Also, the majority of the sample used by AFME¹⁸ has a duration of below 5 years which does capture the whole range of the risk charges available through Solvency II. EIOPA faced a similar challenge as described in the previous section.

With regards to the non-STIS part, longer time series are used (sample from 2010-2021) which however, do not include the crisis of 2008-2009. However, the analysis of the spread risk for non-STIS securitisations is incomplete without this period of stress.

Comparison of results of the current Solvency II calibration, EIOPA’s calibration with the ESMA dataset and AFME’s calibration

The overview of the results can be found on the table below:

	CQS		
	0	1	Non-Rated
Empirical VaR 99.5% based on ESMA STS Register*	0.3%	0.4%	1.0%
Solvency II senior STS	1.0%	1.2%	4.6%
AFME proposal Senior STS	0.9%	1.2%	3.9%
Solvency II non senior STS	2.8%	3.4%	26.7%
AFME proposal non Senior STS	1.3%	1.7%	5.5%

*Note: Value of shock = 0.995th percentile value (in percent)

Overall, the findings of the AFME paper to the extent that they can be compared with the calibration performed by EIOPA are broadly in line. More specifically, it can be said that the outcome of the Senior STS calibration (proxy used through values under quality steps 0 and 1) is relatively close to the AFME finding which confirms the statement that senior STS is properly calibrated. At the same time the outcome of EIOPA’s exercise for the non-senior STS (proxy used through values under non-rated) seems also to be broadly in line with AFME’s finding.

However, the lack of data needs to be highlighted and there can be different views about the validity of the remaining conclusions set out in the paper. As for EIOPA’s analysis, more STS observations are needed in order to assess the plausibility of the STS risk charges of Solvency II.

¹⁸ The same applies also to the sample of ISINs used by EIOPA

2.2.3. NON-STS SECURITISATION

After the Global Financial Crisis (GFC) the EU took steps to mitigate the risks involved in securitisations, in particular it introduced STS securitisations. But the 2007 to 2009 episode remains relevant, at least for non-STS securitisations, as it illustrates the possible effects of a loss of investor confidence.

The “AFME Securitisation Data Report Q4:2010” shows the development of spreads for securitisations between January 2008 and the end of 2010.

The graphs on page 12 of this report suggest that the maximum change in spreads over 12 months during this period for European 3-5 Year AAA CMBS was around 1.000 basis points. The corresponding value for BBB was approximately 3.500 basis points. It would of course be preferable to have the figures underlying the graphs available but the aim here is only to develop an idea about the general magnitude of the changes.

For RMBS the spreads are shown for different countries (page 13). The situation is therefore less clear-cut than for CMBS but the maximum change in spreads over 12 months was at least 250 basis points for European 3-5 Year AAA RMBS. The corresponding value for BBB was 1.500 basis points.

The same caveat as for RMBS applies also for ABS (page 14). The values here are 300 basis points for AAA and 2.000 basis points for BBB.

For BBB the observed 12-month maximum spread change for CMBS and ABS was above the 1.970 basis points implied by the standard formula calibration (for CMBS significantly higher).¹⁹ For AAA the maximum 12 month spread change for CMBS was quite close to the 1.250 basis point change implied by the standard formula while lower for the other underlyings. But there is uncertainty about the future composition of the non-STS securitisations for standard formula insurers.

In summary, the considerations above might be seen as an indication that no changes to the calibration for non-STS securitisations are warranted.

Another approach could be to use the results that EIOPA produced for the so called “Type B” securitisations (which did not meet the quality criteria required for type A”) as a proxy for non-STS securitisation. The results derived then (which entered into the current calibration for non-STS securitisations) would probably not be considerably different if the period considered was expanded

¹⁹ The results would probably not be considerably different if one looked at the period 2008 to 2021 and calculated the empirical 99.5 % one-year VaR of the spreads. Assuming 260 trading days the empirical VaR would correspond roughly to the 18th highest 12-month drop in spreads. Given the development of the spreads as illustrated in the referenced report this value should not be meaningfully lower than the estimate provided above.

until the end of 2021.²⁰ The question is of course how representative Type 2 securitisations are for non-STS securitisations²¹.

2.2.4. COMPARISON WITH NON-SECURITISED ASSETS WITH SIMILAR RISK CHARACTERISTICS

Based on the tables shown on Section 1 page 15, risk charges for Senior STS are slightly higher than the ones for corporate bonds (and somewhat more for covered bonds). The European Commission took the positive changes introduced by the STS framework into account in the legislative changes it introduced in 2018. As set out above there is not yet enough evidence in the meantime to decide whether further adjustments are justified. With respect to covered bonds it should be noted that the lender has dual recourse to the issuer as well as to the underlying pool of assets.

Non-STS securitisations do not benefit from the improvements introduced by the STS regulation which provides a reliable framework. The 2007 to 2009 episode illustrates the possible effect that a loss of investor confidence in an asset class can have. Based on data from this period it is argued that the current calibration is still adequate.

2.2.5. ADVICE ON IMPROVED RISK SENSITIVITY

Based on the findings of this section, it is believed that the overall risk sensitivity of the Solvency II risk charges with regards to STS is appropriate. More time and more observations are needed in order to consider changes to the existing framework for the STS securitisation.

Risk sensitivity can be obtained at a more granular level by including additional tranches (mezzanine and junior) as well as by splitting the Non-STS segment into senior and non-senior. These are explored in more detail in section 3 of the report. Overall EIOPA considers that the current framework is fit for purpose. At this stage, the evidence is that the calibration for the STS is correct and the analysis so far does not justify a change in the calibration for securitisations that do not meet the STS criteria.

Questions to stakeholders

Q3: Do you have evidence that the current calculation for capital requirements for securitisation (senior STS, non-senior STS and Non-STS) is not proportionate or commensurate with their risk?

²⁰ The period considered by EIOPA in 2013 was between January 2007 and August 2013. Assuming 260 trading days the additional years would shift the empirical 99.5 VaR of the spreads from roughly the 8th largest increase in spreads to the approximately the 18th one.

²¹ The securitisations considered for the calibration of type 2 securitisations are set out in page 131 in EIOPA (2013): Technical Report on Standard Formula Design and Calibration for Certain Long-Term Investments. EIOPA/13/513.

Q4: Do you agree with the calibration method used on this paper? Do you have any evidence that an alternative method could have been used?

Q5: Do you agree with the conclusions obtained in this section? Do you have any evidence which suggests that the conclusions could be different?

2.3 RECOMMENDATIONS LAID OUT IN THE HIGH LEVEL FORUM²² (HLF) REPORT

Extract from the CfA sections covered in this section:

Follow-up recommendations

The JC is, in particular, invited to consider for these purposes the recommendations laid out in the HLF Report for recalibrating capital charges applied to senior tranches under the CRR and for recalibrating the capital treatment of securitisation tranches under Solvency II (see pages 61-62 of the HLF Report).

Regarding Solvency II, the [HLF report](#) recommends that the capital charges for securitisation positions should be recalibrated to reduce the current gap between the shocks applied under stress-testing to mezzanine and senior STS tranches as well as the gaps between respective STS and non-STS tranches based on additional data and common methodology.

The HLF report also recommends that the stress factors applied to senior STS and Non-STS tranches should be realigned where justified with those for equally rated corporate and covered bonds, while the stress factors for senior securitisation tranches must be commensurate with their risk and in principle lesser than those applied to the respective underlying exposures on a stand-alone basis.

As exposed before, different policy options and calibration methodologies, aligned with those recommendations, are being envisaged by EIOPA and should well respond to the proposals made in the HLF report:

- On capital charges, the analysis is performed in section 2.1 ;
- On the comparison between securitisation and corporate and covered bonds, the analysis appears in section 1 ²³;

²² https://ec.europa.eu/info/sites/default/files/business_economy_euro/growth_and_investment/documents/200610-cmu-high-level-forum-final-report_en.pdf

²³ "Given the nature of securitisation and its added risk, a slightly higher capital charge is applied compared to the other two asset categories. However, this difference is unlikely to explain the small amounts of investments made by insurers in this particular asset category. Other reasons also have to be taken into account such as the complexity of this asset product or legal provisions that make

- On the granularity of the tranches, the analysis and comparison with CRR is performed in section 3.

such investment more complicated than in other asset classes. We expect that the responses to the questionnaire will give us information on this.”

3. TREATMENT OF SECURITISED PRODUCTS WITHIN CRR AND COMPARISON WITH SOLVENCY II

Key findings of this section:

The Commission requested to assess whether Solvency II framework could be elaborated in a manner coherent with the CRR's securitisation framework on the four following points. EIOPA remains open to change on points (i) and (iii) as described below:

- i) Treatment for STS and non-STS securitisations:** EIOPA is open to split the non-STS category into two credit tranches in Solvency II: one senior and one non-senior. Such change could improve consistency with the STS category, improve consistency with the banking framework (CRR) and make the existing framework risk sensitive in a more granular way.

- ii) Link between the capital requirement of securitisation and capital requirement of underlying exposures:** It seems not desirable under Solvency II to calculate the capital charges for securitisation positions based on the underlying exposures. Indeed:
 - Applying a look-through treatment as in CRR and estimating the market value of the underlying assets would not be adapted and would be burdensome for insurers, considering the valuation methodology under Solvency II where capital requirements are calibrated in order to be used on the market value of assets, and not the exposure.
 - Also, the securitisation entails additional risks which are not present in the underlying exposures itself. The spread risk of a securitisation is in general higher than the spread risk of its underlying exposure. The additional risks of the securitisation must be taken into account in a risk-sensitive calibration.

- iii) Granularity of the treatment of tranches:** EIOPA is open to differentiate between mezzanine and junior the current non-senior STS tranche in Solvency II. Such change could improve consistency with the banking framework (CRR) and increase the risk sensitivity in a more granular way for the existing framework.

- iv) Hierarchy of approaches:** it seems not desirable to suggest an additional approach or modify the standard formula with the concept of underlying exposures (same rational as above).

Overview of Solvency II and CRR

The Commission requests the JC to assess whether the existing calibration method of Solvency II could be elaborated in a manner coherent with the overall Solvency II framework providing for more consistency with the CRR's securitisation framework. However, it should be noted that some structural differences characterise the banking and insurance prudential frameworks:

- Coverage of different risks (credit risk for the CRR and spread for Solvency II);
- In the banking regulation there are no standardized valuation criteria ;
- The capital requirements consider only the items of the assets side, no liabilities;
- The requirement to distinguish between expected and unexpected losses applies only to those banks that have elected to use the Internal Ratings-Based (IRB) approach to credit risk ;
- The requirement to distinguish between expected and unexpected losses applies only to those banks that have elected to use the IRB Approach to credit risk.

When it comes down to securitisation:

<p>Solvency II: $SCR_{\text{securitisation}} = \text{market value} * \text{shock}$</p>	<ul style="list-style-type: none"> - Market value consistent - Shocks take into account the securitisation category, credit tranche, modified duration and credit quality steps (CQS).
<p>CRR: $\text{Capital requirement} = 8\% \text{ or } 12\% * \text{exposure value} * \text{risk-weight}$</p>	<ul style="list-style-type: none"> - Exposure value²⁴ - Risk-weights take into account the maturity

- Recognition of diversification in Solvency II
- Loss-absorbing effect of technical provisions and deferred taxes recognised in Solvency II
- Solvency II measures risk in terms of changes in market values and determines capital requirement as 99.5 % one-year Value-at-Risk of Own Funds. CRR differs between trading book (99% Value-at-Risk over 10 days) and banking book (credit risk driven, not market value based).

²⁴ Initial amount of money that the institution has invested in an asset.

The banking approach of the financial risk stemming from investments in securitised products is defined within the Capital Requirements Regulation (CRR)²⁵ and developed within the credit risk module (such a separate module is not foreseen in the Solvency II risk tree).

The following part will be treated as followed: at first, the different approaches used under CRR for the calculation of the capital requirements will be explained. Secondly, the comparison of the treatment between STS and non STS products will be compared between both Solvency II and the most similar approach under CRR, SEC-ERBA. Thirdly, the granularity of the treatment of tranches used under CRR will be detailed and put in front of Solvency II. Finally, a link between capital requirements for securitisations and the capital requirements for the underlying exposures will be made.

3.1 DIFFERENTIATED TREATMENTS FOR STS VS. NON-STS SECURITISATIONS

Extract from the CfA covered in this section:

In addition, the Commission requests the JC to assess whether the existing calibration method of Solvency 2 could be elaborated in a manner coherent with the overall Solvency 2 framework providing for more consistency with the CRR's securitisation framework. This alternative method should, in particular, provide for the following:

(i) Differentiated treatments for STS vs. non-STS securitisations

3.1.1 DESCRIPTION IN DIFFERENTIATED TREATMENTS FOR STS VS NON STS

CRR STS Securitisation

For an STS securitisation, for the external rating based approach under CRR (SEC-ERBA), the risk-weight is determined by the external rating of the tranche, its seniority, thickness²⁶ and its maturity²⁷ as defined in article 264 CRR. In this aspect, two categories are distinguished:

- Short-term credit assessment with 4 credit quality step (1, 2, 3 and "all other ratings")
- Long-term credit assessment with 18 credit quality step (1 to 17 and "all other") adjusted in 2 categories:
 - o Senior tranches with 2 maturity : 1 year and 5 years ;

²⁵ Regulation (EU) 2017/2401 (the EU CRR Amendment Regulation) which makes the capital treatment of securitisations for banks and investment firms under the Capital Requirements Regulation (EU) 575/2013 (EU CRR) more risk-sensitive and able to reflect properly the specific features of STS securitisations

²⁶ Size of the tranche relative to the entire securitisation transaction.

²⁷ Effective maturity that is remaining and is expressed in years.

- Non-senior tranches with also the 2 above maturities.

It should be noted that tranche maturity is the tranche’s remaining effective maturity in years and it can be measured at the banks discretion. In this context, banks have to choose between calculating the maturity as:

- 1) the weighted average maturity of the contractual payments due under the tranche, or
- 2) the final legal maturity of the tranche.

For long-term exposures, in order to determine the risk weight for tranches with a maturity between 1 and 5 years, institutions have to use linear interpolation between the risk weights applicable for 1 and 5 years maturity. The determination of a tranche maturity is subject in all cases to a floor of 1 year and a cap of 5 years.

For long-term exposures for non-senior tranches, the tranche thickness is also taken into account (see part below on the granularity of the treatment of tranches).

For STS securitisation, the resulting risk weight is subject to a floor risk weight of 10% for senior tranches and 15% for non-senior tranches.

The presence of caps to risk weights of senior tranches and limitations on maximum capital requirements (1250%) aim to promote consistency with the underlying IRB framework and not to disincentive securitisations of low credit risk exposures.

CRR non-STIS Securitisation

Similar to STS securitisation, the risk-weight is also determined by the external rating of the tranche, its seniority, thickness and its maturity as defined in article 263 CRR, with the same 2 categories as for STS securitisation, short-term and long-term exposures. The difference between STS and non-STIS securitisation being the level of the risk-weight that are higher for non-STIS securitisation. A risk-sensitive prudential treatment in a more granular way is provided for STS securitisations. A risk-sensitive prudential treatment in a more granular way is provided for STS securitisations.

3.1.2 ANALYSIS

Comparison Solvency II/CRR

	Solvency II	CRR
Prudential treatment applied to	Treated as a spread risk Shock applied directly to the market value of the product	Treated as a credit risk

<p>securitised products</p>	<p>Shock determined according to several tables presented in the DR depending on :</p> <ul style="list-style-type: none"> - seniority, - credit quality step (CQS 0 to 6), - modified duration (from 1 to more than 20), - STS/non STS character - Non STS securitised products <u>are not</u> differentiated between senior and non-senior tranches 	<p>SEC-ERBA (external rating based approach) : risk-weight provided from tables and applied based on :</p> <ul style="list-style-type: none"> - rating type (long/short), - for long-term exposures : external credit assessment (CQS 1 to 17), - tranche maturity (1 and 5 years), - tranche thickness for non-senior tranches, - STS/non-STS character - Non STS securitised products <u>are</u> differentiated between senior and non-senior tranches
<p>Capital requirements</p>	<p>Capital requirement = market value * shock</p> <p>After applying the shock to the products, the capital requirements of securitised products benefit from risk diversification.</p>	<p>Capital requirement = 8²⁸% or 12%²⁹ * exposure value * risk-weight</p> <p>There is no concept of “diversification” of risks under CRR.</p>

3.1.3 POLICY OPTIONS

One can propose, in order to increase the risk sensitivity of the prudential framework but also make it more consistent with the STS category, to split the non-STS category into 2 credit tranches: one senior and one non-senior.

<p><i>Policy option 1: No change with regards to the granularity of the Non-STS category.</i></p>
<p><i>Policy option 2: Split the Non-STS category into two credit tranches: one senior and one non-senior.</i></p>

²⁸ Pillar 1 requirement

²⁹ Pillar 2 and the capital buffers

Impact of the options on the financial position and investment

A segmentation of this category within Solvency II would better reflect the risks that investors are exposed to when investing and could lead to more investment in this category, taking into account also the higher appetite of insurers for non-STS securitisation products (see part I).

Assessment of the options: PROS / CONS

The following tables set out the pros and cons of Option 1 and 2:

Option 1: No change	
Pros	Cons
No additional complexity added to Solvency II framework.	Less risk-sensitive capital charges, making the senior non-STS category potentially less appealing for insurers.

Option 2: Split the non-STS category into 2 credit tranches: one senior and one non-senior. New risk factors would be proposed.	
Pros	Cons
Avoidance of possible disincentive for Senior non-STS securitisation	Increasing the complexity of the framework could lead to less investment in this category, taking into account also the current low appetite of insurers for securitisation products.
Increased risk sensitivity in a more granular way.	There is no calibration of what any new risk factors would be.
Consistency with the STS category.	
Consistency with the banking framework (CRR).	

3.1.4 CONCLUSION

It could be desirable to increase the risk sensitivity by making the framework more granular. This would bring consistency with the STS category within Solvency II but also with the CRR. However, one downside is that it will further increased the (already high) number of risk charges in Solvency II for securitisation while the volume of investment is very low.

3.2 SECURITISATION AND UNDERLYING EXPOSURES

Extract from the CfA covered in this section:

In addition, the Commission requests the JC to assess whether the existing calibration method of Solvency 2 could be elaborated in a manner coherent with the overall Solvency 2 framework providing for more consistency with the CRR's securitisation framework. This alternative method should, in particular, provide for the following:

(ii) a link between capital requirements for securitisations and the capital requirements for the underlying exposures, including a cap based on the capital requirements of the underlying portfolio of assets as a backstop to the capital requirements on the securitisation positions.

3.2.1 DESCRIPTION OF THE LINK BETWEEN CAPITAL REQUIREMENTS FOR SECURITISATIONS AND THE CAPITAL REQUIREMENTS FOR THE UNDERLYING EXPOSURES UNDER CRR

The securitisation framework applicable since 2019 with the introduction of the STS label included also, under CRR, caps on capital charges (driven by the capital requirements that would be applied to the underlying exposures if they had not been securitised) and a “look-through” treatment which applies to senior securitisation positions. For these exposures, an institution can apply a risk weight equal to the weighted-average risk weight applicable to the underlying exposures.

Article 267 of the CRR (“maximum risk weight for senior securitisation positions: look-through approach”) stipulates that: “*an institution which has knowledge at all times of the composition of the underlying exposures may assign the senior securitisation position a maximum risk weight equal to the exposure-weighted-average risk weight that would be applicable to the underlying exposures as if the underlying exposures had not been securitised*”.

3.2.2 ANALYSIS

While the assessment of the risk of a securitisation requires to relate the risk to some extent to its underlying exposures, it is not sufficient to just perform a look-through approach for the

securitisation products. It is important to emphasize that the securitisation entails additional risks which are not present in the underlying exposures itself. These potential additional risks are particularly adverse selection and contagion risks, the latter is especially pronounced in an economic crisis as it has been observed in the period of financial crisis. While adverse selection risks, particularly the risk that underlying exposures with a poorer credit quality are put in the securitisation, might be reduced for STS- due to its specific design and legal provisions- compared to other types of securitisations, contagion risks are still present. Contagion risks imply that several underlying exposures might default in a period of economic stress and therefore the probability of default (PD) of a securitisation is usually higher than the PD of an underlying exposure with a same rating. Accordingly the credit risk of a securitisation is in general higher than the credit risk of its underlying exposure. The additional risks of the securitisation need to be taken into account in a risk-sensitive calibration of securitisations in general and STS as well, thus the higher capital charges applied in comparison to bonds and loans.

Additionally, transferring this concept to Solvency II for the securitisation positions would be complex, burdensome and not adapted to Solvency II given the fact that capital requirements are calibrated in order to be used on the market value of assets, and not the exposure. This concept is therefore not desirable under Solvency II to calculate the capital charges for securitisation positions.

3.2.3 CONCLUSION

No options are suggested in this area.

3.3 GRANULARITY OF THE TREATMENT OF TRANCHES UNDER CRR

Extract from the CfA covered in this section:

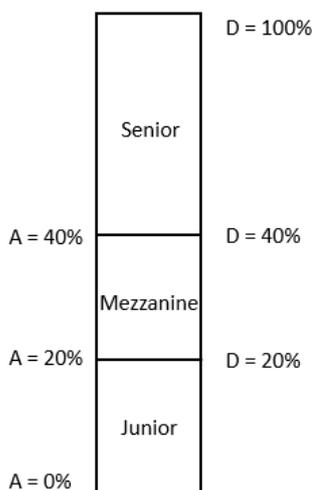
In addition, the Commission requests the JC to assess whether the existing calibration method of Solvency 2 could be elaborated in a manner coherent with the overall Solvency 2 framework providing for more consistency with the CRR's securitisation framework. This alternative method should, in particular, provide for the following:

(iii) the granularity of the treatment of tranches as characterised by their attachment and detachment points;

3.3.1 DESCRIPTION OF ATTACHMENT AND DETACHMENT POINTS WITHIN THE CRR

CRR takes into account the thickness of the tranche relative to the size of the overall pool. To do so, the tranches are defined by an attachment³⁰ and a detachment point³¹ expressed as a decimal value between zero and one (article 256 CRR).

The riskiness of a tranche decreases with the tranche's seniority. For example, a junior tranche, could have an attachment point of 0% and a detachment point of 20%, of the pool exposure. This tranche would be intact if there are no losses but it would be partly consumed with the first losses as shown in the example below. When losses reach 20% of the pool exposure, the junior tranche is completely consumed. The mezzanine tranche with attachment and detachment points of 20% and 40%, respectively, is initially protected (the junior tranche being consumed at first). But it would be affected as soon as losses exceed 20% of the pool. When losses reach 40% of the pool exposure, the mezzanine tranche is, in turn, completely consumed. Finally, a senior tranche with attachment and detachment points of 40% and 100% respectively will be the most protected, starting to incur losses only when both the junior and mezzanine tranches are consumed. To simplify:



- The attachment point (A) indicates the minimum of pool-level losses at which a given tranche begins to suffer losses.

³⁰ "Expressed as a decimal value between zero and one and shall be equal to the greater of zero and the ratio of the outstanding balance of the pool of underlying exposures in the securitisation minus the outstanding balance of all tranches that rank senior or pari passu to the tranche containing the relevant securitisation position including the exposure itself to the outstanding balance of all the underlying exposures in the securitisation" (article 256 CRR)

³¹ "Expressed as a decimal value between zero and one and shall be equal to the greater of zero and the ratio of the outstanding balance of the pool of underlying exposures in the securitisation minus the outstanding balance of all tranches that rank senior to the tranche containing the relevant securitisation position to the outstanding balance of all the underlying exposures in the securitisation" (article 256 CRR).

- The detachment point (D) corresponds to the amount of pool losses that completely wipe out the tranche.

In order to calculate the risk-weights for long-term exposures for non-senior tranches when SEC-ERBA is used, banks have to take into account the thickness of the tranche, which corresponds to the difference between the detachment and attachment points. Therefore, institutions calculate risk-weights as follows:

$$\text{Risk Weight} = (\text{risk weight of non – senior tranches adjusted to maturity}) * (1 - \min(T; 50\%))$$

Where T is the tranche thickness measured as $D-A$

For senior tranche, this concept does not apply, the risk-weights being already available in the look-up table in article 263 and 264 CRR.

3.3.2 ANALYSIS

The inclusion of such concepts allow CRR to be sensitive in a more granular way for non-senior tranches. Theoretically, it could be feasible to integrate the same concept within Solvency II. The objective being to make the risk-weights more unfavourable for thin tranches. Thinner tranches bringing more risks, a thick tranche represents a larger portion of the pool and, as a result, has lower principal sensitivity to losses.

However, it is not recommended to adopt this approach for Solvency II considering the fact that it would be too burdensome for insurers to integrate them. The proportion of investment in securitisation being already low for insurers, the prudential treatment should be kept simple and not add additional burden with complex concepts.

Instead, in order to increase the risk-sensitivity of the existing framework, one can propose instead, to split the current non-senior tranche of STS securitisation into 2 tranches: mezzanine and junior. This suggestion would take into account the fact that the riskiness of a tranche decreases with the tranche's seniority.

3.3.3 POLICY OPTIONS

Policy option 3: No change with regards to the granularity of the STS category.

Policy option 4: Split the current non-senior STS category into two credit tranches: one mezzanine and one junior.

Impact of the options on the financial position and investment

A segmentation of this category within Solvency II would better reflect the risks that investors are exposed to when investing and could lead to more investment in this category.

Assessment of the options: PROS / CONS

Option 3: No change

Option 4: Split the current non-senior STS category into 2 credit tranches: one mezzanine and one junior. New risk factors would be proposed.

The following tables set out the pros and cons of Option 3 and 4:

<u>Option 3:</u> No change	
Pros	Cons
No additional complexity	Less risk-sensitive capital charges, making the mezzanine STS category potentially less appealing for insurers (as claimed by some stakeholders).
<u>Option 4:</u> Split the current non-senior STS category into 2 credit tranches: one mezzanine and one junior. New risk factors would be proposed.	
Pros	Cons
Risk-sensitive capital charges in a more granular way.	Increasing the complexity of the framework could lead to less investment in this category, taking into account also the current low appetite of insurers for securitisation products.
Taking into account the mezzanine tranche in the prudential treatment would lead to more consistency with the banking framework (CRR).	No consistency with other asset classes within Solvency II.
Avoidance of potential disincentive for mezzanine STS category.	New risk factors would have to be calibrated without knowing if insurers would invest in such tranches, considering also the current low proportion of investments in the STS category (cf. part I.).

3.3.4 CONCLUSION

Within Solvency II it is implied that the risks for mezzanine and junior tranches for STS and non-STS are the same (same capital charges applied). Therefore, in order to increase risk-sensitivity in a more granular way regarding tranches for STS, it could be desirable to split the current non-senior tranche of STS securitisation into two tranches: mezzanine and junior. This segmentation could add value to the existing framework.

3.4 HIERARCHY OF APPROACHES

Extract from the CfA covered in this section:

In addition, the Commission requests the JC to assess whether the existing calibration method of Solvency 2 could be elaborated in a manner coherent with the overall Solvency 2 framework providing for more consistency with the CRR's securitisation framework. This alternative method should, in particular, provide for the following:

(iv) a hierarchy of approaches similar to that currently set out in the CRR SEC-IRBA (Internal Ratings Based Approach), SEC-SA (Standardised Approach) and SEC-ERBA (External Ratings Based Approach).

3.4.1 DESCRIPTION OF THE HIERARCHY OF APPROACHES WITHIN THE CRR FRAMEWORK

The capital requirement to cover banks' securitisation exposures is calculated by multiplying the amount of the exposure by the appropriate risk weight determined according to the hierarchy of approaches. There are three different approaches under CRR. The hierarchy of these approaches relies on the information that is available to the bank and on the type of analysis and estimations that it can perform on a specific transaction. They can be summarized as follows:

- The bank must first use the approach based on internal ratings: **SEC-IRBA**, Internal Ratings-Based Approach :
 - o The IRBA for credit risk relies on credit institutions' own credit risk assessment of their counterparties and exposures to calculate capital requirements for credit risk.
 - o The risk weight under the SEC-IRBA is subject to a floor of 15%, unless the securitisation position meets the STS criteria, in which case the capital surcharge is halved and the risk weight floor is set at 10%.
 - o The capital charge for the underlying exposures in the securitisation pool (" K_{IRB} "): Institutions determine K_{IRB} by multiplying by 8% the risk-weighted exposure amounts that would be calculated in respect of the underlying exposures as if they had not been securitised, divided by the exposure value of the underlying exposures (article 255 CRR).

- Institutions using this approach also have to determine the attachment point (A) and detachment point (D) separately for each of the positions (article 259 CRR – see part 3.2 for more details on these concepts).
 - **This approach could be the closest to the internal models under Solvency II.** Indeed, an undertaking may use an internal model, rather than the standard formula, to calculate its solvency capital requirement. Such use is subject to the national supervisory authority's approval.
 - A comparison between the capital charges in the IRB approach and Solvency II is not straightforward.
- If the bank cannot use the SEC-IRBA approach, it will have to apply the Standard Approach, **SEC-SA**:
- This approach relies on a provided formula using as an input the capital requirements that would be calculated under the existing standardised approach.
 - Capital requirements would be calculated using the following bank-supplied inputs :
 - The capital charge under the Standardised Approach for the underlying exposures in the securitisation pool (“ K_{SA} ”): Institutions calculate K_{SA} by multiplying by 8% the risk-weighted exposure amounts that would be calculated in respect of the underlying exposures as if they had not been securitised, divided by the value of the underlying exposures (article 255 CRR).
 - A factor, “W”, being the ratio of the nominal amount of delinquent exposures³² in the underlying pool to the nominal amount of the total underlying exposures;
 - Once again, the risk-weight floor under the SEC-SA is 15%, with the exception of STS securitisations for which the capital surcharge is halved and the risk weight is floored at 10%.
- Finally, if the bank cannot use the SEC-SA, it must use the External Ratings-Based Approach, **SEC-ERBA**, which is based on external credit ratings:
- This approach includes the requirement that external ratings (known as external credit assessments) must be from one or more eligible credit assessment institutions (ECAIs³³).
 - The bank will be required to refer to the applicable look-up table containing risk weights for short-term and long-term ratings respectively.

³² Delinquent exposures are exposures that are 90 days or more past due, subject to bankruptcy or insolvency proceedings, in the process of foreclosure, held as real estate owned, or in default, where default is defined within the securitisation deal documents.

³³ As for Solvency II, the link between the CQS and the corresponding credit assessments are provided by the External Credit Assessment Institutions (ECAIs) through a common and provided mapping.

Since the main inputs to approaches are so different (pool regulatory capital versus agency ratings), it is easy for the capital levels implied by the SEC-ERBA and the formula-based approaches to diverge substantially.

3.4.2 ANALYSIS

Current Solvency II rules for the standard formula are the closest to the external ratings approach of CRR (SEC-ERBA). Under the standard formula, insurers use a risk factor based on a look-up table. Under Internal Models, insurers use a risk factor based on their own assessment, with prior supervisory approval. Both the alternatives for banks, internal models and standardized approach, use the underlying asset capital requirement as a basis for the securitisation capital requirement. Transferring this to Solvency II would be complex.

Theoretically, the Solvency II capital requirement is the difference in own funds value between two balance sheets, in which assets are included at their market value. Therefore stresses to assets in order to calculate that capital requirement should refer whenever possible to the market value.

Practically, for some investments such as loans and mortgages, Solvency II does not have any floor to the cost of capital. A calculation based on the cost of capital of the underlying assets might underestimate the securitisation SCR, especially for junior tranches.

Unlike CRR, Solvency II capital requirements are calibrated in order to be used on the market value of assets, and not the exposure. For on-traded assets such as loans and mortgages, estimating the market value of the underlying assets would be more complex than estimating the market value of the securitisation.

Additionally, there are no requirements for insurers to report or even calculate the underlying exposure of their securitisation position. Using the underlying exposure would create an undue burden on insurers.

It is therefore not possible to integrate such concepts within Solvency II considering the fact that it would not be coherent with the rest of the framework.

3.4.3 CONCLUSION

No options are suggested in this section.

3.5 AGENCY AND MODELLING RISK

Extract from the CfA covered in this section:

In its advice, the JC is particularly invited to reflect about agency and modelling risk and how they differ between STS and non-STS securitisations.

Description under CRR

Under CRR, besides the re-calibration of the three approaches in order to generate lower capital charges for positions in transactions qualifying as STS securitisations, the regulation introduced, for senior positions in STS securitisations, a lower floor of 10% (instead of 15%, which will remain applicable to both non-senior positions in STS securitisations and to non-STs securitisations more generally)³⁴. Over time, senior STS tranches have performed materially better than non-senior STS tranches³⁵.

Definition of agency and modelling risk and application to Solvency II

The large number of parties involved in a securitisation transaction brings about **agency risk**, a special form of operational risk in which individual parties involved in the transaction (agents) may take advantage of discretionary freedom to the detriment of the investors (principals).

An **agency risk** arises when principals (shareholders or investors) appoints agents (employees or managers) to act on their behalf. The interests of those principals and agents are not necessarily aligned. This so-called incentive conflict is a key feature of any agency problem. Lack of information about the activities of the agents (information asymmetry) is a key factor in agency problems as it prevents principals from adequately protecting their own interests.

Securitisation-specific agency risks (which can be allocated to the category of general operational risks) could result from the numerous contractual relationships among the parties involved in a securitization transaction, in combination with the existing information asymmetries between the parties. As the principal, the special-purpose vehicle commissions the other parties involved (agents) without being able to monitor their actions directly. This leaves the agents a certain latitude for discretionary action which they could use to their own benefit and to the detriment of the special-purpose vehicle as well as the investors (moral hazard). This agency risk is exacerbated in cases where the agent has access to specific information (e.g. defaults which become known to the servicer) and withholds it from the principal. Examples of potential agency risks include the following:

- Disregard for the criteria defined for selecting receivables on the part of the originator;
- Failure to report losses on the part of the servicer;

³⁴ See part 3.4 on hierarchy of approaches

³⁵ [https://www.europarl.europa.eu/RegData/etudes/BRIE/2017/608778/EPRS_BRI\(2017\)608778_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2017/608778/EPRS_BRI(2017)608778_EN.pdf)

- Lack of motivation on the part of the servicer to collect receivables on time and as completely as possible, as the securitisation is intentionally drawn on as insurance against losses;
- Insufficient monitoring of the transaction by the trustee or the violation of payout arrangements — Attempts to exercise influence on rating calculations and
- Maximization of fee income by the arranger or the bank syndicate at the expense of the available payment flows.

The avoidance of agency risks is to be ensured in the structuring of the transaction and in ongoing risk monitoring.

Model risk is a type of risk that occurs when a financial model is used to measure quantitative information such as a firm's market risks or value transactions, and the model fails or performs inadequately and leads to adverse outcomes for the firm.

Securitisation is a funding technique converting balance sheet exposures that are normally not tradable into tradable securities placed by the originator with the aim of raising funds. The transformation process entails the tranching of the credit risk related to the exposures being securitised; consequently, institutions also use the securitisation tool for significant risk transfer and capital relief purposes.

The transformation process may be complex to structure and operationalise: the risks arising in a securitisation transaction include, but are not limited to, the model risk and the agency risk between the various participants in the securitisation process.

Against these complexities transactions may be structured so as to lack a sufficient degree of transparency towards investors and other market participants.

Given the different risk charges between STS and non-STS securitisation, these additional risks are therefore already reflected under the Solvency II framework.

3.6 ADDITIONAL INFORMATION

Extract from the CfA covered in this section:

In addition to the above, the Commission Services welcome recommendations from the JC on any other technical amendments that may be appropriate or desirable to improve the prudential capital

treatment of securitisations, as well as on desirable mechanisms to enhance consistency in the interpretation of the framework.

Use of maturity and duration

Under CRR, the risk weight uses the maturity of the securitisation as reference, which is the time remaining until the payment of the nominal value of the bond. Under Solvency II, the stress uses the modified duration of the securitisation as reference, which is the sensibility of the asset price to a change in interest rate value.

The principle of Solvency II asset stresses that they model the loss in own funds from the loss of value of an asset. Securitisations are subject to the spread risk, which models the loss of value from a change in spread levels. The modified duration is a better reference compared to the duration when assessing the exposure to change in spread levels. Therefore, it is more appropriate to use in the Solvency II framework.

Questions to stakeholders

Q6: What is your view on the proposed segmentation of the STS category: should the calibration of the Non-Senior STS Securitisation be differentiated between mezzanine and junior? (Option 1 or 2 of page 31) Please explain your view. If Option 2 is your preference, do you think it would encourage you to invest more into securitisation with the STS label?

Q7: What is your view on the preliminary conclusion not to implement the underlying exposure risk as a basis for the securitisation risk charges in Solvency II? Do you have any evidence which suggests that this conclusion could be different?

Q8: What is your view on the preliminary conclusion not to implement the considerations for the thickness of non-senior tranches in Solvency II? Do you have any evidence which suggests that the conclusions could be different?

Q9: What is your view on the proposed segmentation of the non STS category: should the calibration of the non STS securitisation be differentiated between senior and non-senior? Please explain your view. (Option 3 or option 4 of page 36)? If Option 4 is your preference, do you do you think it would encourage you to invest more into Non-STS securitisation?

Q10: What is your view on the preliminary conclusion not to implement the hierarchy of approaches in Solvency II? Do you have any evidence which suggests that this conclusion could be different?

Q11: Do you consider that agency and modelling risks are reflected in an appropriate manner in Solvency II? If the answer is "No", please elaborate on the changes that you deem necessary.

Q12: What is your view on the preliminary conclusion not to use the maturity (as in CRR) for the Solvency II framework?

Q13: Do you consider that other technical amendments may be appropriate or desirable to improve that treatment of securitisation in Solvency II? If the answer is “Yes”, please elaborate on the changes that you deem necessary.

4. QUESTIONS TO STAKEHOLDERS

Stakeholder questions included in the consultation paper:

- **Question 1:** Do you have any comment on the comparison of the securitisation capital charges with other asset classes with similar characteristics? (Section 1 – page 16)
- **Question 2:** Do you see practical or legal difficulties in investing in securitisation with the STS label? Are you aware of any other factors, including regulatory rules other than capital requirements that could have a major impact on securitisation investment levels? (Section 1 page 16)
- **Question 3:** Do you have evidence that the current calculation for capital requirements for securitisation (senior STS, non-senior STS and Non-STs) is not proportionate or commensurate with their risk? (Section 2 page 24)
- **Question 4:** Do you agree with the calibration method used in this paper? Do you have any evidence that an alternative method could have been used? (Section 2 – page 25)
- **Question 5:** Do you agree with the conclusions obtained in this section? Do you have any evidence which suggests that the conclusions could be different? (Section 2 – page 25)
- **Question 6:** What is your view on the proposed segmentation of the STS category: should the calibration of the Non-Senior STS Securitisation be differentiated between mezzanine and junior? (Option 1 or 2 of page 31) Please explain your view. If Option 2 is your preference, do you think it would encourage you to invest more into securitisation with the STS label? (Section 3 – page 43)
- **Question 7:** What is your view on the preliminary conclusion not to implement the underlying exposure risk as a basis for the securitisation risk charges in Solvency II? Do you have any evidence which suggests that this conclusion could be different? (Section 3 – page 43)
- **Question 8:** What is your view on the preliminary conclusion not to implement the considerations for the thickness of non-senior tranches in Solvency II? Do you have any evidence which suggests that the conclusions could be different? (Section 3 – page 43)

- **Question 9:** What is your view on the proposed segmentation of the non STS category: should the calibration of the non STS securitisation be differentiated between senior and non-senior? Please explain your view. (Option 3 or option 4 of page 36)? If Option 4 is your preference, do you think it would encourage you to invest more into Non-STS securitisation? (Section 3 – page 43)
- **Question 10:** What is your view on the preliminary conclusion not to implement the hierarchy of approaches in Solvency II? Do you have any evidence which suggests that this conclusion could be different? (Section 3 – page 43)
- **Question 11:** Do you consider that agency and modelling risks are reflected in an appropriate manner in Solvency II? If the answer is “No”, please elaborate on the changes that you deem necessary. (Section 3 – page 43)
- **Question 12:** What is your view on the preliminary conclusion not to use the maturity (as in CRR) for the Solvency II framework? (Section 3 – page 44)
- **Question 13:** Do you consider that other technical amendments may be appropriate or desirable to improve that treatment of securitisation in Solvency II? If the answer is “Yes”, please elaborate on the changes that you deem necessary (Section 3 – page 44).

EIOPA

Westhafen Tower, Westhafenplatz 1

60327 Frankfurt – Germany

Tel. + 49 69-951119-20

info@eiopa.europa.eu

<https://www.eiopa.europa.eu>