



**RESPONSE TO THE EUROPEAN  
COMMISSION'S CFA ON STANDARDISED  
APPROACH FOR COUNTERPARTY CREDIT  
RISK AND OWN FUNDS REQUIREMENTS  
FOR MARKET RISK**

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# Contents

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<b>Executive summary</b>	<b>12</b>
Introducing greater proportionality	12
Paving the way for further impact monitoring and regulatory fine-tuning	13
Introducing a threshold for small derivative business	14
Increasing the threshold for small TB business	15
<b>Background</b>	<b>17</b>
<b>EBA policy recommendations</b>	<b>21</b>
<b>1. General advice on the CRR review</b>	<b>24</b>
1.1 Building on the EBA's experience – Avoiding a new CVA conundrum	24
1.2 Examples of technical parts of international standards best suited for delegated legislation	26
1.2.1 P&L attribution	26
1.2.2 Model validation standards	26
1.2.3 Reduced SBA	27
1.2.4 Other examples	27
1.3 Conclusion	27
<b>2. CCR</b>	<b>28</b>
2.1 Overview of CCR RWAs	28
2.1.1 Ratio of CCR RWAs to credit risk RWAs	29
2.1.2 Ratio of CCR and CVA RWAs to total RWAs	30
2.1.3 Breakdown by business model	31
2.2 Use of the existing approaches	32
2.2.1 SM	32
2.2.2 OEM	32
2.2.3 IMM	35
2.3 Assessment of a threshold for small derivative business	35
2.4 Assessment of the impact of the SA-CCR	37
2.4.1 BCBS Basel III monitoring exercise	37
2.4.2 Exposures under the CEM or the SM for CCR	38
2.4.3 Banks with exposures both under the CEM/SM and the IMM	40
2.5 Remaining issues and operational burden regarding the implementation of the SA-CCR – Industry feedback	41
2.5.1 Calibration of the SA-CCR	41
2.5.2 Consistency with the FRTB SBA	42
2.6 Conclusion	42
<b>3. MKR</b>	<b>45</b>
Data used for the analysis provided in the first section of the Cfa	46

Analysis of MKR activities in the EU	47
3.1 First part of the first section of the CfA – Overview of EU trading instruments and current market capital charges	48
3.1.1 The analysis of FV instruments	48
3.1.2 Analysis of market RWAs	61
Summary	74
3.2 Second part of the first section of the CfA – Assessment of the derogation for small TB	75
3.2.1 Introduction	75
3.2.2 Definition of the thresholds	75
3.2.3 Sample of participating institutions	76
3.2.4 Levels of the threshold assessed – RWA loss assumptions	77
3.2.5 Analysis of the composition of market RWAs and the impact of the derogation	78
Summary	91
3.3 Second section of the CfA – Impact of the new framework	93
3.3.1 Introduction	93
3.3.2 Data quality issues	93
3.3.3 Calibration of the new SA compared with the IMA	94
3.3.4 Overall impact of the FRTB for IMA banks	94
3.3.5 Analysis of the internal desk structure for IMA banks	96
3.3.6 Impact of the FRTB by trading activity – Industry feedback	99
3.4 Third section of the CfA – Impact of the new SA for EU banks	106
3.4.1 Operational impact of the implementation of the new SA	106
3.4.2 Capital impact of the implementation of the new SA	107
3.5 Fifth section of the CfA – Interpretational issues regarding the revised MKR framework	114
3.5.1 Issues with broken hedges due to uncertainty in maximum loss application	114
3.5.2 IMA	115
3.5.3 SBA	117
3.5.4 TB/BB boundary	120
3.6 Conclusion	122
<b>4. Annex 1 – Relevant CRR articles related to the derogation</b>	<b>126</b>
<b>5. Annex 2 – Impact analysis of the limited sample</b>	<b>129</b>
<b>6. Annex 3 – Granular impact analysis</b>	<b>142</b>

## List of figures

---

Figure 1. The EBA sample – Distribution of the ratio of CCR RWAs to credit risk RWAs	29
Figure 2. Smaller banks – Subsample of 1 013 banks – Distribution of the ratio of CCR RWAs to credit risk RWAs	30
Figure 3. The EBA sample – Distribution of the ratio of CCR+CVA RWAs to total RWAs	30
Figure 4. Smaller banks – Subsample of 1 013 banks – Distribution of the ratio of CCR+CVA RWAs to total RWAs	30
Figure 5. The EBA sample – Average of the ratio of CCR RWAs to credit risk RWAs and the ratio of CCR+CVA RWAs to total RWAs	31
Figure 6. Smaller banks – Subsample of 1 013 banks – Average of the ratio of CCR RWAs to credit risk RWAs and the ratio of CCR+CVA RWAs to total RWAs	31
Figure 7. Smaller banks using the OEM – Sample of 1 094 banks – Breakdown by business model	33
Figure 8. Number of institutions using the OEM in the EU	34
Figure 9. Distribution of the ratio of OEM to MtM exposure values	35
Figure 10. Breakdown of banks by threshold values for small derivative business	36
Figure 11. Number of banks reporting non-zero exposures in derivative transactions	38
Figure 12. Impact of moving from the CEM to the SA-CCR for exposures currently under the CEM in terms of exposure value	39
Figure 13. Impact of moving from the CEM to the SA-CCR for exposures currently under the CEM in terms of CCR RWAs	39
Figure 14. Share of derivative exposures under the SA or the IRB approach to credit risk	40
Figure 15. Overall impact of moving from the CEM to the SA-CCR for banks using both the CEM and the IMM in terms of exposure value	40
Figure 16. Overall impact of moving from the CEM to the SA-CCR for banks using both the CEM and the IMM in terms of RWAs	41
Figure 17. COREP, FINREP and business model data available for analysis, and number of jurisdictions that participated in the analysis	46
Figure 18. Composition of FV instruments – The EBA sample	49
Figure 19. Composition of FV instruments – Small banks	49
Figure 20. Relative importance of FV instruments – The EBA sample	50
Figure 21. Relative importance of FV instruments – Small banks	50
Figure 22. Type of FV instruments – The EBA sample	51

Figure 23. Type of FV instruments – Small banks	51
Figure 24. Asset instruments held by accounting category – The EBA sample	52
Figure 25. Asset instruments held by accounting category – Small banks	52
Figure 26. Liability instruments held by accounting category – The EBA sample	53
Figure 27. Liability instruments held by accounting category – Small banks	53
Figure 28. FV hierarchy by accounting category – The EBA sample	54
Figure 29. FV hierarchy by accounting category – Small banks	54
Figure 30. FV hierarchy by type of instrument – The EBA sample	55
Figure 31. FV hierarchy by type of instrument – Small banks	55
Figure 32. Relative importance of FV instruments per accounting classification and country – The EBA sample	56
Figure 33. Relative importance of FV instruments by accounting classification and country – Small banks	57
Figure 34. Relative importance of FV instruments per type of instrument and country – The EBA sample	58
Figure 35. Relative importance of FV instruments per type of instrument and country – Small banks	58
Figure 36. Relative importance of FV instruments per accounting classification and business model – The EBA sample	59
Figure 37. Relative importance of FV instruments per accounting classification and business model – Small banks	59
Figure 38. Relative importance of FV instruments by type of instrument and business model – The EBA sample	60
Figure 39. Relative importance of FV instruments by type of instrument and business model – Small banks	60
Figure 40. Overall composition of RWAs – The EBA sample	61
Figure 41. Overall composition of RWAs – Small banks	62
Figure 42. Scattering of market RWAs as a percentage of total RWAs by type of business model – The EBA sample	63
Figure 43. Scattering of market RWAs as a percentage of total RWAs by type of business model – Small banks	63
Figure 44. Interquartile distribution of market RWAs relative to total RWAs by type of business model – The EBA sample	64
Figure 45. Interquartile distribution of market RWAs relative to total RWAs by type of business model – Small banks	64

Figure 46. Scattering of market RWAs as a percentage of total RWAs by jurisdiction – The EBA sample	65
Figure 47. Scattering of market RWAs as a percentage of total RWAs by jurisdiction – Small banks	65
Figure 48. Interquartile distribution of market RWAs relative to total RWAs by jurisdiction – The EBA sample	66
Figure 49. Interquartile distribution of market RWAs relative to total RWAs by jurisdiction – Small banks	66
Figure 50. Scattering of market RWAs as a percentage of total RWAs by type of approach – The EBA sample	67
Figure 51. Scattering of market RWAs as a percentage of total RWAs by type of approach – Small banks	67
Figure 52. Overall composition of market RWAs under the SA – The EBA sample	68
Figure 53. Overall composition of market RWAs under the SA – Small banks	69
Figure 54. SA: Granular breakdown of market RWAs by type of business model – The EBA sample	70
Figure 55. SA: Granular breakdown of market RWAs by type of business model – Small banks	70
Figure 56. SA: Granular breakdown of market RWAs by jurisdiction – The EBA sample	71
Figure 57. SA: Granular breakdown of market RWAs by jurisdiction – Small banks	71
Figure 58. SA: Non-delta RWAs as a percentage of total market RWAs – The EBA sample	72
Figure 59. SA: Non-delta RWAs as a percentage of total market RWAs – Small banks	72
Figure 60. IMA: Overall composition of RWAs – The EBA sample	73
Figure 61. IMA: Absolute size of RWAs by type of approach – The EBA sample	73
Figure 62. Number of banks included under the different threshold definitions	79
Figure 63. Composition of market RWAs by selected levels under threshold 1	80
Figure 64. Composition of market RWAs by selected levels under threshold 2	80
Figure 65. Composition of market RWAs by selected levels under threshold 3	81
Figure 66. Composition of market RWAs by selected levels under threshold 4	81
Figure 67. Impact relative to market RWAs and total RWAs under threshold 1 of applying the BB approach to EQ and debt positions	82
Figure 68. Cumulative impact relative to market RWAs and total RWAs under threshold 1 of applying the BB approach to EQ and debt positions	82
Figure 69. Impact relative to market RWAs and total RWAs under relative threshold 1 of applying the BB approach to EQ and debt positions	83

Figure 70. Cumulative impact relative to market RWAs and total RWAs under relative threshold 1 of applying the BB approach to EQ and debt positions	83
Figure 71. Impact relative to market RWAs and total RWAs under threshold 2 of applying the BB approach to EQ and debt positions	84
Figure 72. Cumulative impact relative to market RWAs and total RWAs under threshold 2 of applying the BB approach to EQ and debt positions	84
Figure 73. Impact relative to market RWAs and total RWAs under relative threshold 2 of applying the BB approach to EQ and debt positions	85
Figure 74. Cumulative impact relative to market RWAs and total RWAs under relative threshold 2 of applying the BB approach to EQ and debt positions	85
Figure 75. Impact relative to market RWAs and total RWAs under threshold 3 of applying the BB approach to EQ and debt positions	86
Figure 76. Cumulative impact relative to market RWAs and total RWAs under threshold 3 of applying the BB approach to EQ and debt positions	86
Figure 77. Impact relative to market RWAs and total RWAs under relative threshold 3 of applying the BB approach to EQ and debt positions	87
Figure 78. Cumulative impact relative to market RWAs and total RWAs under relative threshold 3 of applying the BB approach to EQ and debt positions	87
Figure 79. Impact relative to market RWAs and total RWAs under threshold 4 of applying the BB approach to EQ and debt positions	88
Figure 80. Cumulative impact relative to market RWAs and total RWAs under threshold 4 of applying the BB approach to EQ and debt positions	88
Figure 81. Impact relative to market RWAs and total RWAs under relative threshold 4 of applying the BB approach to EQ and debt positions	89
Figure 82. Cumulative impact relative to market RWAs and total RWAs under relative threshold 4 of applying the BB approach to EQ and debt positions	89
Figure 83. Threshold 1 – Impact of relative thresholds in terms of the number of banks applicable for the derogation	90
Figure 84. Threshold 2 – Impact of relative thresholds in terms of the number of banks applicable for the derogation	90
Figure 85. Threshold 3 – Impact of relative thresholds in terms of the number of banks applicable for the derogation	90
Figure 86. Threshold 4 – Impact of relative thresholds in terms of the number of banks applicable for the derogation	90
Figure 87. IMA-only desks	95
Figure 88. IMA banks (including SA desks of IMA banks)	96
Figure 89. Desk number by institution	97
Figure 90. Desk frequency	98

Figure 91. P&L attribution test	99
Figure 92. Impact of capital charge for NMRFs in a bond portfolio	102
Figure 93. During the crisis, financials were far more volatile than covered or sovereigns	104
Figure 94. Estimated ROE by securitisation desk	105
Figure 95. SA-only banks	108
Figure 96. SA desks (SA banks + SA desks of IMA banks)	109
Figure 97. SBA vs current SA – General interest rate risk	110
Figure 98. SBA vs current SA – Specific IRR	111
Figure 99. SBA vs current SA – EQ	112
Figure 100. SBA vs current SA – FX	113
Figure 101. SBA vs current SA – Commodities	113



# Abbreviations

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<b>AFME</b>	Association for Financial Markets in Europe
<b>AfS</b>	Available for sale
<b>AVA</b>	Additional valuation adjustment
<b>BB</b>	Banking book (also referred to as 'non-trading book')
<b>BCBS</b>	Basel Committee on Banking Supervision
<b>CA</b>	Competent authority
<b>CCR</b>	Counterparty credit risk
<b>CDS</b>	Credit default swap
<b>CEM</b>	Current exposure method (also referred to as mark-to-market method)
<b>CIU</b>	Collective investment undertaking
<b>CMS</b>	Constant maturity swap
<b>COREP</b>	Common reporting framework (in accordance with Commission Implementing Regulation (EU) No 680/2014 of 16 April 2014)
<b>CP</b>	Consultative paper
<b>CPN</b>	Cross-product netting
<b>CRD</b>	Capital Requirements Directive
<b>CRR</b>	Capital Requirements Regulation
<b>CTP</b>	Correlation trading portfolio
<b>CVA</b>	Credit valuation adjustment
<b>DRC</b>	Default risk charge
<b>DVA</b>	Debt valuation adjustment
<b>EAD</b>	Exposure at default
<b>EQ</b>	Equity
<b>ES</b>	Expected shortfall
<b>FINREP</b>	Financial reporting framework in accordance with Commission Implementing Regulation (EU) No 680/2014 of 16 April 2014
<b>FRTB</b>	Fundamental review of the trading book
<b>FV</b>	Fair value
<b>FVA</b>	Funding valuation adjustment

<b>FX</b>	Foreign exchange
<b>GAAP</b>	Generally accepted accounting principles
<b>GR</b>	General risk
<b>IFRS</b>	International Financial Reporting Standards
<b>IMA</b>	Internal models approach
<b>IMM</b>	Internal model method
<b>IRB</b>	Internal ratings-based
<b>IRC</b>	Incremental Default and Migration Risk Charge
<b>ISDA</b>	International Swaps and Derivatives Association
<b>ITS</b>	Implementing technical standards
<b>JTD</b>	Jump to default
<b>LGD</b>	Loss given default
<b>MBS</b>	Mortgage-backed security
<b>MKR</b>	Market risk
<b>MtM</b>	Mark to market
<b>NFC</b>	Non-financial counterparty
<b>NMRF</b>	Non-modellable risk factor
<b>NSFR</b>	Net stable funding ratio
<b>OEM</b>	Original exposure method
<b>OFR</b>	Own funds requirement
<b>P&amp;L</b>	Profit and loss
<b>PFE</b>	Potential future exposure
<b>QIS</b>	Quantitative Impact Study
<b>RMBS</b>	Residential mortgage-backed security
<b>RRAO</b>	Residual risk add-on
<b>RTS</b>	Regulatory technical standards
<b>RWA</b>	Risk-weighted asset
<b>SA</b>	Standardised approach
<b>SA-CCR</b>	Standardised approach for counterparty credit risk
<b>SBA</b>	Sensitivity-based approach
<b>SFTs</b>	Securities financing transactions

<b>SM</b>	Standardised method (for counterparty credit risk)
<b>SR</b>	Specific risk
<b>STC</b>	Simple, transparent and comparable
<b>STS</b>	Simple, transparent and standardised
<b>SVaR</b>	Stressed value at risk
<b>TB</b>	Trading book
<b>TDI</b>	Traded debt instrument
<b>TS</b>	Technical standards
<b>UCITS</b>	Undertakings for the collective investment in transferable securities
<b>VaR</b>	Value at risk
<b>XVA</b>	Generic acronym for all types of valuation adjustments

## Executive summary

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In April 2016, the European Banking Authority (EBA) received two calls for advice to assist the European Commission (the Commission) in the adoption of a framework for a new SA-CCR and a new MKR framework, based on the so-called FRTB, into European legislation. The calls for advice centred on the need to perform an impact assessment of the new frameworks proposed by the BCBS, and the EBA was further requested for recommendation on their implementation.

The present report constitutes the EBA's response to the Commission's two calls for advice. Given the limitations in resources and time, the report relies mostly on existing data either from FINREP/COREP or conducted QISs (where possible and relevant). The information collected from COREP and FINREP is provided for two main samples: the sample of 193 large institutions for which the EBA have access to this information (the EBA sample) and a sample of small banks provided by CAs (small banks sample), representing more than a thousand EU banks. The analysis presented in this report could serve as a basis for an overall impact assessment for any legislative proposals by the Commission in the area of CCR and MKR, subject to some caveats. In particular, the EBA has not always been able to fully perform adequate controls for data due to the short time period available for preparing the report. In addition, the size of the samples used differs depending on the raw data needed and, in some cases, the relevant samples are small. This is due to the limited number of institutions participating in QISs, as well as the limited number of institutions submitting relevant FINREP reports. Finally, it should be highlighted that, in the case of the latest QIS exercises on SA-CCR and FRTB implementation, there have been serious concerns about the quality of the data collected. This is likely to be due to the novelty of the frameworks and their relative complexity, particularly for small and medium sized banks, using the SA, that have not been previously involved in QIS exercises in Basel.

Nonetheless, despite reservations as to the quality of the data used, the conclusions drawn in this report (in the form of a number of recommendations) have considered the uncertainties linked to data quality. The recommendations set out in the report are, therefore, in the view of the EBA, based on sufficiently robust evidence.

### **Introducing greater proportionality**

As requested by the Commission in the mandate of the two calls for advice, the EBA provides in this report its preliminary views on the potential introduction of greater proportionality in the implementation of the new market and counterparty risk frameworks. The EBA considers that there is room to increase the proportionality of regulation in general. The consideration of proportionality is, of course, particularly relevant in the context of the implementation of the new Basel standards.

The development and calibration of the new frameworks have been conducted at Basel level with a primary focus on big, internationally active institutions (which have always been the traditional

focus of international standard setters). In this context, it should be highlighted that the vast majority of institutions in the EU are small- and medium-sized banks that, in most cases, apply the SA developed in Basel and generally have not been involved in the rulemaking process.

In this regard, it is worth remembering that one of the key developments that the FRTB will introduce—once implemented—is a new, more risk-based and inevitably more complex SA. Adding this complexity to the framework was unavoidable, as the ‘old’ SA was not suited for many internal model portfolios and because one of the key objectives of the new SA is that it works as a credible fallback for the internal model.

Regarding the new counterparty credit risk framework, the changes also only affect the different methods under the SA, leaving the IMM completely unchanged. Thus, implementing a new and complex SA framework will potentially impose excessive burdens on institutions with limited trading activities that depend on the SA framework to calculate their RWAs.

Accordingly, as part of the response to the calls for advice (CfAs), the EBA has assessed the current derogation for small trading activities (contemplated in Article 94 of the CRR), including its use in the context of the counterparty framework (i.e. firms allowed to use the OEM). The EBA has specifically assessed several definitions of ‘trading activities’ and evaluated the convenience of maintaining or increasing the current thresholds applied for this derogation.

### **Paving the way for further impact monitoring and regulatory fine-tuning**

The introduction in the EU of two major new frameworks whose impact has been assessed via various QISs—although these assessment are essentially based on a certain number of implementation assumptions made by institutions—will require careful monitoring, as both the impact and the scale of potential implementation issues may have been underestimated.

According to latest QIS data, the introduction of the SA-CCR would, for the median bank, lead to an increase of 27% in the exposure value and of 40% in RWAs for CCR. The effect seems to be more diluted for banks using a combination of the IMM and the MtM method; these show a median increase of 5% in exposure value and 7% in RWAs. Considering the low share of counterparty credit risk RWAs in banks’ total RWAs, the overall impact on banks’ total RWAs should remain limited. However, the SA-CCR will not only impact the OFRs for CCR, but also bank’s exposures to central counterparties, the CVA risk, the leverage ratio and the large exposures regime, whose impacts have not been considered as part of this report.

Similarly, the final calibration of the FRTB shows that banks would see an increase in the capital charges for the IMA, with the median bank showing a 7% increase in capital when compared to the current MKR internal model framework and a 16% increase on average (simple mean). However, the overall capital impact of the new SA is quite significant, certainly more pronounced than that of the IMA. According to the data received, the implementation of the new SA would increase capital requirements by 170% for the median bank (i.e. 2.7 times the current SA) and by 183% on average (simple mean).

It is clear that—after the implementation of the so-called Basel 2.5 package that, among other elements, introduced an IRC and a SVaR capital charge—the ‘old’ SA became, in many cases, more advantageous from a capital perspective compared to the IMA. This situation eliminated many of the previous capital incentives that firms would have had to request modelling permission. The substantial increase in capital requirements under the new SA can be considered as contributing to reverting this situation back to normal. Nevertheless, the overall impact of the implementation of the FRTB, including the operational burden linked with the implementation and updating of reporting (especially in the case of small- or medium-sized institutions), should be further monitored.

In addition, considering the novelty of the FRTB framework and that the still substantial, complex and unsolved issues under discussion internationally are likely to pose implementation challenges, the EBA also considers that technical parts of these international standards should be implemented via delegated legislation, using delegated acts or broadly formulated RTS mandates, in accordance with EBA regulation. This would allow the EBA—in case unexpected implementation issues materialise during the implementation phase of the newly adopted EU legislation—to reflect key changes in regulation in a timely fashion that, if left unaddressed, would threaten the prudent implementation needed and consistency in the application of regulation in the EU. This would also allow the political process to focus on the overall design of the framework, such as the possibilities of embedding more proportionality in the existing framework.

### **Introducing a threshold for small derivative business**

While being highly significant for the largest EU banks, CCR is generally less relevant for smaller institutions. Whereas for one EU institution, the sum of CCR and CVA RWAs represents more than 50% of total RWAs, the median ratio is 2.17% for larger EU banks (the EBA sample) and 0.01% for smaller EU banks (the small banks sample).

This diversity is also reflected in the approaches used for CCR. Whereas the IMM is more widely used in the EU than in any other jurisdiction (20 institutions from 10 Member States have been granted permission to use the IMM), the OEM is still substantially applied by small-sized (or medium-sized) institutions across the EU, with at least 372 institutions from 13 Member States using it. As expected, the SM appears to be applied by two banks in the EU only, thus confirming the relatively marginal impact of removing it. The MtM method appears to be the most widely used method in the EU.

The large number of institutions still using the OEM for CCR seems to advocate for keeping the OEM in the framework, at least for CCR (the OEM seems to be less significantly used for CVA risk). This should not be an issue, as the OEM generally appears to be more conservative than the MtM method. In addition, the MtM method could also be kept in the framework for smaller banks that currently use it. Naturally, the OEM and the MtM method may have to be recalibrated to ensure that they remain more conservative than the SA-CCR.

The use of the OEM is currently only allowed for institutions with a small TB business, regardless of the relative size of their derivative business within their TB business. In principle, the use of a simplified CCR framework should be linked to the size of the derivative business only, regardless of whether they are in the TB or the non-trading book. This is why, based on the analysis conducted in the report, it is proposed that the current requirement to have a small TB business in order to use the OEM be removed and, instead, a threshold for small derivative business be applied consistent with the threshold for small TB business in terms of definition and level. A threshold level of EUR 20 m for the sum of the absolute FV of long and short positions in derivative instruments is considered appropriate as an option for institutions willing to use the OEM or the MtM method. However, based on the analysis, a relative threshold expressed in terms of total assets does not seem strictly required.

In reaction to the absence of COREP reporting on threshold computation for institutions with a small TB business and considering the difficulty of assessing—immediately and accurately—the approaches used by institutions for CCR, the EBA also recommends clarifying and expanding the reporting of CCR exposure values and RWAs, as well as including a COREP template providing detail on the computation of the new proportionality threshold.

### **Increasing the threshold for small TB business**

With regard to the overview of EU trading instruments and current market capital charges, the importance of market RWAs appears to be far greater for the EBA sample than for smaller banks. MKR RWAs (SA and IMA), including CVA, amount to approximately 8.5% of total RWAs for large firms, while, for the small banks sample, MKR RWAs (including CVA) amount to just below 2% of total RWAs. As expected, IMA banks generally show a larger share of RWAs stemming from TB activities, though a significant part of this stems from portfolios that remain under standardised rules.

Regarding the composition of market RWAs under the SA, whereas EQ and debt position risks are very significant and far greater than FX and commodity risks for the EBA sample, the composition of market RWAs is very different for the small banks sample, where FX is by far the largest risk exposure out of the total market RWAs. The relative large size of FX RWAs would, in most cases, be due to BB activities and not because these small banks have great FX risk in the TB.

Finally, for banks using the IMA, the SVaR capital charge constitutes the most significant share (with 53% of total market RWAs), followed by VaR (24%), IRC (20%) and CTP (3%).

With regard to the mandate of the Cfa requesting the EBA to reassess the derogation for small TB business, the EBA considers, based on the quantitative analysis, that a threshold level of EUR 50 m is appropriate. This level would ensure that most institutions (out of the small banks sample) are eligible to apply the derogation, while—at the same time—limiting the impact in terms of lost RWAs from applying the derogation. Accordingly, the EBA considers that this level would be adequate for the purpose of introducing a greater degree of proportionality for small TB banks, as well as consistent with the assumption that the business model for these small institutions tends to be primarily focused on BB activities.

Based on the analysis, the effect of establishing a relative threshold of 5% (as a proportion of TB assets to total assets) in addition to the absolute threshold, as currently required in Article 94 of the CRR, seems to be non-material for most threshold definitions and levels.

At the same time, the EBA recommends that the COREP reporting templates be expanded to include relevant reporting for banks that apply, or intend to apply, the derogation. At a minimum, this would entail more information on the actual mapping between banks' trading instruments and activities from both regulatory and accounting perspectives.

Finally, with regard to the general mandate of the two CfAs and as stated above, the EBA considers that there is room to increase the proportionality of regulation in general. In order to achieve this for MKR, the current SA could be kept for institutions that fall between the threshold of EUR 50 m proposed and a higher threshold to be defined. This should, however, be subject to appropriate recalibration of the current SA.



## Background

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In April 2016, the EBA received several calls for advice<sup>1</sup> to assist the Commission in the implementation of the revised international standards, two of which are more specifically related to CCR and MKR. While welcoming the opportunity to be involved in key impact assessments for the implementation of revised international standards in the EU, the EBA pointed out (in a letter to the Commission) the difficulty of providing an in-depth analysis for all items referred to in the CfAs within the challenging deadlines.

The present report constitutes the EBA's response to the Commission's CfAs in the area of CCR and MKR. Given the limitations in resource and time, the report relies mostly on existing data either from FINREP/COREP or conducted QISs (where possible and relevant). This analysis could serve as a basis for an overall impact assessment of any legislative proposals by the Commission in the area of CCR and MKR, subject to some caveats. In particular, the EBA has not always been able to fully perform adequate controls of data due to the short time available for preparing the report. In addition, the size of the samples, used for different parts of the analysis, is different depending on the raw data needed and, in some cases, the relevant samples are small. This is due to the limited number of firms participating in QISs, as well as the limited number of firms submitting relevant FINREP reports as described below.

Nonetheless, despite the reservations above, the conclusions drawn in this report (in the form of a number of recommendations) have considered the uncertainties linked to data quality. Whereas the overall impact assessment is generally dependent on the sample used for the analysis, the conclusions have been tested against a number of alternatives. The recommendations set out in the report are, therefore, in the view of the EBA, based on sufficiently robust evidence.

Firstly, in the short first part, the report presents general advice on the CRR review, advocating for large technical parts of international standards to be implemented via delegated legislation, especially in the case of new frameworks such as the SA-CCR and the FRTB, which have not been sufficiently tested and for which regulatory fine-tuning may be required in the early phase of the implementation of the new requirements.

After this, the two main parts of the report provide the various analyses conducted, as requested by the CfAs, as well as the main conclusions (for CCR (Part Two) and MKR (Part Three)).

For these two main parts, the EBA has based its analysis on information collected from COREP and FINREP from two main samples:

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<sup>1</sup> <http://www.eba.europa.eu/about-us/missions-and-tasks/calls-for-advice>.

- The sample of 193 large institutions for which the EBA receives this information (the EBA sample);
- A sample of small banks provided by CAs (the small banks sample), representing more than a thousand EU banks.

In order to form the small banks sample, the EBA requested CAs to submit relevant COREP and FINREP templates for those institutions that had less than EUR 500 m in FV assets and liabilities, including derivatives but excluding the AfS portfolio. The intention was to have relevant information to provide an overview of trading activities for small firms and to be able to assess the derogation for small trading portfolios. Obviously, the institutions that are neither big enough to be in the EBA group nor small enough to be in the small banks sample are not represented in this analysis.

Whereas the quality of COREP data for the small banks sample was generally good, FINREP figures were, for a large part of the data requested, very limited or not available at all. The reason for this is that according to Article 99 of the CRR FINREP reporting is not currently required for all EU banks using national GAAP reporting. The implication of this is that only a subsample of the full population of EU banks below the threshold of EUR 500 m has been used for the analysis in this report, with some jurisdictions well represented and others not represented at all.

Due to the issues described above and the fact that QIS data has been used in addition to COREP/FINREP data, the different analysis sections in this report are based on different sample sizes. Information on the different sample sizes used is disclosed under each analysis section.

In addition, the information included in COREP/FINREP was not always granular enough or sufficient for the purposes of the analysis. In particular, the absence of any information on the computation of the current threshold for small TB business in COREP made it difficult to identify the institutions currently applying the derogation. Likewise, accounting FINREP data had to be used as a proxy in both CCR and MKR sections for the assessment of thresholds.

Finally, it should be highlighted that, in the case of the latest QIS exercises on the SA-CCR and the FRTB implementation, there have been serious concerns about the quality of the data collected. This is likely to be due to the novelty of the frameworks and their relative complexity, particularly for small and medium standardised firms that had not been previously involved in QIS exercises in Basel. The second part of the report first provides an analysis of the relevance of CCR for the banks in both samples. It then shows the important diversity in the approaches used for CCR in the EU, including the identification (via COREP) of an important number of banks using the OEM.

This second part then assesses the possibility of introducing a threshold linked to the size of the derivative business in order to permit institutions to use the OEM (instead of only relying on the derogation for small TB business for the use of the OEM, as it stands today). To this end, the sum of derivative assets and liabilities held for trading is considered for a limited subsample of the small banks sample based on the available FINREP data. A relative threshold expressed in terms of total assets has been also tested, although it does not seem to be strictly required.

Finally, based on the QIS data from the Basel III monitoring exercise, the analysis shows that the introduction of the SA-CCR would generally lead to an increase in both exposure value and CCR RWAs.

The third part of the report provides the EBA's response to the Commission for each of the sections of the CfA on MKR. To provide an overview of the current size and composition of MKR activities and capital requirements in the EU, the EBA analysed the composition of FV instruments and RWAs within the two samples of banks used in the report.

This analysis showed that there are significant divergences between the two samples, with both FV instruments and market RWAs being far more material for the larger banks—especially IMA banks. In terms of types of risk, position risk proved to be the most significant for the larger banks, while FX risk is the main component for the smaller banks.

Following this, the derogation—applicable to institutions with small TB business—was assessed by conducting a quantitative analysis of the data submitted by CAs for small banks with less than EUR 500 m in FV assets and liabilities (excluding AfS instruments) based on four different threshold definitions:

- Threshold 1 is defined as the absolute sum of financial assets and liabilities Held for Trading (HfT) and financial assets and liabilities designated at FV through P&L;
- Threshold 2 is defined as the absolute sum of financial assets and liabilities HfT without financial assets and liabilities designated at FV through P&L;
- Threshold 3 is defined as the absolute sum of financial assets and liabilities HfT without financial assets and liabilities designated at FV through P&L and excluding FX and commodities derivatives that would not be considered under the current CRR treatment;
- Threshold 4 is defined as the absolute sum of notional value of trading derivatives, financial assets and liabilities HfT and financial assets and liabilities designated at FV through profit or loss but excluding the FV of derivative assets and liabilities.

Additionally, the impact of applying a relative threshold of 5% (as a proportion of TB assets to total assets) on top of the absolute threshold was assessed.

This analysis showed that, in all cases, the loss in market RWAs as a percentage of total RWAs from applying the derogation is very limited, even though the loss in market RWAs as a percentage of total market RWAs can be substantial in some cases. Additionally, the analysis showed that establishing a threshold at around EUR 50 m would limit the amount of market RWAs lost and, at the same time, ensure that most banks with small TB business would be able to apply the derogation. At this threshold level, an extra relative threshold would only be binding for very few banks.

Finally, the analysis concluded by looking at the operational and capital impact of the FRTB using QIS data and other inputs received from stakeholders. The final calibration of the FRTB showed that banks would see a small increase in the capital charges for the IMA, while there would be a substantial increase according to the SA. This analysis also highlighted a number of other areas of the FRTB that would benefit from further calibration prior to adoption in legislation.

# EBA policy recommendations

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## **EBA Recommendation 1 on a threshold for small TB business**

The EBA recommends keeping a threshold for small TB business below which institutions are able to use the non-trading book approach for the computation of capital requirements. In any case, the EBA considers that institutions below the threshold should not be exempt from capital requirements.

The threshold should be applicable in the case of position risk only. Institutions would still be required to compute FX and commodity capital requirements for BB and TB according to the corresponding provisions in the relevant sections.

Considering the still material divergences in terms of accounting across EU Member States, the EBA recommends the definition of a threshold in terms of **the sum of the absolute market value of an institution's long positions and short positions in EQ and debt instruments included in its TB (i.e. subject to position risk)**. The computation of the threshold would be a mandatory field for all institutions in COREP. In addition to the computation of the threshold, information on the FV of derivative and non-derivative positions in the regulatory TB would be inserted in COREP for supervisors to perform consistency checks.

To ensure a holistic view of institutions' TB business, information on TB positions could be mapped onto FINREP information on the market value of trading and held for trading assets and liabilities, as well as the market value of off-balance-sheet derivative instruments when derivative instruments are off-balance-sheet according to the relevant national GAAP. This mapping could also include other relevant FINREP information on assets in the regulatory TB, such as information on financial assets and liabilities designated at FV through P&L or measured at FV through other comprehensive income. A single COREP template could be used for the information on small TB business, the threshold for small derivative business, and the threshold for prudent valuation purposes, as all of them need to be checked against accounting data.

With regard to the level of the threshold, the EBA recommends the definition of a relatively low threshold level of **EUR 50 m**, as evidenced in the report. Were a low absolute threshold level defined as EUR 50 m, a relative threshold would probably have a limited added value.

**EBA Recommendation 2 on a threshold for small derivative business**

The EBA recommends introducing a threshold for small derivative business below which institutions are allowed to use a simple, conservative approach for the computation of CCR capital requirements, which could include the use of the current OEM or MtM method subject to appropriate recalibration. In any case, the EBA considers that institutions below the threshold should not be exempt from capital requirements.

Instead of using notional values, the EBA recommends that the threshold be defined in terms of the sum of the absolute market value of an institution's long positions and short positions in derivative instruments included in both its TB and non-trading book. The computation of the threshold would be a mandatory field for all institutions in COREP.

For consistency reasons, the threshold for small derivative business should be lower than the threshold for small TB business and could be established at **EUR 20 m**, as evidenced in the report.

**EBA Recommendation 3 for consideration of additional proportionality solutions**

Whereas the calls for advice requested the EBA to essentially reassess the small TB business derogation, including with regard to the use of the OEM, the EBA recommends the consideration of additional proportionality solutions that could include—for both CCR and MKR purposes—the definition of higher thresholds below which SAs that are simpler and more conservative than the ones developed in Basel could be applied for smaller banks not included in the scope of the Basel standards.

The additional thresholds should broadly be consistent in terms of definition with the one proposed in this report, as well as subject to reporting under COREP.

In particular, for MKR, the current SA (subject to appropriate recalibration) could be kept for institutions that fall between the threshold of EUR 50 m proposed in Recommendation 1 and the higher threshold to be defined. Although being broadly consistent with the threshold of EUR 50 m, this second threshold would need to consider all financial instruments subject to market capital requirements, including those subject to FX and commodity risks.

For CCR, either a conservative, simplified version of SA-CCR or the current MtM method (subject to appropriate recalibration) could be used by institutions falling between the threshold of EUR 20 m proposed in Recommendation 1 and the higher threshold to be defined.

The use of these approaches would be reassessed in light of international regulatory developments.

**EBA Recommendation 4 for a higher reliance on delegated legislation in the implementation of the SA-CCR and the FRTB frameworks**

Considering the novelty of the SA-CCR and the FRTB frameworks, the still substantial, complex and unsolved issues under discussion in Basel, and the expected upcoming implementation challenges, the EBA recommends that—in order to allow for flexible implementation—large technical parts of these international standards should be implemented via delegated legislation using delegated acts or flexibly formulated RTS mandates, so as to allow the EBA to reflect key changes in regulation in a timely fashion that, if left unaddressed, would threaten the prudent implementation needed and consistency in the application of regulation in the EU.

In accordance with EBA regulation, RTS mandates would only be limited to the technical parts of the new frameworks, without implying strategic decisions or policy choices.

**EBA Recommendation 5 on COREP proportionality monitoring**

In light of the issues raised by the analysis conducted in the report and for the purposes of the monitoring of additional proportionality granted in the framework, the EBA recommends the inclusion of:

- One or more CCR COREP templates giving an overview of the CCR of institutions, including exposures to central counterparties and the method(s) used to compute CCR exposure values and corresponding RWAs;
- COREP cells/templates providing (where relevant) details on the computation of the different proportionality thresholds included in legislation and links with broadly corresponding accounting categories.

The EBA, therefore, recommends that the legal basis for the EBA to design or revise COREP templates is kept in the CRR and that sufficient time is allowed to perform this task. Considering the need to update COREP in order to reflect the implementation of the SA-CCR and the FRTB, a deadline of 2 years should be set, excluding the time needed by the Commission to adopt the final templates.

# 1. General advice on the CRR review

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## 1.1 Building on the EBA's experience – Avoiding a new CVA conundrum

Considering discussions in Basel, the EBA expects to receive substantial RTS mandates in the revised CRR (CRR2). Some of these mandates will require the EBA to start working as soon as the legislative proposal is published, as these mandates have to come into force at the same time as CRR2 or shortly thereafter. In addition, COREP templates relating to CCR and MKR will have to be fully revised.

Three years after the adoption of the first CRR TS mandates, it appears that some TS have contributed more directly to improving convergence in the implementation of the Level 1 text than others. In particular, the broadly defined RTS mandates on non-delta risks, prudent valuation, model changes or assessment methodology ensured highly effective final products, regardless of whether they were simply implementing parts of the Basel framework in the EU (RTS on non-delta risks), developing new ambitious frameworks (prudent valuation, model changes) or enshrining model assessment best practices in Level 2 regulation.

In other cases, the outcome appears relatively modest despite the intensity of the resources involved.

CVA risk is a good example of a field where a better balance between Level 1 requirements and delegated legislation would have both ensured better consistency in the implementation of regulation across the EU and reduced the time and resources needed to draft RTS, which (in the end) could do little to improve the issues or inconsistencies present in the Level 1 text.

The EBA's resources and supervisory resources have often been kept busy addressing inconsistencies in the CRR detailed text. In some cases, those inconsistencies were reflected in the RTS mandates themselves, and addressed at the same time:

- RTS on proxy spread<sup>2</sup> – Opinion on CVA<sup>3</sup> expressing scepticism on the appropriateness of a unified proxy methodology for both market and CVA risks, as suggested by the letter of Article 383(7)(a) of the CRR;
- RTS on NFCs – Clarification of the interpretation of Article 382(4)(a) of the CRR in RTS recitals in order to restore convergence in the implementation of the CRR, this being probably the most important part of these RTS (which are particularly 'empty' otherwise).

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<sup>2</sup> 20 December 2013.

<sup>3</sup> 20 December 2013.



In other cases, issues and inconsistencies emerged (quite naturally in the case of the adoption of a radically new framework) in the last months of the finalisation of the implementation by banks or later, when the CRR had already been published. This gave rise to numerous Q&As on intragroup exemptions, pension fund exemptions, and CVA treatment of funds (e.g. UCITS,<sup>4</sup> treatment of exchange-traded derivatives,<sup>5</sup> computation of EAD,<sup>6</sup> treatment of SFTs, and CVA hedges).<sup>7</sup> This also usually delayed the RTS adoption process. In particular, two consultations on the RTS on proxy spread were necessary before the publication of the final RTS<sup>8</sup> due to issues in terms of the reference to 'rating': the question of the single name proxying for sovereign/local administrations and parent/subsidiaries; and the apparent link made in the CRR between the proxy methodology used for CVA risk and the one used for MKR.<sup>9</sup>

Those issues (as implementation issues) were also experienced by other jurisdictions and, in some cases, were brought to the Basel table through Basel frequently asked question (FAQ) (LGD<sub>MKT</sub>, no backtesting requirement for CVA VaR, frequency of calculation, CVA hedges). Some of them were solved before the actual finalisation of the CRR, which could be reflected in the final CRR text (monthly frequency of calculation). However, some issues were either of a more fundamental nature in Basel (CVA hedges), thus requiring a rules change in Basel, or simply not reflected in the CRR (such as the Basel FAQ on LGD<sub>MKT</sub>), causing divergence in implementation.<sup>10</sup> In contrast, other jurisdictions (US, Canada, Switzerland) were able, due to the higher adjustment ability of their legal frameworks,<sup>11</sup> to address those issues swiftly once they appeared.

It should also be noted in relation to CVA risk that—despite being empowered as per Article 456(2) of the CRR to amend all provisions of the CVA risk Title VI (apart from EU exemptions) via delegated act—the Commission could never seize the opportunity to improve the text on some key CVA implementation issues.

Given the novelty of the FRTB, it appears likely that the framework will evolve as implementation progresses (both in the industry, but also by supervisors in terms of model approval). This is a very similar situation to the CVA framework, which was also a new approach. In the past, the EBA and the European supervisory authorities (ESAs) have already shown that they are able to implement a broad and complex framework successfully through an RTS—namely, the RTS on bilateral margins.

Therefore, the experience advocates both for:

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<sup>4</sup> EBA Q&A 2013\_637.

<sup>5</sup> EBA Q&A 2013\_692.

<sup>6</sup> EBA Q&A 2013\_616.

<sup>7</sup> EBA Q&A 2013\_360, 2013\_402, 2014\_949.

<sup>8</sup> 20 December 2013.

<sup>9</sup> Also addressed in the EBA Q&A 2014\_1686.

<sup>10</sup> Considering LGD<sub>MKT</sub>, the EBA got confirmation during the CVA Pillar 2 QIS exercise (February 2016) that some banks in the EU were applying the Basel FAQ despite the currently missing clear legal basis for it.

<sup>11</sup> In the US, the Basel CVA risk charge was transposed into US law as part of joint FRB/OCC/FDIC Regulatory Capital rules; in Canada, as part of OSFI Capital Adequacy Requirements Guidelines; in Switzerland, via FINMA circular.

- Large technical parts of international standards to be implemented via delegated legislation instead of Level 1, be it through Commission delegated acts or EBA RTS;
- Flexibly formulated RTS mandates when delegation is conferred to the EBA.

This is all the more relevant in the context of the first implementation of radically new international standards such as CVA risk, the SA-CCR and the FRTB, which may require regulatory monitoring and fine-tuning in the first years of implementation and anyway remain subject to industry changes and innovations in practice.

Where delegation is considered to be better achieved through EBA RTS than Commission delegated acts, RTS mandates would—in accordance with EBA regulation—only be limited to the technical parts of the new frameworks, without implying strategic decisions or policy choices. The recommendation to rely (to a higher extent) on Level 2 legislation acknowledges the limitations of Level 2 legislation, particularly the fact that it should not be used to address fundamental issues.

## 1.2 Examples of technical parts of international standards best suited for delegated legislation

Based on the above, the EBA provides here some examples of possible elements that can be recommended to be included as secondary legislation.

### 1.2.1 P&L attribution

The P&L attribution test is a central requirement for the approval of the IMA. The fact that the issue is still unsolved and discussed in Basel probably leaves no other choice but to include an empowerment for delegated legislation in the Level 1 text, thus allowing for an inclusion of the test at a later stage and preventing any delay in the adoption of the legislative proposal.

Notwithstanding this, the test is also of a very technical nature and in a new area of the MKR framework, which may require phasing-in measures or further amendments in the near future based on industry feedback on implementation.

For all these reasons, the P&L attribution test would be best implemented via RTS mandated to the EBA.

### 1.2.2 Model validation standards

Many FRTB requirements linked with model validation would probably better fit into the revised version of the RTS on assessment methodology. Therefore, a general high-level mandate to define model validation criteria used by CAs appears to be more appropriate.

The supervisory approval process is generally considered a technical issue. As industry practices evolve, it will be important to also continuously reflect this in the supervisory approval

requirements. An overall mandate—based on the principles in the Level 1 legislation—could reflect the supervisory approval processes in more detail.

### 1.2.3 Reduced SBA

The fact that the reduced SBA's impact will probably not be as well documented in Basel as the IMA or the SBA is a good reason for its inclusion in delegated regulation.

### 1.2.4 Other examples

Broader parts of the FRTB could be included via delegated legislation, such as the specification of backtesting requirements. Generally speaking, if the technical requirements in the Basel framework are not considered controversial, these are well suited for delegated acts, as they would anyway need implementation monitoring.

## 1.3 Conclusion

Building on the EBA's experience and bearing in mind the legislative process to come, the EBA considers that a better balance between Level 1 and Level 2 legislations could be achieved in the revised CRR. This would entail large technical parts of international standards being implemented via delegated legislation, thus allowing the political process to focus on the overall design of the framework, such as the possibilities to embed more proportionality in the existing framework.

### **EBA recommendation for a higher reliance on delegated legislation in the implementation of the SA-CCR and the FRTB frameworks**

Considering the novelty of the SA-CCR and the FRTB frameworks, the still substantial, complex and unsolved issues under discussion in Basel, and the expected upcoming implementation challenges, the EBA recommends that—in order to allow for flexible implementation—large technical parts of these international standards should be implemented via delegated legislation using delegated acts or flexibly formulated RTS mandates, so as to allow the EBA to reflect key changes in regulation in a timely fashion that, if left unaddressed, would threaten the prudent implementation needed and consistency in the application of regulation in the EU.

In accordance with the EBA regulation, RTS mandates would only be limited to the technical parts of the new frameworks, without implying strategic decisions or policy choices.

## 2. CCR

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The Cfa to assist the Commission in the implementation of the SA-CCR requests the EBA to gather information on the use of the current approaches applied under the SA framework i.e. the SM, the MtM method and the OEM—and to assess the impact of introducing the SA-CCR in the EU.

The following section first provides an overview of CCR RWAs as a share of credit risk RWAs and total RWAs. It then highlights the approaches currently used for CCR purposes in the EU, including the OEM. Then, based on the available data, a specific threshold for small derivative business is assessed for a reduced sample of smaller institutions. Finally, the impact of moving to the SA-CCR is assessed. As the SA-CCR will impact not only the CCR framework, but also the large exposures and the leverage ratio frameworks, impact figures are provided (where available) not only in terms of RWAs, but also in terms of exposure value.

### 2.1 Overview of CCR RWAs

COREP data provides very limited information in relation to CCR. CCR information is currently reported as part of credit risk data and appears to be both insufficiently granular and difficult to disentangle.

Regarding CCR exposure value, no information is available on the methodology used to compute the exposure value (i.e. the MtM method, the OEM, the SM, the IMM). The aggregated exposure value for derivatives is reported in COREP in either the CR-SA template or the CR-IRB 1 template, depending on whether the counterparty is subject to SA or IRB under the credit risk framework. This exposure value is given in Column 010 of the CR-SA template and Column 020 of the CR-IRB 1 template (column 'Original exposure pre conversion factors'), mainly in row 'Derivatives & Long Settlement Transactions' but also in row 'From Contractual Cross-Product Netting'<sup>12</sup>, where some SFTs and derivative transactions are netted and reported jointly.

Similarly, with regard to CCR OFRs, no information can be immediately identified or used. Rather, it has to be reconstructed based on the different COREP templates. RWAs for CCR are available in Column 220 of the CR-SA template and in Column 260 of IRBA and IRBF sub-templates of the CR-IRB 1 template (column 'Risk-weighted exposure amount after SME-supporting factor').

In the EBA sample,<sup>13</sup> on reference date 31 December 2015, 17 banks reported a non-zero exposure value in row 'From Contractual Cross-Product Netting'. In accordance with Article 295(c)

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<sup>12</sup> Contractual cross product netting agreement is defined in Article 272(25) of the CRR as a 'bilateral contractual agreement between an institution and a counterparty which creates a single legal obligation (based on netting of covered transactions) covering all bilateral master agreements and transactions belonging to different product categories that are included within the agreement', where 'different product categories' refers to SFTs or derivative transactions included in Annex II (i.e. excluding credit derivatives).

<sup>13</sup> The EBA sample consists of large European banks that the EBA receives COREP and FINREP reports from. Currently, the sample size is 193 banks.

of the CRR, only banks that have been granted IMM approval are allowed to treat contractual CPN agreements as risk-reducing.<sup>14</sup> The total RWAs for CCR reported in row 'From Contractual Cross-Product Netting' corresponded to around 2% of the total RWAs for CCR for derivatives and contractual Cross Product Netting<sup>15</sup>

In aggregate, for the EBA sample, the RWAs for CCR (SFTs included) represent 6.05% of the total RWAs (as shown on Figure 40), while CVA risk represents 2.32%.

In the following, CCR will—unless indicated otherwise—only refer to derivative transactions and transactions included in contractual CPN agreements. RWAs stemming from SFTs are disregarded.

### 2.1.1 Ratio of CCR RWAs to credit risk RWAs

CCR is far from being negligible for some banks: seven banks of the EBA sample have the majority of their credit risk RWAs due to CCR (the ratio of CCR RWAs to credit RWAs is higher than 50%). Among those seven banks, two banks have a ratio greater than 70%. Those seven banks are all concentrated in one Member State (UK). However, in general, this ratio is below 5% for most banks of the sample, as shown in the table below.

Figure 1. The EBA sample – Distribution of the ratio of CCR RWAs to credit risk RWAs

Distribution of the ratio of CCR RWAs to credit risk RWAs	
Min	0.00%
25% percentile	0.39%
Median	1.68%
75% percentile	4.35%
Max	81.64%

Regarding the sample of 1 094 smaller banks, CCR OFRs (derivatives and cross-product, excluding SFTs) could only be retrieved for a subsample of 1 013 banks.

<sup>14</sup> According to the same article, CAs shall report to the EBA a list of the contractual CPN agreements approved.

<sup>15</sup> Amounts reported in row 'From Contractual Cross-Product Netting' have been consistently considered as stemming mainly from derivatives and, therefore, added to amounts in row 'Derivatives & Long Settlement Transactions'. Thus, the exposure values or OFRs for derivative transactions may be slightly overestimated.

Figure 2. Smaller banks – Subsample of 1 013 banks – Distribution of the ratio of CCR RWAs to credit risk RWAs

Distribution of the ratio of CCR RWAs to credit risk RWAs	
Min	0.00%
25% percentile	0.00%
Median	0.00%
75% percentile	0.02%
Max	27.73%

### 2.1.2 Ratio of CCR and CVA RWAs to total RWAs

As the SA-CCR will impact both CCR (SFTs excluded) and CVA OFRs, the proportion of impacted OFRs can be assessed using the ratio of CCR+CVA RWAs to total RWAs.

Figure 3. The EBA sample – Distribution of the ratio of CCR+CVA RWAs to total RWAs

Distribution of the ratio of CCR+CVA RWAs to total RWAs	
Min	0.00%
25% percentile	0.85%
Median	2.17%
75% percentile	5.28%
Max	55.75%

Figure 4. Smaller banks – Subsample of 1 013 banks – Distribution of the ratio of CCR+CVA RWAs to total RWAs

Distribution of the ratio of CCR+CVA RWAs to total RWAs	
Min	0.00%
25% percentile	0.00%
Median	0.01%
75% percentile	0.06%
Max	18.21%

### 2.1.3 Breakdown by business model

Figure 5. The EBA sample – Average of the ratio of CCR RWAs to credit risk RWAs and the ratio of CCR+CVA RWAs to total RWAs

	Banks	Average ratio CCR/CREDIT	Average ratio CCR+CVA/TOTAL
Auto & cons.	5	2.64%	3.11%
CCP	2	3.66%	8.08%
Co-operatives	15	6.88%	6.46%
Custodian inst.	3	0.92%	1.41%
Div. no retail dep.	14	0.02%	0.05%
Local Universal	52	0.02%	4.37%
Mrtg. & Build.Soc.	13	10.97%	12.19%
Other taking retail dep	2	0.05%	0.19%
Other no retail dep.	8	1.78%	1.95%
Pass-through	1	30.86%	42.52%
Savings	10	0.94%	1.30%
Sec. trading house	4	5.94%	5.63%
Univ. Cross-Border	33	4.64%	4.49%
Unclassified	31	9.92%	8.12%
TOTAL	193	5.55%	5.55%

Figure 6. Smaller banks – Subsample of 1 013 banks – Average of the ratio of CCR RWAs to credit risk RWAs and the ratio of CCR+CVA RWAs to total RWAs

	Banks	Average ratio CCR/CREDIT	Average ratio CCR+CVA/TOTAL
Auto & cons.	16	0.04%	0.06%
CCP	0	-	-
Co-operatives	505	0.26%	0.28%
Custodian inst.	3	0.60%	0.42%
Div. no retail dep.	3	0.13%	0.33%
Local Universal	210	0.22%	0.29%
Mrtg. & Build.Soc.	26	0.19%	0.56%
Other taking retail dep	28	0.82%	1.38%
Other no retail dep.	12	0.38%	0.64%
Pass-through	0	-	-
Savings	144	0.13%	0.16%
Sec. trading house	6	0.88%	0.35%
Univ. Cross-Border	13	0.43%	0.31%
Unclassified	47	0.19%	0.34%
TOTAL	1 013	0.25%	0.31%

## 2.2 Use of the existing approaches

Four methods are available in the CRR to compute the exposure value of derivative transactions: the MtM method, the OEM, the SM and the IMM. In accordance with Article 273(1), institutions are allowed to use those methods in combination on a permanent basis within a group, but not at an individual level.

### 2.2.1 SM

Considering the limited information in COREP on the methodology<sup>16</sup> used to compute the exposure value, CAs were asked to provide the number of institutions in their jurisdiction that are using the SM set out in Article 276 of the CRR.

Based on the information provided by 16 Member States,<sup>17</sup> only 2 banks in 2 Member States seem to be using the SM. Assuming the method is not used in the remaining Member States, the SM does not appear to be significantly used in the EU and the impact of its removal should be limited.

### 2.2.2 OEM

#### a. Use of the OEM

Only institutions that are eligible for the derogation for small TB business in accordance with Article 94 of the CRR are allowed to apply the OEM. Despite the lack of information in COREP, a proxy of the number of institutions using the OEM can be obtained based on:

- The leverage ratio COREP template, which includes a cell for leverage ratio exposures computed using the OEM;
- The CVA risk COREP template, which includes the CVA risk computed using the alternative method based on the OEM set out in Article 385 of the CRR.

In the EBA sample, five institutions from four jurisdictions<sup>18</sup> reported a non-zero OEM exposure in the leverage ratio COREP template. None of these firms reported a CVA risk charge based on the alternative method for CVA risk. Only one bank (UK) reported a non-zero CVA risk charge based on the OEM. This bank reported zero for the corresponding cell of the leverage ratio COREP template.

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<sup>16</sup>The MtM method, the OEM, the SM or the IMM.

<sup>17</sup> AT, BE, BG, CZ, DE, DK, EL, ES, FI, FR, HR, LT, PT, SE, SI, UK.

<sup>18</sup> AT, IT, LU and PT.



In the sample of 1 094 smaller banks,<sup>19</sup> 63 banks<sup>20</sup> reported a non-zero OEM exposure in the leverage ratio COREP template. Among those banks, only one bank (ES) reported a non-zero CVA risk charge based on the OEM.

Figure 7. Smaller banks using the OEM – Sample of 1 094 banks – Breakdown by business model

Auto & cons.	0
CCP	0
Co-operatives	30
Custodian inst.	0
Div. no retail dep.	1
Local Universal	12
Mrtg. & Build.Soc.	1
Other taking retail dep	1
Other no retail dep.	0
Pass-through	0
Savings	15
Sec. trading house	0
Univ. Cross-Border	0
Unclassified	3
TOTAL	63

In Section 5.2.8 of the CVA report published on 25 February 2015, the EBA already noted that, according to information provided by Member States, only five EU banks were using the alternative method based on the OEM for CVA risk. As a result, the EBA recommended—in Policy Recommendation 13—‘removing the alternative approach of Article 385 of the CRR (institutions using the OEM) as the approach is applied by very few institutions across the EU and its outputs do not reflect CVA risks in a sufficiently risk-sensitive way’. In practice, some banks may already have decided to move to the SA for CVA risk based on the recommendation made by the EBA in the CVA report.

Based on the extraction of ‘COREP C 45.00.a – Leverage ratio template’, CAs were requested to count institutions for which Column 030 Row 050 (OEM) is different from zero. A non-zero number would, in principle, mean that at least one institution within the scope of consolidation of the institution uses the OEM. In the subsample obtained after the previous step, CAs were requested to keep only institutions for which Column 030 Row 040 (MtM method) is zero or

<sup>19</sup> This is the sample of small banks for which the EBA received the data from CAs.

<sup>20</sup> 47 DE, 2 ES, 1 FR, 1 IT, 1 LV, 4 PT, 2 RO, 1 SI, 4 UK.

blank. This is expected to remove institutions that use a combination of the MtM method and the OEM at the group level,<sup>21</sup> thus limiting double counting of institutions.

Twenty-one members provided answers as shown in the figure below.

Figure 8. Number of institutions using the OEM in the EU

Member State	Total OEM
HR	26
LV	1
HU	3
DK	0
LT	0
CZ	0
BE	1
LU	27
SI	1
BG	0
AT	176
IE	0
FR	5
UK	8
PT	2
EL	0
ES	4
EE	0
DE	117
IT	1
SE	0
<b>TOTAL</b>	<b>372</b>

#### b. Comparison of the OEM and the MtM method

The following impact figures are based on the data used for the leverage ratio report, which is taken from a Basel QIS exercise. As the purpose of the Basel QIS was not to assess CCR but rather the leverage ratio, data is necessarily limited. In particular, only exposure values are available, not OFRs.

<sup>21</sup> In accordance with Article 273(1) of the CRR, institutions are, in principle, not allowed to use a combination of approaches at the entity level: *'Institutions may use in combination the methods set out in Sections 3 to 6 on a permanent basis within a group. A single institution shall not use in combination the methods set out in Sections 3 to 6 on a permanent basis but shall be permitted to use in combination methods set out in Sections 3 and 5 when one of the methods is used for the cases set out in Article 282(6).'*

On a sample of 246 banks, 15 banks provided exposure value figures for both the OEM and the MtM method (replacement cost and PFE add-on) that are acceptable from a data quality point of view. Generally, the OEM is more conservative than the MtM method—i.e. the ratio of the OEM to the MtM method is greater than 1.

Figure 9. Distribution of the ratio of OEM to MtM exposure values

Distribution of the ratio of OEM to MtM exposure values

Min	19%
25% percentile	89%
Median	234%
75% percentile	320%
Max	1 016%

### 2.2.3 IMM

Based on COREP, 20 institutions in the EBA sample had a non-zero OFR for CVA risk based on the advanced method for CVA as of December 2015. This includes institutions from AT (1), BE (1), DK (1), FI (1), FR (3), DE (2), IT (2), NL (1), SE (1) and UK (7).

## 2.3 Assessment of a threshold for small derivative business

The use of the OEM is currently only possible for institutions having a small TB business, regardless of the relative size of their derivative business in their TB business. However, in principle, the use of a simplified CCR framework should be linked to the size of the derivative business only.

Two different thresholds are therefore considered here: the sum of derivative assets and liabilities held for trading (threshold 1) and the sum of derivative assets and liabilities held for trading or used under hedge accounting (threshold 2). The ratio of the respective threshold values to total assets is then computed.

Due to a limited number of institutions providing exploitable FINREP data, especially among smaller banks, the following analysis relies on the FINREP information from 134 banks out of the 1 094-bank sample.

Figure 10. Breakdown of banks by threshold values for small derivative business

Threshold 1 (derivative only)	Sample	Ratio below 5%	Ratio below 10%	Ratio below 15%
< EUR 5 m	93	93	93	93
> EUR 5 m and < EUR 10 m	7	7	7	7
> EUR 10 m and < EUR 20 m	10	9	10	10
> EUR 20 m and < EUR 50 m	8	8	8	8
> EUR 50 m and < EUR 150 m	8	7	7	7
> EUR 150 m and < EUR 300 m	8	6	7	7
> EUR 300 m	0	0	0	0

Threshold 2 (incl. hedge acc)	Sample	Ratio below 5%	Ratio below 10%	Ratio below 15%
< EUR 5 m	83	83	83	83
> EUR 5 m and < EUR 10 m	11	11	11	11
> EUR 10 m and < EUR 20 m	10	8	9	9
> EUR 20 m and < EUR 50 m	9	9	9	9
> EUR 50 m and < EUR 150 m	7	6	6	6
> EUR 150 m and < EUR 300 m	9	7	8	8
> EUR 300 m	5	5	5	5

Four banks out of those 134 banks are using the OEM. Among those four banks, three banks are included in the 110 banks (threshold 1) or 104 banks (threshold 2) below EUR 20 m, with almost all banks with a ratio below 5% of total assets.

The vast majority of banks in the sample show a sum of derivative assets and liabilities held for trading below EUR 20 m, regardless of the threshold definition, with only a few banks using the OEM at present. Therefore, a threshold level of EUR 20 m would most probably expand the number of banks permitted to use the OEM for proportionality reasons.

Whereas banks are currently required to be eligible for the derogation for small TB business in order to use the OEM, the definition of a threshold for small derivative business would make this condition irrelevant. Nonetheless, consistency would still have to be maintained between thresholds, both in terms of definition (i.e. use of market value for derivatives instead of notional value) and level (i.e. the small derivative business threshold should be lower than the small TB business one), although the threshold for small derivative business would have to consider all derivative instruments, regardless of whether they are in the TB or the non-trading book (except derivatives used for credit risk mitigation). A threshold value of EUR 20 m would be consistent with the proposed EUR 50 m contemplated for small TB business.

Finally, based on the information above, a relative threshold expressed in terms of total assets does not seem to be strictly required. Only two banks in the above sample would exceed a 5% threshold. For simplicity, it could therefore be proposed to rely on an absolute threshold only, even if the present analysis is based on a relatively limited sample of banks.

The OEM, including recalibrated add-ons for consistency with the SA-CCR, would be made available as an option for banks below the small derivative business threshold.

## 2.4 Assessment of the impact of the SA-CCR

### 2.4.1 BCBS Basel III monitoring exercise

The following impact assessment is performed based on the data submitted by EU institutions to the BCBS for the purposes of the Basel III monitoring exercise.<sup>22</sup> This QIS exercise covered the impact of the revisions of the CCR framework, which is relevant for the purposes of assessing the impact of the SA-CCR.<sup>23</sup>

For the purposes of this section, we use the Basel naming convention of the 'CEM' to refer to what the CRR calls the 'MtM method'. All values are reported in EUR with Unit 1. It should also be clarified that, for the purposes of the below analysis, the IRB approach and the proposals for amendments to credit risk by the BCBS for the SA are not considered. The focus is, instead, on the introduction of the SA-CCR for the calculation of the exposure to transactions subject to CCR, which will be an input for the calculation of RWAs under the relevant SA and/or IRB approach.

It is noted that the SA-CCR will apply to OTC derivatives, exchange-traded derivatives and long settlement transactions, but not to SFTs;<sup>24</sup> therefore, this section does not directly cover this last type of transaction. Nevertheless, some results are presented—based on banks using the IMM for CCR and also Cross Product Netting, for those banks that have received prior approval from the CA to estimate their exposure to CCR using the IMM.

The following table exhibits (per country) the number of banks that reported current exposures different from zero on their derivative transactions. In addition, only one institution reported a non-zero exposure to derivatives and SFTs under Cross Product Netting.

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<sup>22</sup> Please refer to <http://www.bis.org/bcbs/qis/index.htm>, particularly to the ad hoc monitoring exercise associated with the template available under [http://www.bis.org/bcbs/qis/biiiimplmoniwb\\_adhocex\\_may16.xlsx](http://www.bis.org/bcbs/qis/biiiimplmoniwb_adhocex_may16.xlsx) and to the instructions available under [http://www.bis.org/bcbs/qis/biiiimplmoninstr\\_adhocex\\_apr16.pdf](http://www.bis.org/bcbs/qis/biiiimplmoninstr_adhocex_apr16.pdf).

<sup>23</sup> Please refer to the BCBS SA-CCR standards, available under <http://www.bis.org/publ/bcbs279.pdf>.

<sup>24</sup> SFTs are defined in Basel as transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing and margin lending transactions, where the value of the transactions depends on the market valuation and the transactions are often subject to margin agreements.

Figure 11. Number of banks reporting non-zero exposures in derivative transactions

Country	Number of banks reporting exposure in derivative transactions currently under the CEM/SM	Number of banks reporting exposure in derivative transactions currently under the IMM	Number of banks reporting exposure in derivatives and SFTs under CPN under the IMM
AT	1		
BE	2		
DE	29	2	
DK	3		
ES	5		
FR	4	2	
GB	9	3	
GR	4		
IT	10	1	
MT	1		
NL	12	1	
NO	6		
PL	3		
SE	7	2	1
<b>Total</b>	<b>96</b>	<b>11</b>	<b>1</b>

#### 2.4.2 Exposures under the CEM or the SM for CCR

Nineteen banks that did provide exposure values for their derivative transactions under the CEM/SM did not provide exposure values for those derivative transactions recalculated under the SA-CCR. Therefore, they were not considered as part of this section, as it was not possible to analyse the relative impact of the introduction of the SA-CCR with respect to the CEM/SM. In addition, nine banks presenting exposures under the CEM/SM also reported exposures under the IMM.<sup>25</sup> The following tables exhibit the distribution of banks' exposures to derivative transactions under the CEM/SM, as well as the RWAs arising from them, and also propose their impacts following the implementation of the SA-CCR.

<sup>25</sup> Since the focus is on the impact of the SA-CCR with respect to the CEM/SM, all impacted exposures under the CEM/SM are assessed to better understand the effect. Exposures under the IMM are not considered as part of this section.

Figure 12. Impact of moving from the CEM to the SA-CCR for exposures currently under the CEM in terms of exposure value

	Exposure value for derivative transactions currently under CEM/SM (A)	Exposure value for derivative transactions currently under the CEM/SM, recalculated under the SA-CCR (B)	Ratio B/A (the ratio is computed at bank level)
# banks	77	77	77
Min	594 645	832 503	62%
25% percentile	203 968 000	325 038 000	100%
50% percentile	598 086 753	823 780 050	127%
75% percentile	2 377 619 620	4 295 534 811	148%
Max	91 499 207 219	128 680 531 587	281%

Figure 13. Impact of moving from the CEM to the SA-CCR for exposures currently under the CEM in terms of CCR RWAs

	RWAs for derivative transactions currently under the CEM/SM (A)	RWAs for derivative transactions currently under the CEM/SM, recalculated under the SA-CCR (B)	Ratio B/A (the ratio is computed at bank level)
# banks	77	77	77
Min	297 323	416 252	61%
25% percentile	75 675 000	97 014 700	100%
50% percentile	281 620 047	414 862 397	140%
75% percentile	1 196 823 763	2 028 524 767	157%
Max	29 728 882 561	46 283 335 885	453%

The variables reported in the tables **should be read independently** from each other, and values appearing in the same row should not be associated with the same reporting bank.

From the tables above, it is possible to see that (on average) the introduction of the SA-CCR would raise the exposure value for derivative transactions and this, in turn, would be reflected in the RWAs arising from those exposures. With regard to the increase in exposure, for the bank representing the median of the considered sample, the implementation of the SA-CCR leads to a 27% increase in its exposure for derivative transactions.

The table below reports the share of exposures for derivative transactions currently under the CEM/SM recalculated under the SA-CCR—and for which the SA or the IRB approach to credit risk are applied—out of the total exposures for derivative transactions currently under the CEM/SM recalculated under the SA-CCR. It is possible to see that most exposures are covered by the SA to credit risk for the purposes of calculating RWAs (for example, 38 out of 77 banks calculate RWAs with the SA to credit risk for more than 82% of their CCR exposures in derivative transactions under the CEM/SM). Nonetheless, many banks also use the IRB approach to calculate RWAs for CCR exposures under the CEM/SM.

Figure 14. Share of derivative exposures under the SA or the IRB approach to credit risk

	Share of exposures for derivative transactions currently under the CEM/SM recalculated under the SA-CCR, and for which SA to credit risk is applied, out of total exposures for derivative transactions currently under the CEM/SM recalculated under the SA-CCR	Share of exposures for derivative transactions currently under the CEM/SM recalculated under the SA-CCR, and for which IRB to credit risk is applied, out of total exposures for derivative transactions currently under the CEM/SM recalculated under the SA-CCR
# banks	77	77
Min	0%	0%
25% percentile	15%	0%
50% percentile	82%	18%
75% percentile	100%	85%
Max	100%	100%

The variables reported in this table **should be read independently** from each other, and values appearing in the same row should not be associated with the same reporting bank.

### 2.4.3 Banks with exposures both under the CEM/SM and the IMM

In this section, we analyse the aggregated impact due to the introduction of the SA-CCR for banks that apply both the CEM/SM and the IMM approaches for calculating their exposure value for transactions subject to CCR. We consider exposures for derivatives and CPN, but not SFTs. The sample in this case consists of nine banks.

Figure 15. Overall impact of moving from the CEM to the SA-CCR for banks using both the CEM and the IMM in terms of exposure value

	Exposure value for derivative transactions currently under both the CEM/SM and the IMM (CPN included) (A)	Exposure value for derivative transactions currently under both the CEM/SM and the IMM (CPN included), after the SA-CCR has replaced the CEM/SM (B)	Ratio B/A (the ratio is computed at bank level)
# banks	9	9	9
Min	8 792 685 815	9 014 611 215	99%
25% percentile	21 545 797 109	21 378 955 156	103%
50% percentile	53 721 581 635	53 721 581 635	105%
75% percentile	77 692 878 981	81 305 891 043	115%
Max	116 252 244 720	153 433 569 089	132%



Figure 16. Overall impact of moving from the CEM to the SA-CCR for banks using both the CEM and the IMM in terms of RWAs

	RWAs for derivative transactions currently under both the CEM/SM and the IMM (CPN included) (A)	RWAs for derivative transactions currently under both the CEM/SM and the IMM (CPN included), after the SA-CCR has replaced the CEM/SM (B)	Ratio B/A (the ratio is computed at bank level)
# banks	9	9	9
Min	1 322 319 842	1 414 096 640	98%
25% percentile	7 800 023 813	7 668 998 672	103%
50% percentile	24 991 406 302	25 784 786 239	107%
75% percentile	29 804 617 750	32 242 715 277	121%
Max	39 694 626 764	56 249 080 089	142%

Only banks that reported both CCR exposures in derivatives under the CEM/SM and the IMM (CPN included) are considered in the tables. The variables reported in the tables **should be read independently** from each other, and values appearing in the same row should not be associated with the same reporting bank.

The tables above show that, for banks applying both the CEM/SM and the IMM to calculate their exposure for derivative transactions, the implementation of the SA-CCR for their transactions under the CEM/SM is not expected to materially affect their current total exposure and associated RWAs for their derivatives under CCR (although some banks see an increase from their current levels). In addition, as the impact of the introduction of the SA-CCR only affects exposures subject to the CEM/SM and not IMM exposures, the effect of the SA-CCR is diluted depending on the relative quantity of exposures under the IMM. It should finally be noted that this is a very limited sample (i.e. nine banks), which may raise questions over the reliability of conclusions drawn from this result.

## 2.5 Remaining issues and operational burden regarding the implementation of the SA-CCR – Industry feedback

The EBA received some feedback from the industry,<sup>26</sup> which is presented in this section. It should be noted that the EBA does not necessarily support the arguments and conclusions provided by the industry. ISDA/AFME comments broadly relate to the calibration of the SA-CCR, as well as question the consistency of the SA-CCR with the more recent SBA approach under the FRTB.

### 2.5.1 Calibration of the SA-CCR

#### a. Alpha factor

According to industry comments, the calibration of the alpha factor was performed based on ISDA documents established more than 10 years ago. ISDA/AFME believe that the results are no longer

<sup>26</sup> ISDA/AFME

representative. A recalibration of the alpha factor should be performed and, as a result, the CRR provisions should be amended to reflect a lower alpha factor for both the IMM and the SA-CCR.

#### b. Insufficient PFE reduction from initial margins (IM)

The SA-CCR allows excess collateral to reduce the PFE to a certain extent. The reduction is obtained via the application of a multiplier to the PFE component and is floored at 5% of the PFE. Against the backdrop of the generalisation of IM, however, the use of the exponential multiplier provided in the SA-CCR seems to only lead to a marginal reduction of the PFE. This punitive treatment of IM, according to the industry, would justify a recalibration of the SA-CCR, reflecting better overcollateralisation and negative MtM.

### 2.5.2 Consistency with the FRTB SBA

ISDA/AFME also question, in a number of fields, the consistency of policy choices made in the SA-CCR and the SBA approach under the FRTB.

#### a. Recognition of diversification benefits across interest rate and FX hedging sets

No diversification benefit is currently recognised in the SA-CCR across interest rate derivative hedging sets (or across FX derivative hedging sets), since the add-on for interest rate derivatives is obtained by following a simple summation of hedging set level add-ons. The industry argues that, for the sake of consistency with the FRTB, some diversification benefit should be recognised across hedging sets as well.

#### b. Use of supervisory delta adjustments

Among other issues, the industry points out that, whereas institutions are free to use their own internal model deltas in the revised MKR framework subject to approval by CAs, supervisory deltas are required to be used in the SA-CCR. The use of the supervisory deltas set out in the SA-CCR is considered an additional burden in a context where trades have to be valued using internal valuation models and own deltas under the FRTB. In addition, supervisory deltas seem to be operationally complex to implement at a trade level for certain products, such as caps and floors. The industry also highlights the recent evolution in interest rate markets, leading to the pricing of financial instruments in negative rate environment, for which supervisory deltas were not designed. Overall, the industry reiterates its support for using own internal deltas in line with the FRTB requirements.

## 2.6 Conclusion

The analysis shows that, while being extremely significant for the largest EU banks, CCR is generally less relevant for smaller institutions. Whereas the sum of CCR and CVA RWAs represents more than 50% of total RWAs for one EU institution, the median ratio is 2.17% for larger EU banks (the EBA sample) and 0.01% for smaller EU banks (small banks sample).

This diversity is also reflected in the approaches used for CCR. Whereas the IMM is more widely used in the EU than in any other jurisdiction (20 institutions from 10 Member States have been granted permission to use the IMM), the OEM is still substantially applied by small-sized (or medium-sized) institutions across the EU, with at least 372 institutions from 13 Member States using it. As expected, the SM appears to be applied by only two banks in the EU, thus confirming the relatively marginal impact of removing it. The MtM method appears to be the most widely used method in the EU.

The large number of institutions still using the OEM for CCR seems to advocate for keeping the OEM in the framework, at least for CCR (the OEM seems to be less significantly used for CVA risk). This should not be an issue, as the OEM generally appears to be more conservative than the MtM method. In addition, the MtM method could also be kept in the framework for smaller banks that currently use it. Naturally, in the revised framework, the OEM and the MtM method may have to be recalibrated to ensure that they remain more conservative than the SA-CCR.

Currently, the use of the OEM is possible only for institutions with a small TB business, regardless of the relative size of their derivative business in their TB business. In principle, the use of a simplified CCR framework should be linked to the size of the derivative business only, regardless of whether they are in the TB or the non-trading book. This is why, based on the analysis conducted in the report, it is proposed to remove the current requirement to have a small TB business to be able to use the OEM and, instead, to define a threshold for small derivative business that is consistent with the threshold for small TB business in terms of definition and level. A threshold level of EUR 20 m for the sum of the absolute FV of long and short positions in derivative instruments is considered appropriate as an option for institutions willing to use the OEM or the MtM method. However, based on the analysis, a relative threshold expressed in terms of total assets does not seem to be strictly required.

#### **EBA recommendation on a threshold for small derivative business**

The EBA recommends introducing a threshold for small derivative business, below which institutions are allowed to use a simple, conservative approach for the computation of CCR capital requirements (which could include the use of the current OEM or MtM method subject to appropriate recalibration). In any case, the EBA considers that institutions below the threshold should not be exempt from capital requirements.

Instead of using notional values, the EBA recommends that the threshold should be defined in terms of the sum of the absolute market value of an institution's long positions and short positions in derivative instruments included in both its TB and non-trading book. The computation of the threshold would be a mandatory field for all institutions in COREP.

For consistency reasons, the threshold for small derivative business should be lower than the threshold for small TB business and could be established at **EUR 20 m**, as evidenced in the report.

In reaction to the absence of COREP reporting on the threshold computation for institutions with a small TB business and considering the difficulty of immediately and accurately assessing the approaches used by institutions for CCR, the EBA also recommends clarifying and expanding the reporting of CCR exposure values and RWAs, as well as including a COREP template that provides the detail of the computation of the new proportionality threshold.

#### **EBA recommendation on COREP proportionality monitoring**

In light of the issues raised by the analysis conducted in the report and for the purposes of monitoring the additional proportionality granted in the framework, the EBA recommends the inclusion of:

- One or more CCR COREP templates giving an overview of institutions' CCRs, including exposures to central counterparties and the method(s) used to compute CCR exposure values and corresponding RWAs;
- COREP cells/templates providing (where relevant) the details of the computation of the different proportionality thresholds included in legislation and links with broadly corresponding accounting categories.

The EBA, therefore, recommends that the legal basis for the EBA to design or revise COREP templates is kept in the CRR and that sufficient time is allowed to perform this task. Considering the need to update COREP in order to reflect the implementation of the SA-CCR and the FRTB, a deadline of 2 years should be set, excluding the time needed by the Commission to adopt the final templates.

Finally, the analysis shows that the introduction of the SA-CCR would lead, for the median bank, to an increase of 27% in the exposure value and of 40% in RWAs for CCR. The effect seems to be more diluted for banks using a combination of the IMM and the MtM method, which show a median increase of 5% in exposure value and 7% in RWAs. However, these figures do not take into account the potential application of a floor of the IMM based on the SA-CCR. Similarly, the SA-CCR will not only impact the OFRs for CCR, but also the CVA risk, the leverage ratio and the large exposures regime, whose impacts have not been considered as part of this report.

### 3. MKR

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On 18 April, the EBA received a CfA from the Commission for the purposes of revising the OFRs for MKR as part of the CRR review. The CfA is structured around the following sections:

The first section has two parts. First, there is an overview of EU trading instruments and current market capital charges; as requested in the mandate, the information has been clustered by jurisdiction and/or by institutions' different business models (using those proposed for the NSFR report as a template). Second, the report provides an assessment of the current derogation of small TB business and alternative definitions/thresholds.

The second section provides an assessment of the impact of the new FRTB on the IMA and standardised banks, with particular focus on the assessment of the ratio of the new IMA to the new SA.

The third section provides an assessment of the impact of the new SA.

The fourth section deals with the implementation of STS securitisations.

The fifth section shows the main interpretational issues that banks and supervisors have spotted to date.

With regard to the fourth section, taking into account ongoing work by the BCBS, the Commission requested the EBA to provide an assessment of the need for adjustments and specific proposals to adapt general FRTB securitisations capital charges for STC securitisations.

The FRTB text includes, in its 'implementation and monitoring' section, an explicit reference to the introduction of the treatment for STC securitisations in the new MKR framework. It notes the following for once this work had been concluded:

*'The Committee notes that it has underway several areas of ongoing work that may have an impact on the market risk capital requirements. In November 2015, the Committee issued a proposal for incorporating criteria for simple, transparent, and comparable securitisations into the Basel capital framework. Any final treatments in this regard will apply to both the banking book and the trading book and, thus, market risk capital standards for securitisations.'*

On 11 July, the BCBS finally published the revisions to the securitisation framework, which incorporates STC criteria (equivalent to the EU STS).

Given the timeline in BCBS for finalising this framework, as well as the challenging deadline for the EBA to provide a response to the Commission's CfAs, it has not been possible to conduct an analysis on the implementation of STC securitisations. This section is therefore left out of the report.

Nevertheless, the EBA supports the STC criteria as published and, provided they are integrated into the FRTB framework, considers that the STC/STS framework should be adopted in the EU.

### Data used for the analysis provided in the first section of the CFA

In order to provide an overview of EU trading instruments and current capital charges and to assess the current derogation, the EBA has based its analysis on information collected from COREP and FINREP, both from the sample of 193 large institutions for which the EBA already has this information (the EBA sample) and from a sample of small firms provided by CAs (small banks sample). Obviously, the institutions that are neither big enough to be in the EBA group nor small enough to be in the small banks sample are not represented in this analysis.

The EBA requested CAs to submit relevant COREP and FINREP templates for those institutions that had less than EUR 500 m in FV assets and liabilities, including derivatives but excluding the AfS portfolio. The intention was to have relevant information in order to provide an overview of trading activities for small firms and to be able to assess the derogation for small trading portfolios.

For a large part of the data requested, FINREP figures were very limited or not available at all. The reason for this is the transposition of FINREP in Article 99 of the CRR. This article sets out the requirement that banks currently using national GAAP reporting should also submit FINREP information. However, this requirement is to be transposed over a number of years and is far from being implemented in all jurisdictions. Thus, while some CAs managed to map FINREP figures to comparable GAAP reporting, many argued that this could not be done in a meaningful way, especially within the given deadline for this report. The implication of this is that only a subsample of the full population of European banks below the threshold of EUR 500 m has been used for the analysis in this report (with some jurisdictions better represented than others).

Due to the issues described above with attaining sufficient and fully harmonised data, the different analysis sections in this report will be based on different sample sizes. The table below shows the overall number of banks, as well as from which jurisdictions the EBA received FINREP and COREP data. However, the actual sample size used in different parts of this report will vary depending on the information requirements. Detailed information on the different sample sizes used will be disclosed under each analysis section.

Figure 17. COREP, FINREP and business model data available for analysis, and number of jurisdictions that participated in the analysis

	# of banks in EBA sample	# of banks in Small banks sample
COREP	193	1105
FINREP	164	384
Business Model classification	162	1033
Jurisdictions	AT, BE, BG, HR, CY, CZ, DK, EE, FI, FR, DE, EL, HU, IE, IT, LV, LT, LU, MT, NL, NO, PL, PT, RO, SK, SI, ES, SE, UK	AT, BE, BG, CZ, DE, DK, ES, FR, HR, HU, IT, LT, LV, NL, PT, RO, SE, SI, UK
Jurisdictions in the EU not represented	Non	CY, EE, FI, EL, IE, LU, MT, NO, PL, SK

In the end, following several rounds of data submission, the EBA received (in total) data from 1 153 banks representing 19 jurisdictions. After cleaning the data,<sup>27</sup> the sample was reduced to 1 105 banks still representing all 19 jurisdictions. For most of these banks, CAs managed to assign a business model. This was done on a best-efforts basis and should be interpreted with caution. In addition, while all reporting figures are subject to validation rules and monitoring by CAs with additional data checks conducted by the EBA, a certain degree of uncertainty must be accepted when drawing upon the data for conclusions (due to the data issues described above).

### Analysis of MKR activities in the EU

The call for advice required an analysis of the size and composition of MKR activities, which seem to be linked with instruments included in the TB. Since it is currently not possible to obtain information (from the reporting's of institutions) on the instruments linked to MKR activities or the instruments included in the TB, the EBA decided to rely on FINREP accounting data in many cases in order to assess the size and composition of MKR activities, as well as the derogation for small TB business.<sup>28</sup>

In principle, all instruments in the TB should be booked at FV and changes in their value should go through P&L. Accordingly, the EBA used (as a starting point) the 'Financial assets/liabilities held for trading' as well as 'Financial assets/liabilities designated at FV through P&L' when assessing the threshold to be applied for the derogation of small trading business.<sup>29</sup> However, additional threshold definitions have also been assessed in order to give a more holistic picture. The description of the different threshold definitions can be found in the subsection 'Second part of Section 1 of the Cfa – Assessment of the derogation for small trading portfolios'.

In addition, for the analysis of the size and composition of MKR activities, the EBA decided to expand the FV instruments to cover AfS positions as well. While these generally are in the BB and, in most cases, the intention of the firm would not be directly linked to what institutions label as market activities (more Asset and Liability Committee (ALCO) portfolio management), the EBA believes that—due to its potential effect on capital (subject to the existence/phasing out of prudential filters)<sup>30</sup> and due to the fact that eventual accounting changes might eliminate it—this portfolio should also be considered as part of this analysis (although it was not included for the assessment of the derogation).

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<sup>27</sup> Some banks were discarded due to flaws in their reporting figures while other banks proved to be above the threshold of EUR 500 m, rendering them not suitable for the analysis.

<sup>28</sup> The EBA is aware that relying on FINREP data will entail that in some cases FV instruments included in the analysis of TB business will in fact be located in the BB.

<sup>29</sup> Although generally the category 'held for trading' should coincide with instruments included in the regulatory TB, this is not always the case. The EBA has considered two possibilities: (i) that any instruments whose change in value is reflected directly in P&L should be computed; and (ii) that only instruments in the 'held for trading' category should be included when assessing the threshold.

<sup>30</sup> In December 2013, the EBA provided advice to the Commission on these issues:

<http://www.eba.europa.eu/documents/10180/604534/EBA-Op-2013-03+Technical+advice+on+treatment+of+unrealised+gains.pdf>

## 3.1 First part of the first section of the CfA – Overview of EU trading instruments and current market capital charges

The first part of the first section of the CfA mandate requests the EBA to provide an overview of EU trading instruments and current MKR capital requirements for credit institutions, including an overview of the size and composition MKR activities, as well as of the associated MKR capital requirements in the EU as of today. The EBA is requested to cluster the information by jurisdiction and/or by institutions' different business models.

### 3.1.1 The analysis of FV instruments

As mentioned previously, for the analysis presented in this document, the EBA assessed two groups of financial institutions:

- Large firms – The EBA has available FINREP data from 164 EU banks (the EBA sample). This sample includes large/medium institutions that comprise a large proportion of the financial system in each Member State;
- Small firms – The EBA has received (from CAs) information for 1 105 small banks (i.e. those that have less than EUR 500 m in FV assets, excluding AfS portfolios—small banks). However, the majority of these institutions are not required to report FINREP31. Accordingly, data from only 274 of these small banks could be used for this analysis.

#### a. Composition of FV instruments

Large banks show a relative symmetry between assets/liabilities held for trading (36% vs 30%) and designated at FV through P&L (6% vs 7%). Derivatives used for hedge accounting are roughly 2% of the total FV instruments, while the AfS portfolio represents a significant part (17%) of total FV instruments.

For small firms, the AfS portfolio becomes the overwhelming portion of total FV assets, accounting for up to 82% of total FV instruments. The proportion of assets/liabilities held for trading is much smaller than for the large firms and shows less symmetry in terms of size (6% vs 3%). The same thing could be said about the assets/liabilities designated at FV through P&L (1% vs 3%). The derivatives used for hedge accounting are slightly larger than in the case of large firms (2-3% of the total).

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<sup>31</sup> Only a few CAs managed to map a few (but not all) FINREP figures to national GAAP.



Figure 18. Composition of FV instruments – The EBA sample

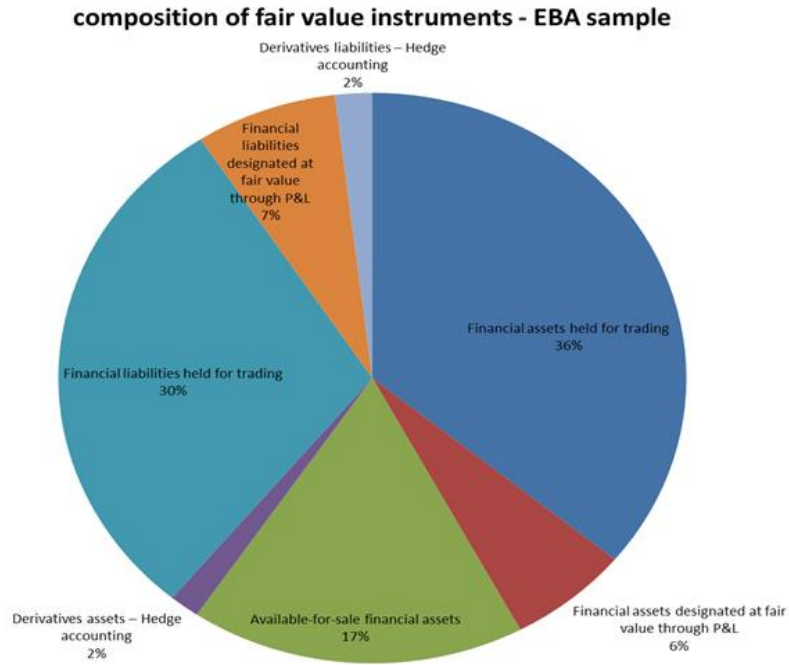
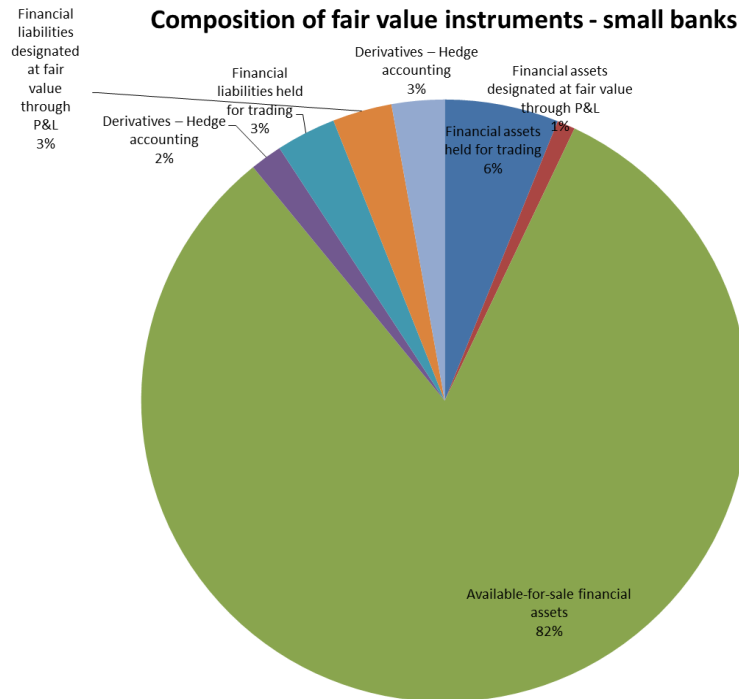


Figure 19. Composition of FV instruments – Small banks



**b. Relative importance of FV instruments in relation to total assets**

If we assess the relative importance of FV instruments in terms of the balance sheet, we can observe that they are significantly more relevant for large firms, where they account for 31% of the assets (out of which a bit more than 8% comes from the AfS portfolio) and 20% of the liabilities. For small firms, they represent close to 15% of the assets and less than 1% of liabilities; of course, it is worth noting again that the key feature is the relevance of the AfS portfolio for small banks, where it represents nearly 14% of total assets (vs 8% for large firms). Without the AfS portfolio, the rest of the FV assets and liabilities for small firms barely reach 1% of the total balance sheet.

Figure 20. Relative importance of FV instruments – The EBA sample

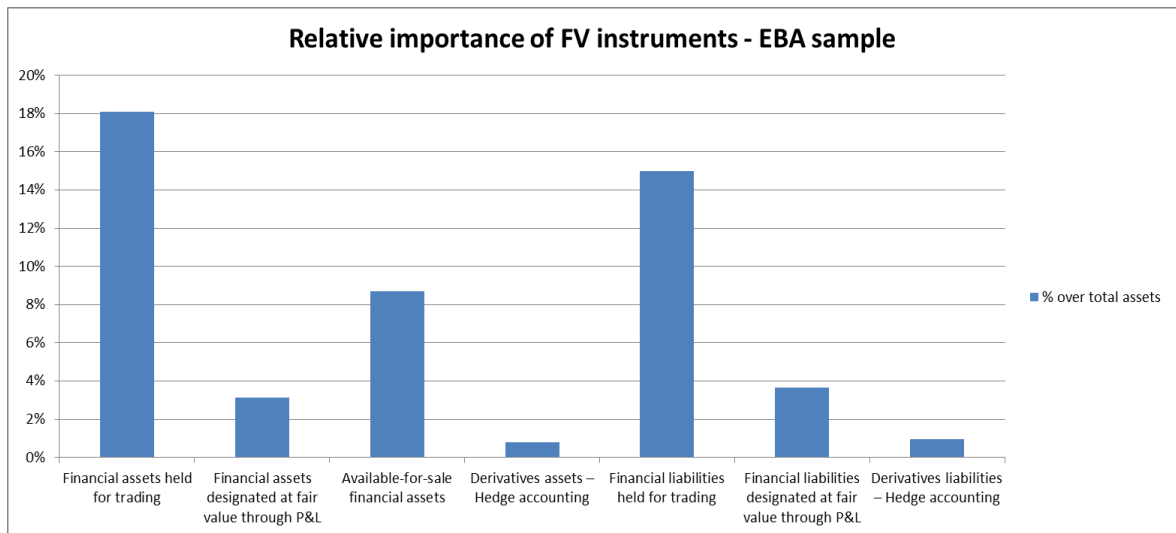
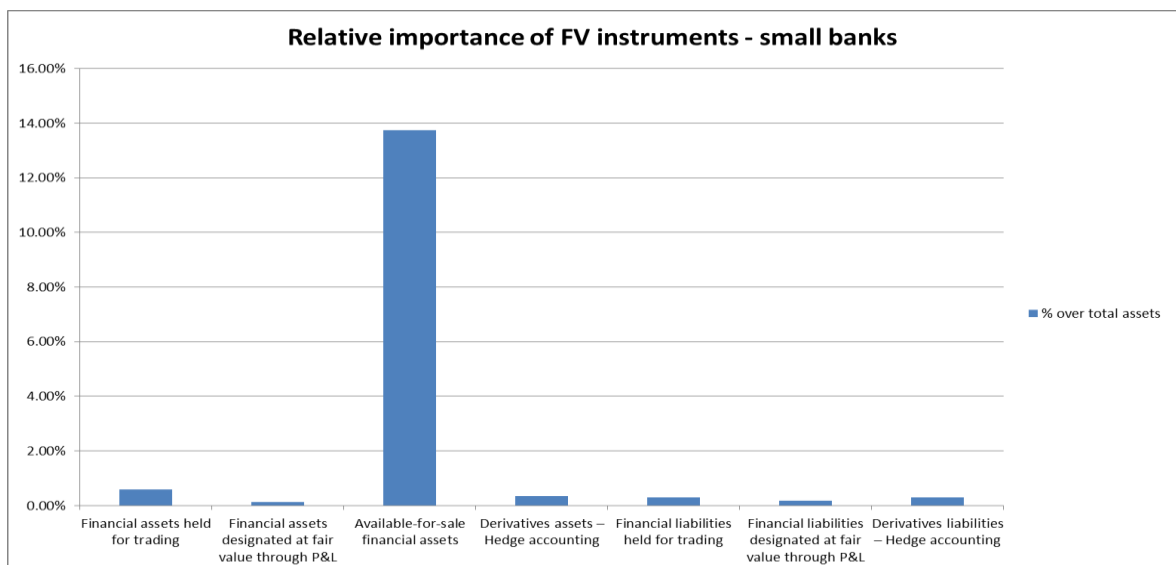


Figure 21. Relative importance of FV instruments – Small banks



**c. Type of FV instruments**

In terms of type of instruments, it is remarkable that nearly half (46%) of the FV instruments are concentrated in derivatives for the EBA sample, while this percentage is 9% for small firms. For these small banks, EQ (7% vs 9%) and specially debt securities (79% vs 24%) are more significant than for large firms, while the rest of the instruments (loans, short positions, deposits, debt securities issued and other financial liabilities) are more relevant for large firms than for small banks (approximately 26% vs 5%).

Figure 22. Type of FV instruments – The EBA sample

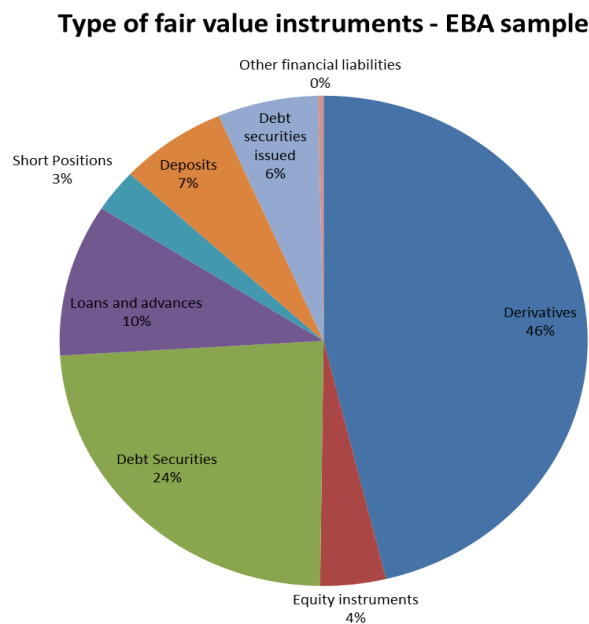
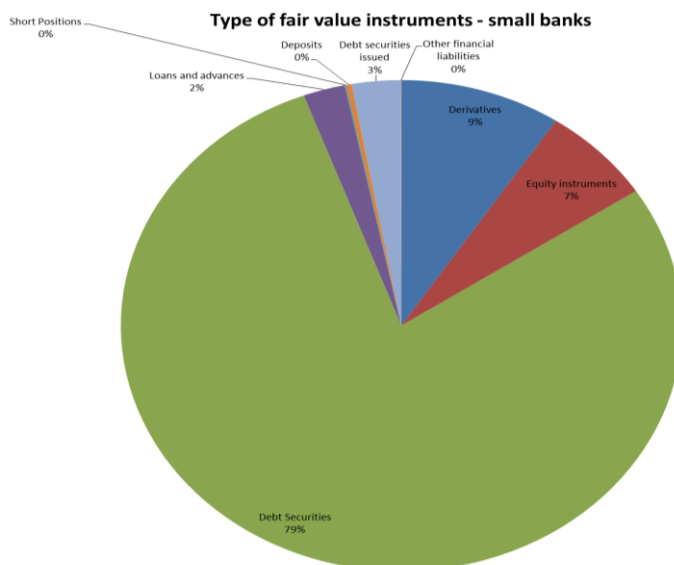


Figure 23. Type of FV instruments – Small banks



d. Type of instruments by accounting category

Regarding the type of instruments held by category, on the asset side, large banks use derivatives far more for trading than for hedging purposes (92 vs8%). For small firms, this proportion is less pronounced (60 vs40%); in any case, it may be worth remembering the limited importance of derivatives for small banks. Debt securities are most of the AfS portfolio for large firms, while the vast majority of EQ, debt and loans at FV are in the AfS portfolio for small firms.

Figure 24. Asset instruments held by accounting category – The EBA sample

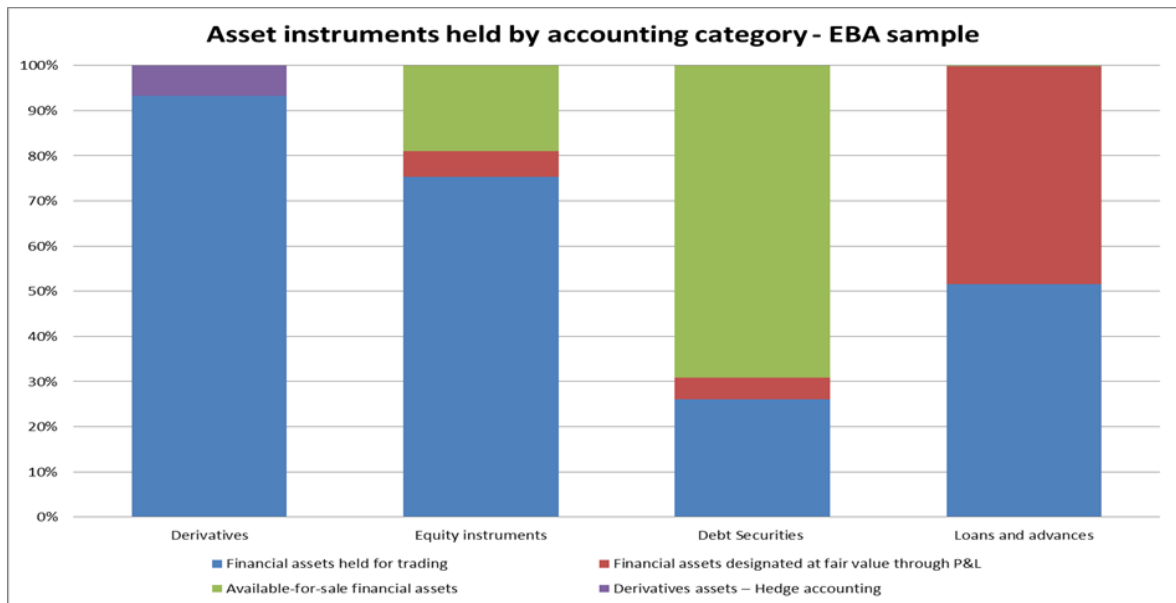
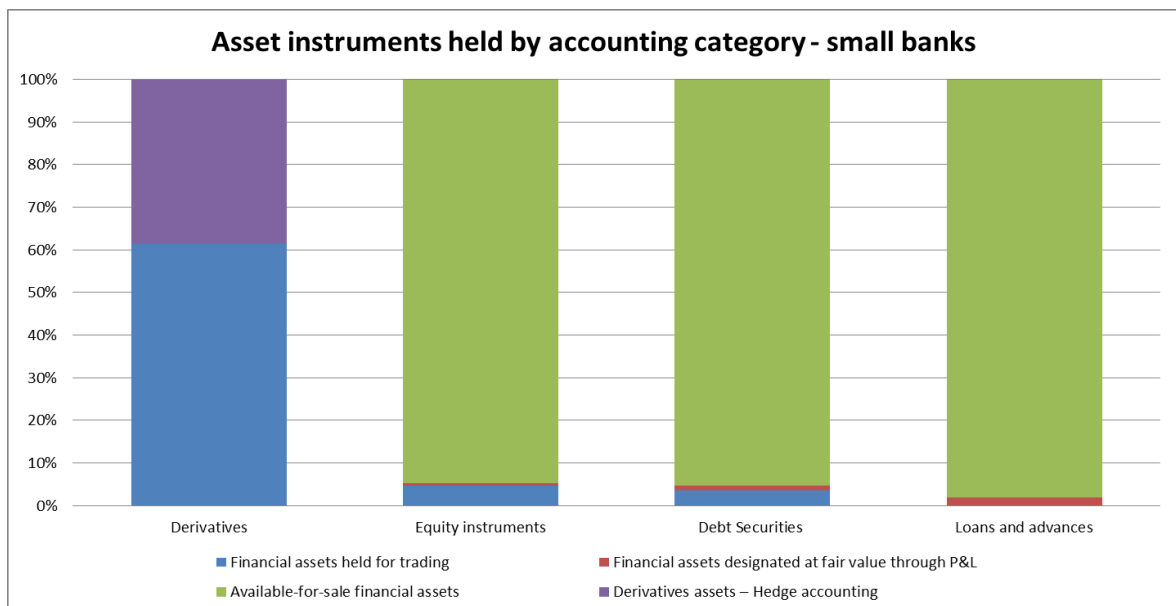


Figure 25. Asset instruments held by accounting category – Small banks



On the liability side, a similar pattern to the one described before can be observed for the derivatives: all short positions are—in both groups—in the ‘held for trading’ category, while the majority of deposits and debt securities issued are in the FV option category for large banks and all of them are under the FV option for small firms. Finally, a majority of other financial liabilities are in the ‘held for trading’ category.

Figure 26. Liability instruments held by accounting category – The EBA sample

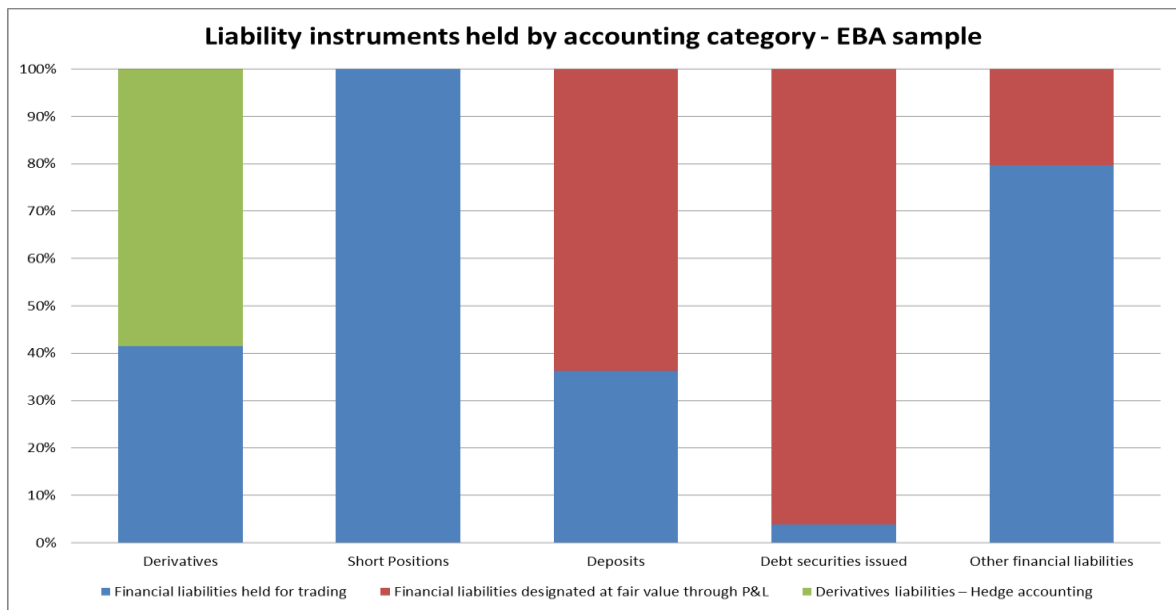
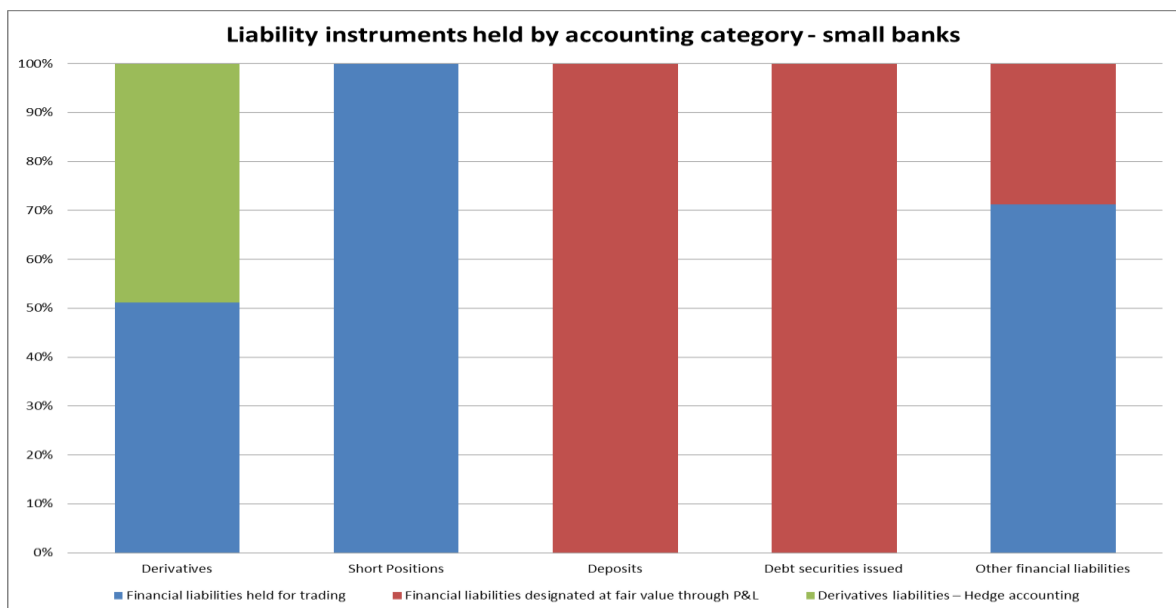


Figure 27. Liability instruments held by accounting category – Small banks



**e. Accounting hierarchy**

Regarding the accounting hierarchy, it can be observed that small firms tend to have a greater proportion of their portfolios in Level 1 instruments (particularly for assets held for trading and designated at FV through P&L) with the exception of liabilities designated at FV through P&L. In both cases, the vast majority of derivatives used for hedging are in the Level 2 category, though the proportion of Level 3 is greater for derivatives on the liability side (between 8% and 15%).

Figure 28. FV hierarchy by accounting category – The EBA sample

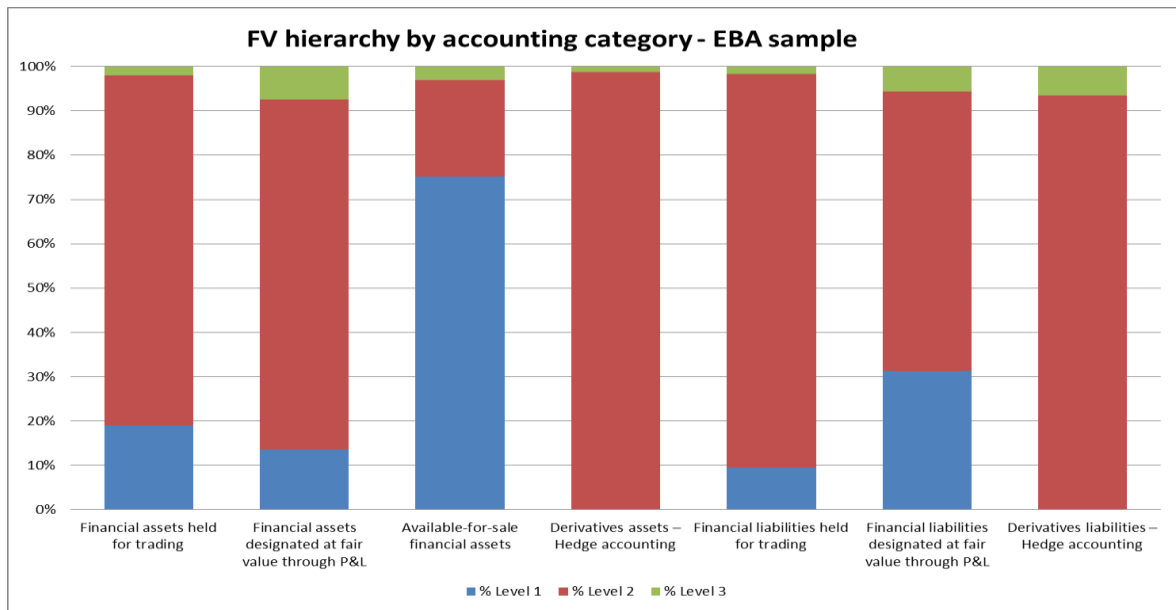
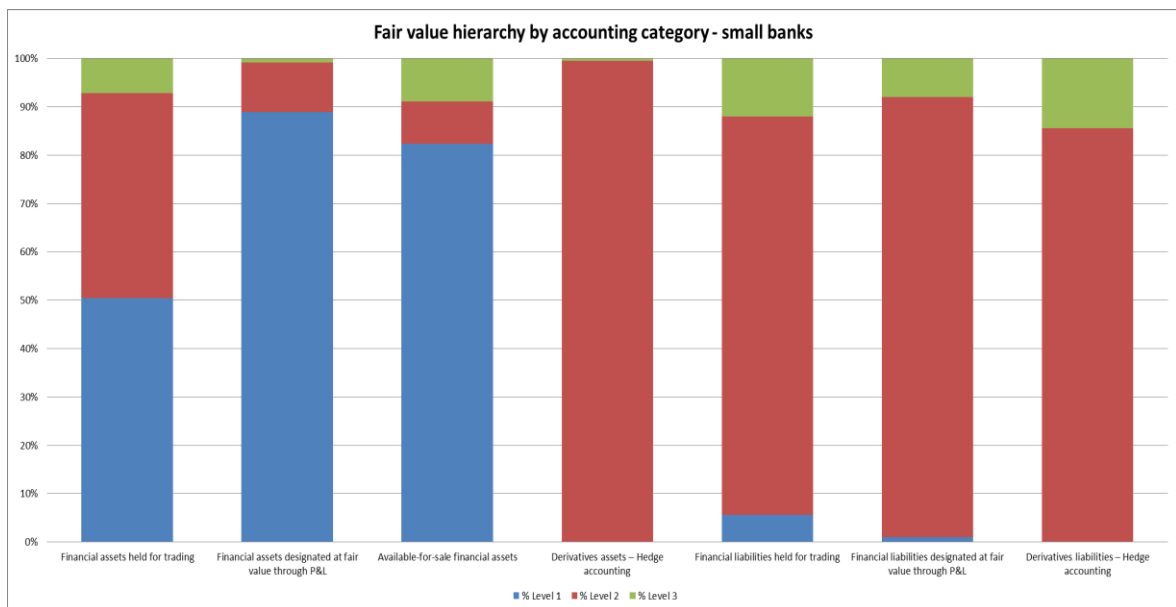


Figure 29. FV hierarchy by accounting category – Small banks



If we analyse the same hierarchy by type of instrument, we observe that small firms also tend to have a greater proportion of derivatives in Level 3 and, remarkably, EQs where the proportion of Level 3 is greater than 50% (compared to 11% for large firms). This is consistent with a significantly higher proportion of EQ classified as AfS for small banks (96% vs 28%), which suggests that most of these EQ positions are not listed. On the liability side, the percentage of deposits in Level 3 is also significantly higher for small firms (38% vs 4%).

Figure 30. FV hierarchy by type of instrument – The EBA sample

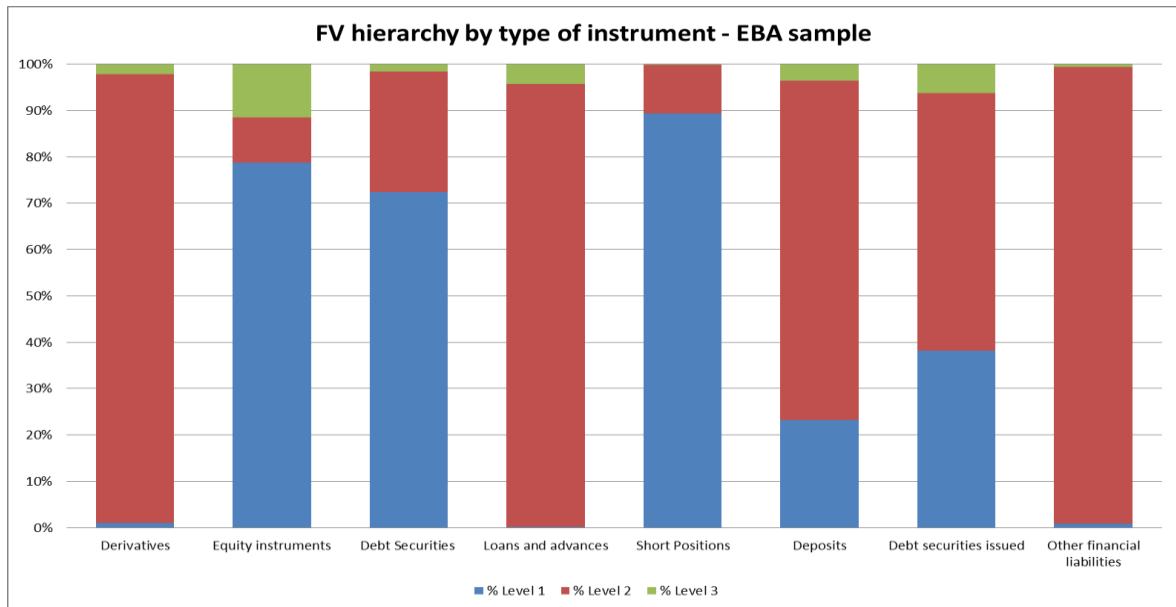
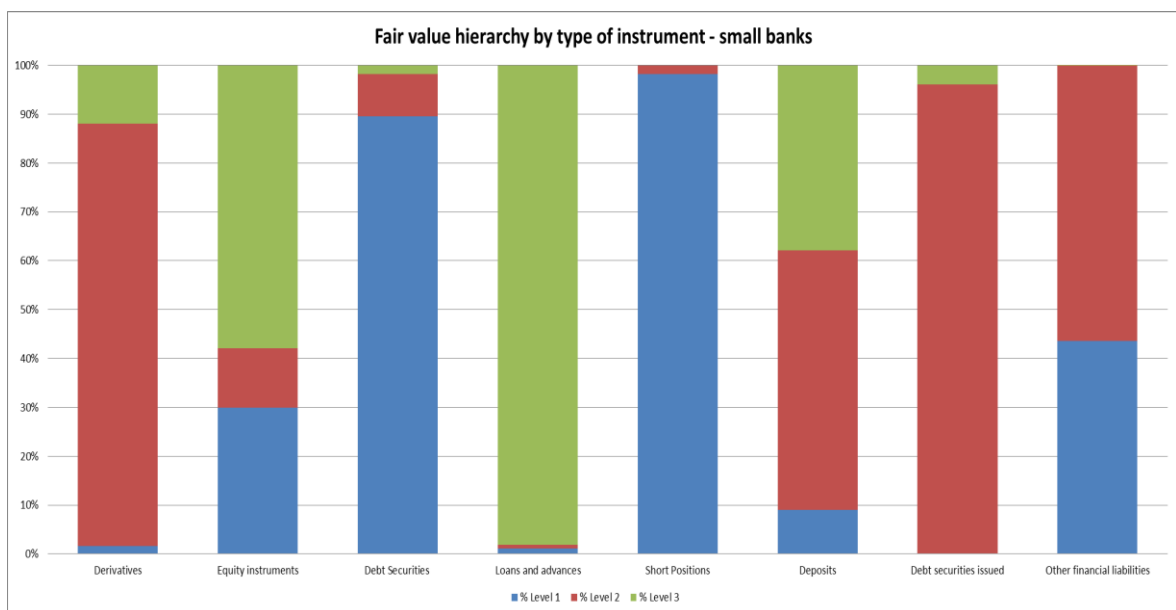


Figure 31. FV hierarchy by type of instrument – Small banks



**f. Analysis by country and business model**

If we take a look at the relative importance of FV instruments per accounting classification and country, we can observe that DK is the most prominent jurisdiction for large and small firms. This is due to the specifics of the local covered bond/mortgage market, with a large amount of perfectly matching assets and liabilities treated under the FV option. LU, NO and SE also tend to present a similar pattern, though clearly not as pronounced as DK.

Looking at the EBA sample, it can be observed that FV assets are far more relevant for some jurisdictions (apart from the DK case mentioned previously); in particular, UK, FI and DE are above 60% of total assets, with FR, NO and SE following by importance. In addition a 'symmetry' in the size of FV assets and liabilities held for trading can generally be observed for these large jurisdictions, with the AfS portfolio having some relevance for larger countries, while for others, such as BG, CY, CZ, HR, HU, IE, LV, MT, PL, PT, RO, SI and SK, the AfS portfolio represents more than 50% of total FV instruments.

Regarding the sample of small firms, the limited data available shows that the AfS portfolio represents an overwhelming majority of FV instruments (with the exception of DK).

Figure 32. Relative importance of FV instruments per accounting classification and country – The EBA sample

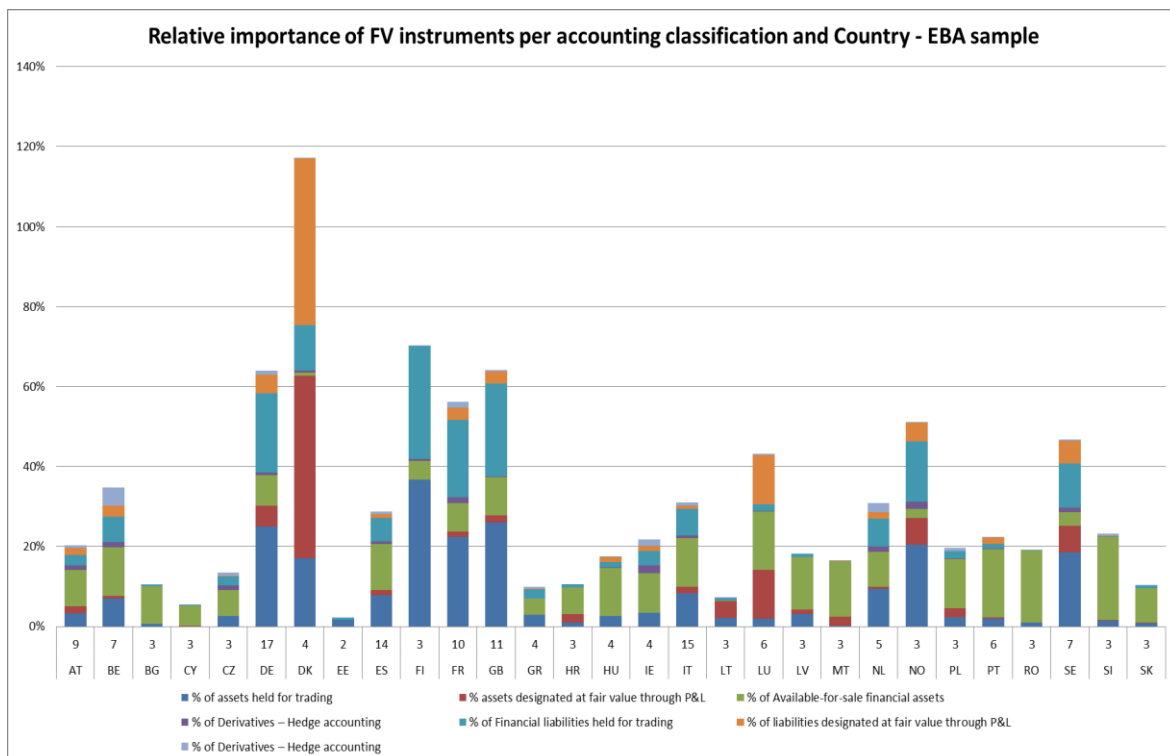
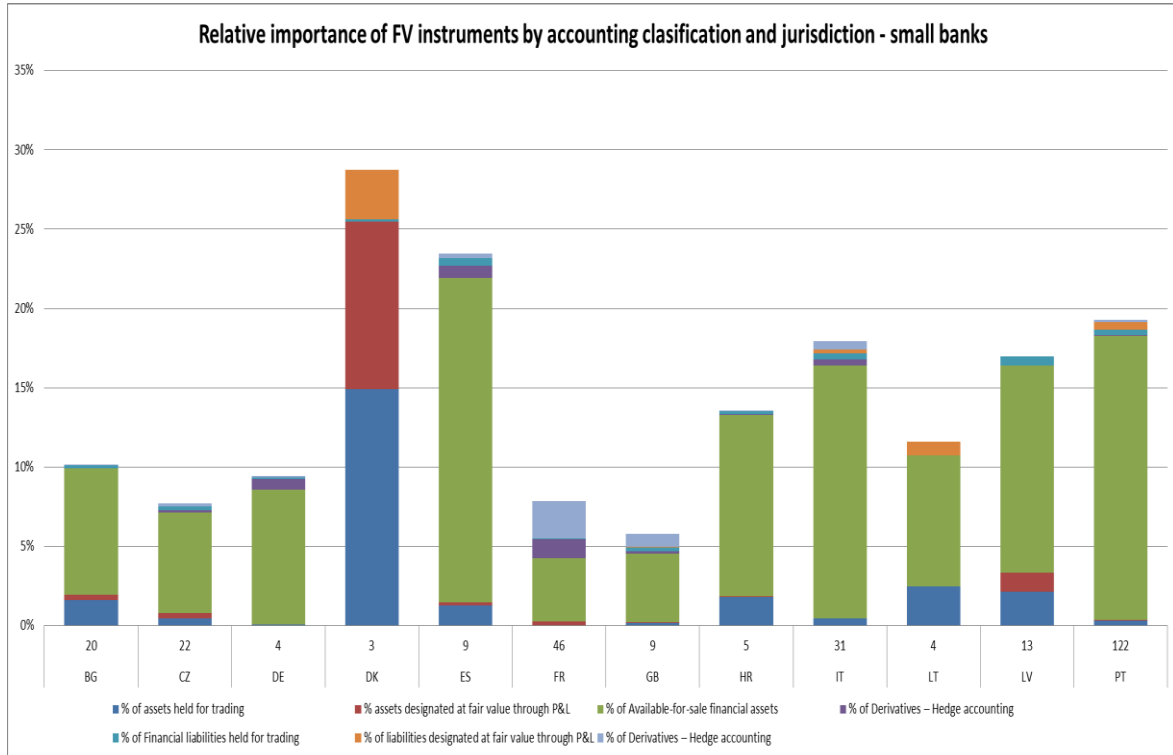




Figure 33. Relative importance of FV instruments by accounting classification and country – Small banks



If we do a similar analysis to the previous one using type of instrument, we can observe that—as expected—the FV assets/liabilities in the case of DK correspond to loans and debt securities issued from the covered bond and mortgage local market. Again, LU, NO and SE also tend to present a similar pattern, though clearly not as pronounced as DK.

For the jurisdictions that showed greater weight of FV positions for their large banks, it can be observed that the market value of derivatives (both on the asset and liability sides) comprises the majority of the FV instruments. Debt securities would be the next relevant type of instrument for firms in these jurisdictions, where FV assets are particularly relevant; however, in the other countries where FV has significantly less weight (such as BG, CY, CZ, HR, HU, IE, LV, MT, PL, PT, RO, SI and SK), debt instruments represent the large majority of the total FV instruments.

Regarding the sample of small firms, the limited data available shows that the debt instruments represent the overwhelming majority of FV instruments (with the exception of DK).

Figure 34. Relative importance of FV instruments per type of instrument and country – The EBA sample

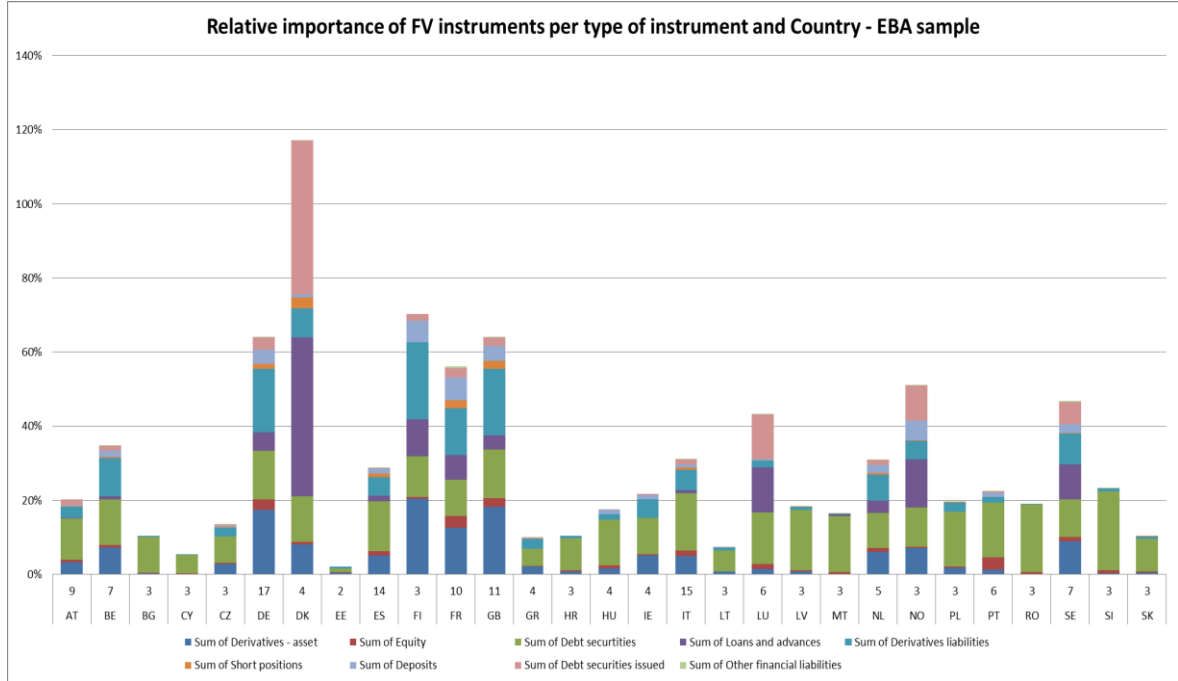
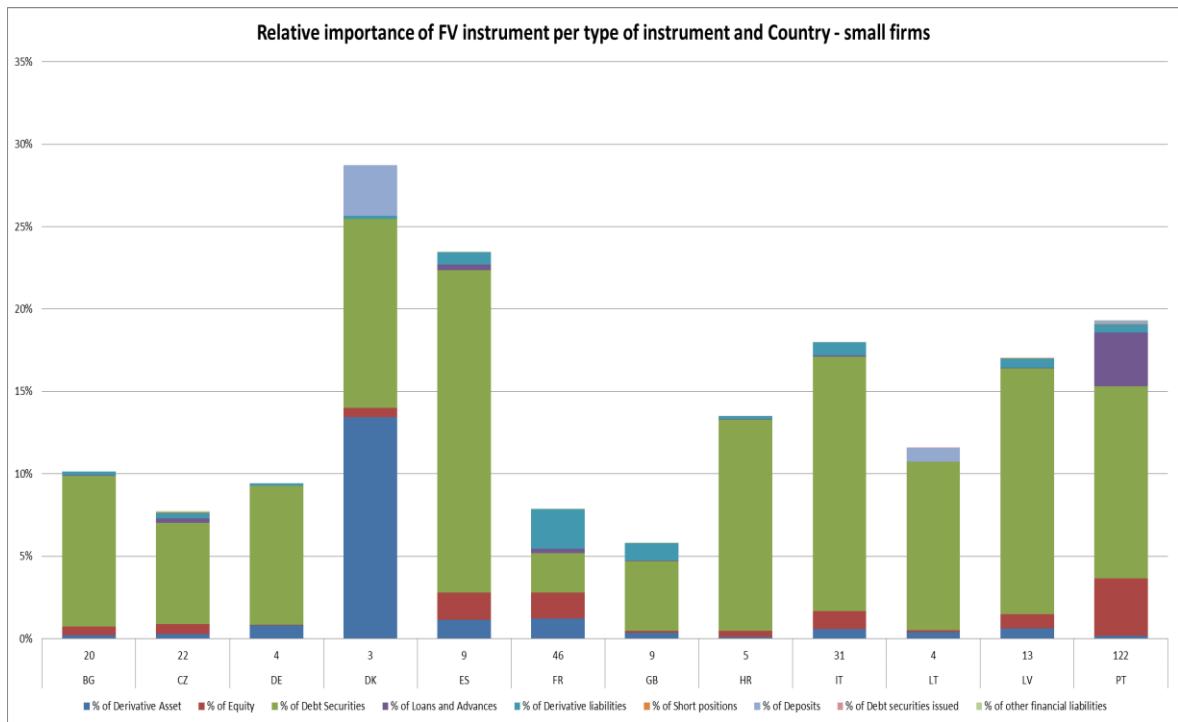


Figure 35. Relative importance of FV instruments per type of instrument and country – Small banks



Considering firms by their prominent business models, we can observe that ‘Sec. trading house’ is the most salient one for large institutions; however, for small institutions, the result is the opposite (though the sample is four banks in both cases, so the data could be biased). Mortgage and building societies are the next relevant group for large firms but, again, this is rather the opposite when we look at small institutions. Likewise, the most relevant types of business model for small firms (‘Other no retail dep.’, ‘Co-operatives’ and ‘Local Universal’) are not among the type of large institutions holding significant positions in FV instruments. Assets/liabilities held for trading are the most prominent type of accounting portfolio for large firms, while AfS dominates the FV portfolio for small institutions.

Figure 36. Relative importance of FV instruments per accounting classification and business model – The EBA sample

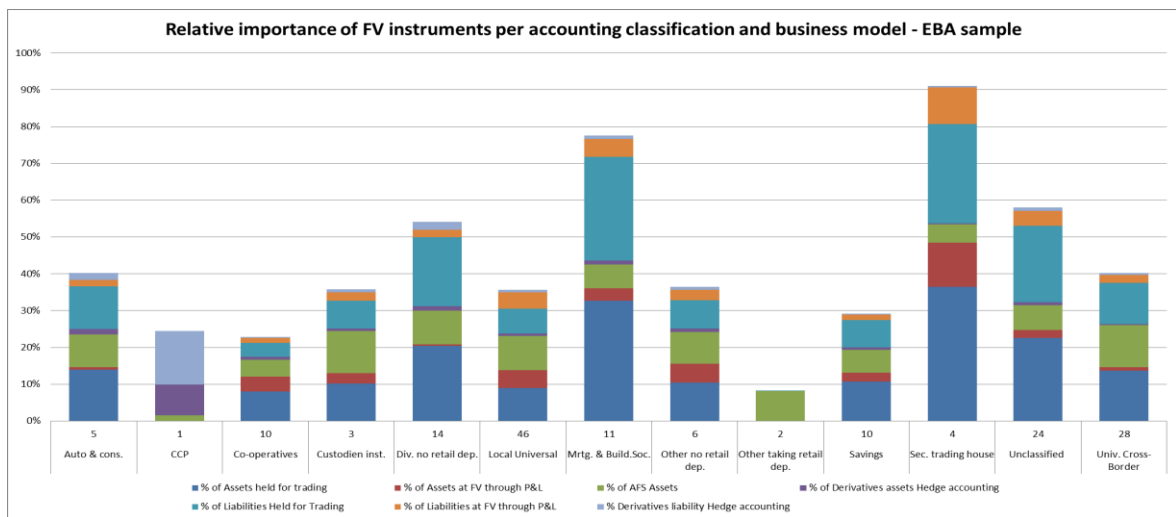
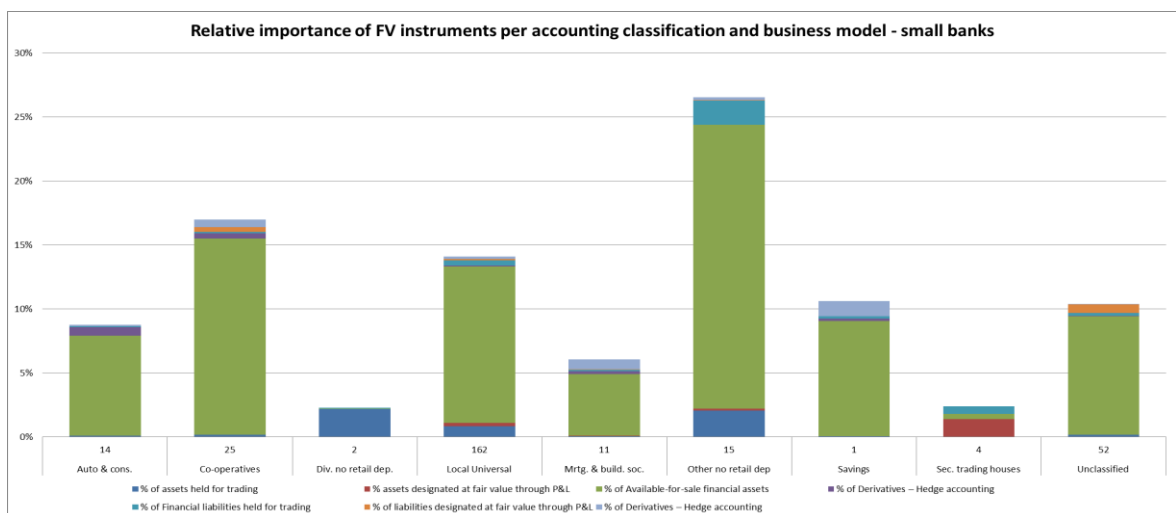


Figure 37. Relative importance of FV instruments per accounting classification and business model – Small banks



Like in previous analyses, for the EBA sample of banks, the market value of derivatives (on both the asset and liability sides) generally comprises the majority of the FV instruments. Debt securities would be the next relevant type of instrument for large firms; however, for ‘Co-operatives’, ‘Custodian inst.’, ‘Other no retail dep.’, ‘Other taking retail dep.’ and ‘Saving’ institutions, the debt instrument becomes the main type of FV. Regarding small institutions, debt instruments represent the vast majority of the total FV instruments; the only exception would be ‘Sec. trading houses’.

Figure 38. Relative importance of FV instruments by type of instrument and business model – The EBA sample

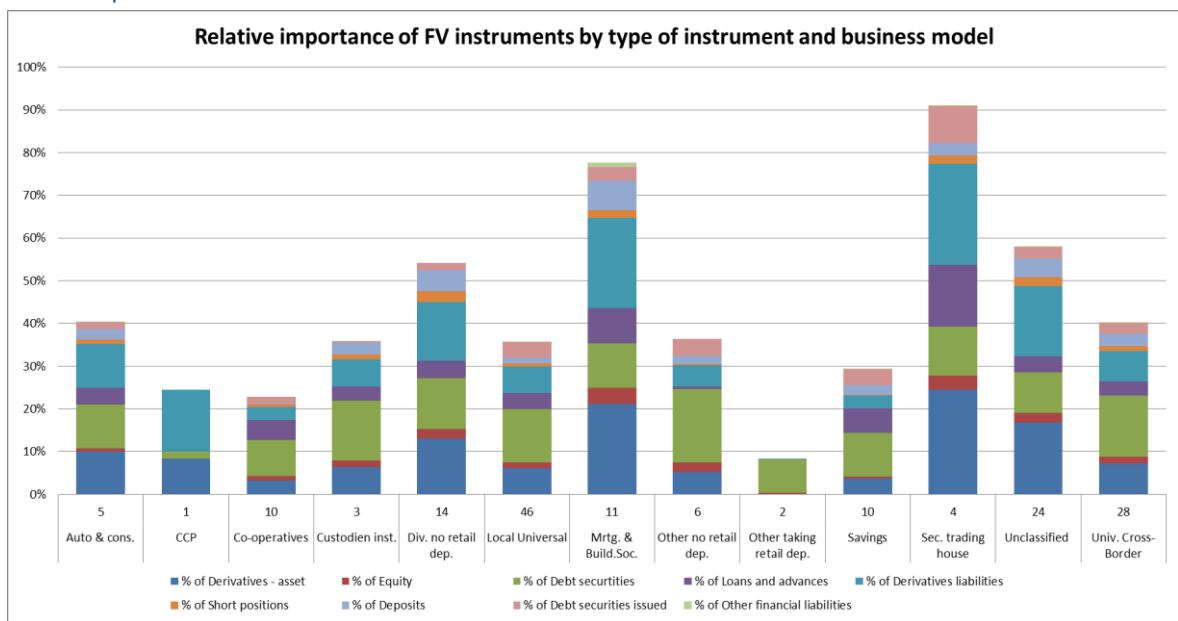
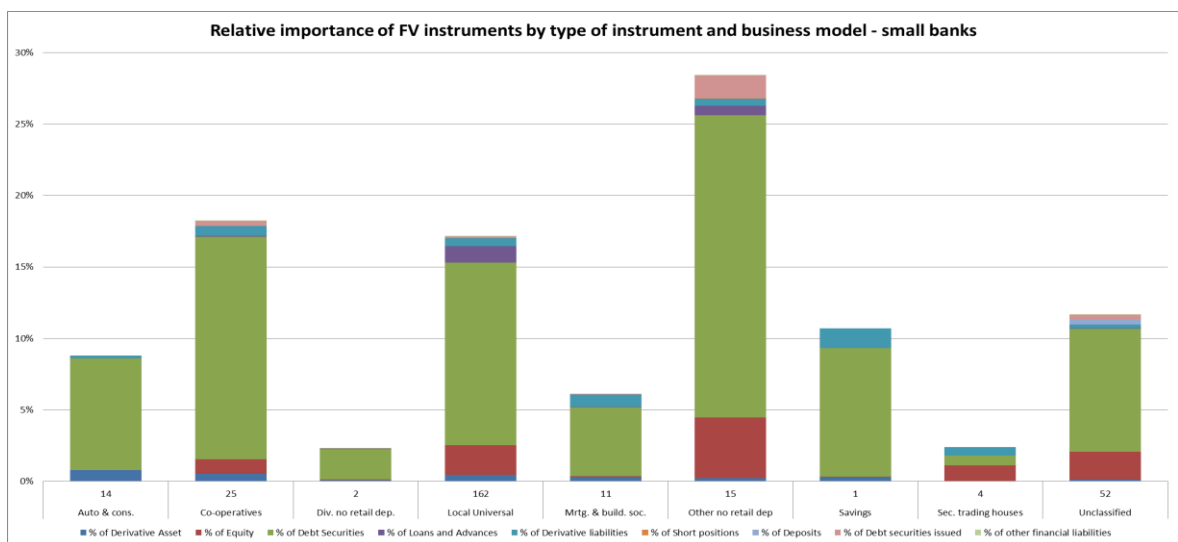


Figure 39. Relative importance of FV instruments by type of instrument and business model – Small banks



### 3.1.2 Analysis of market RWAs

While the previous section makes use of accounting data (FINREP) when analysing MKR activities in the EU, this section supplements this analysis by looking at exposure data (COREP) in terms of RWA amounts. The samples used for the analysis are the 193 banks in the EBA sample representing large banks in the EU and the 1 105 banks in the small banks sample covering banks below the threshold of EUR 500 m.

#### a. Overall composition of RWAs

Looking at the overall composition of MKR, it shows that, for the EBA sample, MKR (SA and IMA) including CVA amounts to approximately 8.5% of total RWAs, while CCR RWAs are just above 6%. For the small banks sample, MKR including CVA amounts to just below 2% of total RWAs. Not surprisingly, for both samples, credit risk is the main type of risk exposure, followed by operational risk. MKR RWAs clearly constitute a larger part of total RWAs for the EBA sample than for the small banks sample. This is not surprising, as the size of MKR exposure relative to total risk exposure generally increases with the size of the bank.

Figure 40. Overall composition of RWAs – The EBA sample

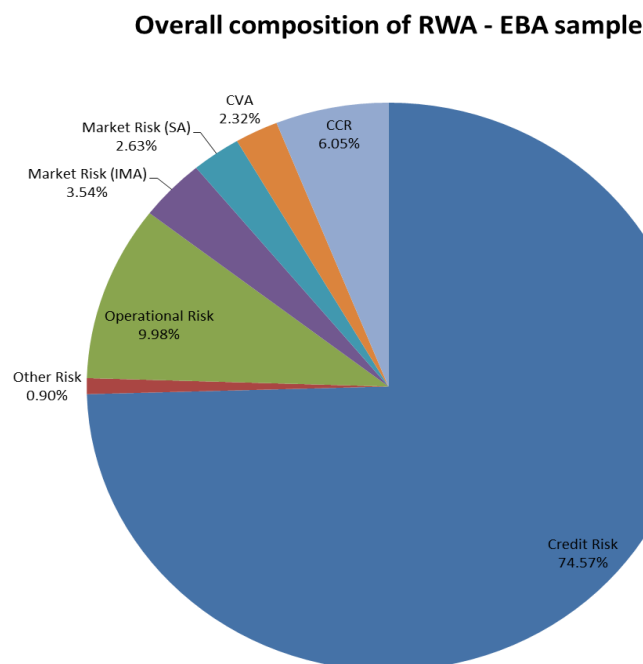
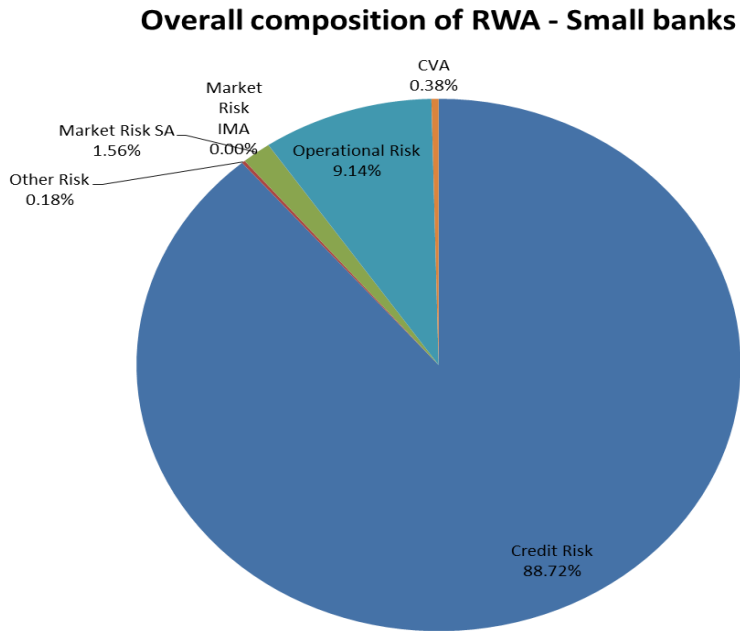


Figure 41. Overall composition of RWAs – Small banks



**b. Market RWAs relative to total RWAs by type of business model**

When clustering the information by business model, we see that—for the EBA sample<sup>32</sup>—the types of banks with the highest relative share of market RWAs and the largest dispersion are generally those with a ‘Local Universal’, ‘Mrtg. & Build.Soc’ or ‘Univ. Cross-Border’ business model. For the small banks sample, the majority of banks are allocated within the ‘Co-operatives’, ‘Local Universal’, ‘Other no retail dep.’ and ‘Savings’ business models, with ‘Other no retail dep.’ showing the greatest dispersion.

Figure 42. Scattering of market RWAs as a percentage of total RWAs by type of business model – The EBA sample

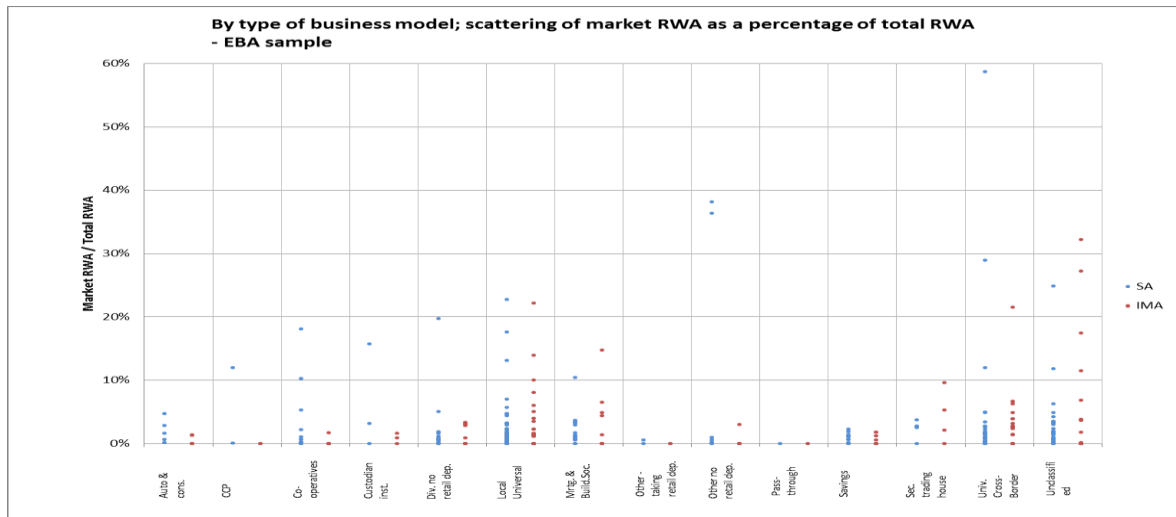
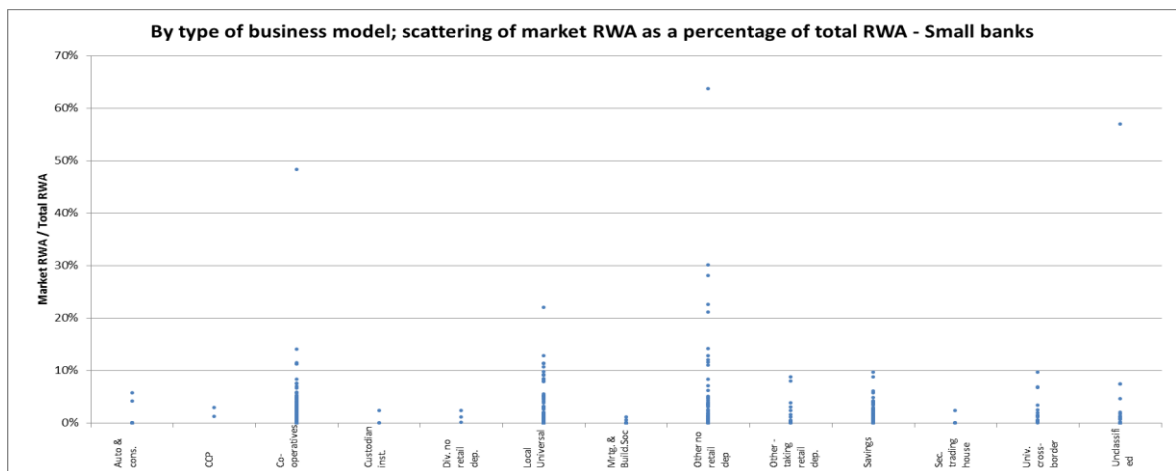


Figure 43. Scattering of market RWAs as a percentage of total RWAs by type of business model – Small banks



<sup>32</sup>The EBA banks that calculate OFRs using an IMA will generally also capitalise a certain share of risk exposures using the SA (i.e. they use a combination of approaches). Accordingly, in the figure displaying the scattering of market RWAs/total RWAs, many banks will be represented by two data points: one for the IMA and one for the SA.

Looking at the interquartile distribution for the EBA sample, we see that the ratio of market RWAs to total RWAs is below 10% up until the third quartile (i.e. including 75% of the banks) for all business models except 'Other no retail dep.'. Looking at the median, it seems that banks in the 'Sec. trading house' business model show the highest ratio, followed by 'Custodian inst.' and 'Savings'. Looking at the small banks sample, we see a ratio of market RWAs to total RWAs below 4% for all business models up until the third quartile. Looking at the median, it seems that banks in the 'Other no retail dep.' business model show the highest ratio, followed by 'Div. no retail dep.' and 'Co-operatives'.

Figure 44. Interquartile distribution of market RWAs relative to total RWAs by type of business model – The EBA sample

EBA sample	Minimum	First quartile	Median quartile	Third quartile	Maximum
Auto & cons.	0.65%	1.55%	1.58%	4.17%	4.74%
CCP	0.04%	-	-	-	11.92%
Co-operatives	0.00%	0.06%	0.17%	2.45%	18.08%
Custodian inst.	0.89%	-	4.75%	-	15.70%
Div. no retail dep.	0.00%	0.20%	1.05%	3.78%	19.73%
Local Universal	0.00%	0.29%	1.44%	4.71%	39.72%
Mrtg. & Build.Soc.	0.00%	0.92%	2.66%	5.42%	25.14%
Other no retail dep.	0.00%	0.08%	0.74%	11.41%	38.11%
Other taking retail dep.	0.00%	-	-	-	0.57%
Pass-through	0.00%	-	-	-	-
Savings	0.00%	0.62%	1.64%	2.25%	2.96%
Sec. trading house	0.00%	3.42%	6.77%	9.83%	12.36%
Univ. cross-border	0.00%	0.27%	2.67%	5.37%	58.67%
Unclassified	0.00%	0.56%	1.81%	4.59%	39.05%

Figure 45. Interquartile distribution of market RWAs relative to total RWAs by type of business model – Small banks

Small banks sample	Minimum	First quartile	Median quartile	Third quartile	Maximum
Auto & cons.	0.00%	0.00%	0.00%	0.00%	5.68%
CCP	1.20%	-	-	-	2.86%
Co-operatives	0.00%	0.55%	0.93%	1.57%	48.28%
Custodian inst.	0.00%	-	0.00%	-	2.38%
Div. no retail dep.	0.13%	-	1.06%	-	2.35%
Local Universal	0.00%	0.00%	0.00%	0.62%	21.99%
Mrtg. & build. soc.	0.00%	0.00%	0.00%	0.00%	1.13%
Other no retail dep	0.00%	0.26%	1.23%	3.72%	63.69%
Other taking retail dep	0.00%	0.06%	0.36%	1.76%	8.76%
Savings	0.00%	0.44%	0.78%	1.48%	9.70%
Sec. trading house	0.00%	0.00%	0.00%	0.03%	2.30%
Univ. cross-border	0.00%	0.32%	0.81%	2.02%	9.61%
Unclassified	0.00%	0.00%	0.00%	0.04%	56.97%



**c. Market RWAs relative to total RWAs by different jurisdictions**

When clustering the information by jurisdiction, we see that—for the EBA sample<sup>33</sup>—the banks with the highest market RWAs relative to total RWAs and the largest dispersion are located within the UK, followed by DE, DK, FR, IT and SE. Regarding small banks, it is difficult to see any clear pattern. Some jurisdictions display larger dispersions, but these jurisdictions are also those that submitted the most bank data. It is therefore more likely that submissions by these jurisdictions include a few outliers that would also have been there for other jurisdictions had they submitted more data.

Figure 46. Scattering of market RWAs as a percentage of total RWAs by jurisdiction – The EBA sample

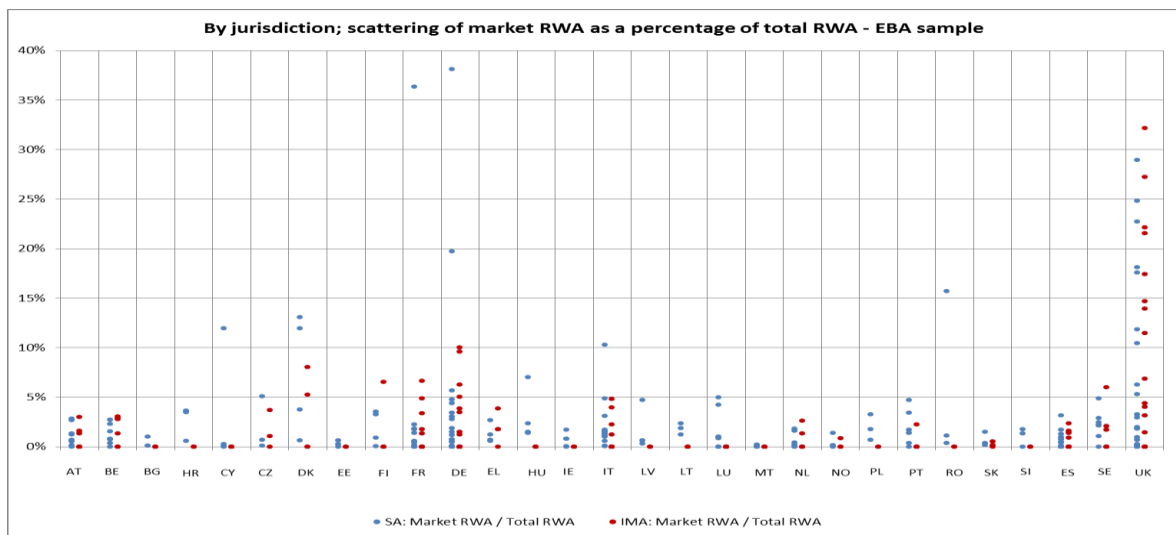
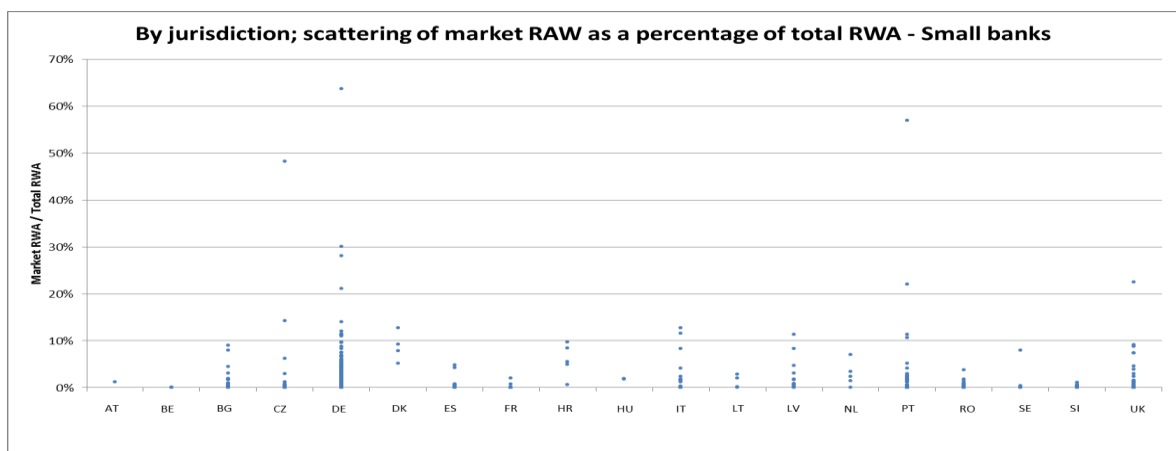


Figure 47. Scattering of market RWAs as a percentage of total RWAs by jurisdiction – Small banks



<sup>33</sup> The EBA banks that calculate OFRs using an IMA will generally also capitalise a certain share of risk exposures using the SA (i.e. they use a combination of approaches). Accordingly, in the figure displaying the scattering of market RWAs/total RWAs, many banks will be represented by two data points: one for the IMA and one for the SA.

Looking at the interquartile distribution for the EBA sample, we see that the jurisdictions showing the highest ratio of market RWAs to total RWAs are the UK, DK and DE while, in most jurisdictions, the ratio is below 5% up until the third quartile. Looking at the third quartile of the small banks sample, we see that DK has the highest ratio (10.09%), followed by HR, NL and ES. However, for most jurisdictions, the ratio is also below 5%.

Figure 48. Interquartile distribution of market RWAs relative to total RWAs by jurisdiction – The EBA sample

EBA sample	Minimum	First quartile	Median quartile	Third quartile	Maximum
AT	0.00%	0.60%	1.19%	2.90%	4.17%
BE	0.00%	1.99%	2.72%	3.66%	4.37%
BG	0.10%	-	0.11%	-	0.98%
HR	0.57%	-	3.47%	-	3.65%
CY	0.00%	0.03%	0.15%	3.17%	11.92%
CZ	1.17%	-	4.34%	-	5.05%
DK	8.66%	8.90%	10.46%	12.21%	13.06%
EE	0.00%	-	0.24%	-	0.61%
FI	0.04%	0.70%	2.21%	5.07%	9.76%
FR	0.00%	0.00%	1.82%	3.77%	36.33%
DE	0.00%	0.41%	4.83%	7.54%	38.11%
EL	0.59%	1.93%	2.67%	3.85%	6.50%
HU	1.39%	1.48%	1.93%	3.52%	7.01%
IE	0.00%	0.04%	0.78%	0.80%	1.71%
IT	0.05%	1.42%	1.67%	3.98%	10.27%
LV	0.27%	-	0.62%	-	4.71%
LT	1.21%	-	1.88%	-	2.32%
LU	0.00%	0.00%	0.01%	1.02%	4.95%
MT	0.00%	0.00%	0.00%	0.01%	0.17%
NL	0.00%	0.38%	1.56%	1.75%	3.00%
NO	0.00%	-	0.96%	-	1.40%
PL	0.69%	-	1.75%	-	3.27%
PT	0.00%	1.45%	2.15%	3.20%	4.71%
RO	0.38%	-	1.10%	-	15.70%
SK	0.51%	-	0.66%	-	1.49%
SI	0.00%	-	1.31%	-	1.73%
ES	0.00%	0.00%	0.44%	0.93%	4.75%
SE	0.00%	2.16%	2.76%	4.71%	8.87%
UK	0.00%	1.27%	13.19%	26.09%	58.67%

Figure 49. Interquartile distribution of market RWAs relative to total RWAs by jurisdiction – Small banks

Small banks sample	Minimum	First quartile	Median quartile	Third quartile	Maximum
AT	1.19%	1.19%	1.19%	1.19%	1.19%
BE	0.00%	0.00%	0.00%	0.00%	0.00%
BG	0.00%	0.08%	0.68%	1.87%	9.04%
CZ	0.00%	0.00%	0.00%	0.59%	48.28%
DE	0.00%	0.57%	1.00%	1.72%	63.69%
DK	5.18%	7.21%	8.54%	10.09%	12.77%
ES	0.00%	1.02%	2.04%	3.06%	4.08%
FR	0.00%	0.00%	0.00%	0.00%	2.03%
HR	0.57%	4.95%	5.51%	8.38%	9.72%
HU	1.81%	-	-	-	1.88%
IT	0.00%	0.00%	0.11%	1.56%	12.77%
LT	0.00%	0.11%	1.07%	2.21%	2.85%
LV	0.00%	0.27%	0.89%	3.09%	11.39%
NL	0.00%	1.38%	2.38%	3.43%	7.02%
PT	0.00%	0.00%	0.00%	0.00%	56.97%
RO	0.00%	0.00%	0.33%	0.62%	3.78%
SE	0.00%	0.00%	0.00%	0.21%	7.97%
SI	0.00%	0.00%	0.03%	0.26%	1.06%
UK	0.00%	0.00%	0.00%	0.29%	22.53%

**d. Market RWAs relative to total RWAs by type of approach**

When scattering banks by market RWAs over total RWAs, we see that, for the EBA sample, banks on the SA have an average ratio of 3.2% while banks that use a combination of the SA and the IMA have an average ratio of 8%. This is as expected, as IMA banks generally have a greater number of RWAs from TB activities. Regarding the small banks sample, we see that all banks use the SA and that the average ratio is much lower at 1.47% compared to the EBA sample. This is also according to expectation, as smaller banks usually have less RWAs coming from TB activities and use less sophisticated approaches to manage and calculate RWAs and OFRs for these activities.

Figure 50. Scattering of market RWAs as a percentage of total RWAs by type of approach – The EBA sample

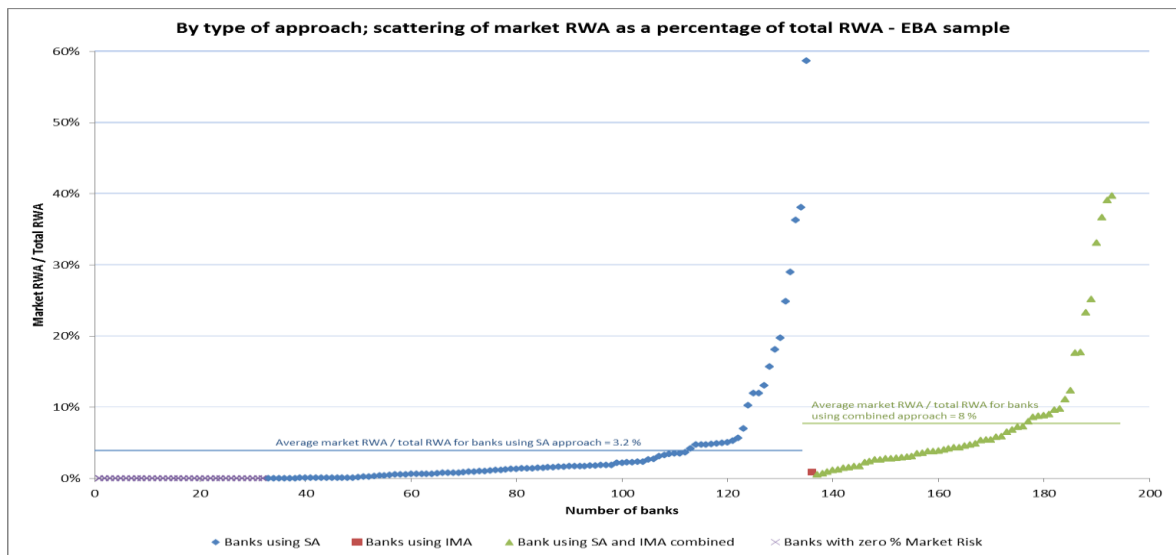
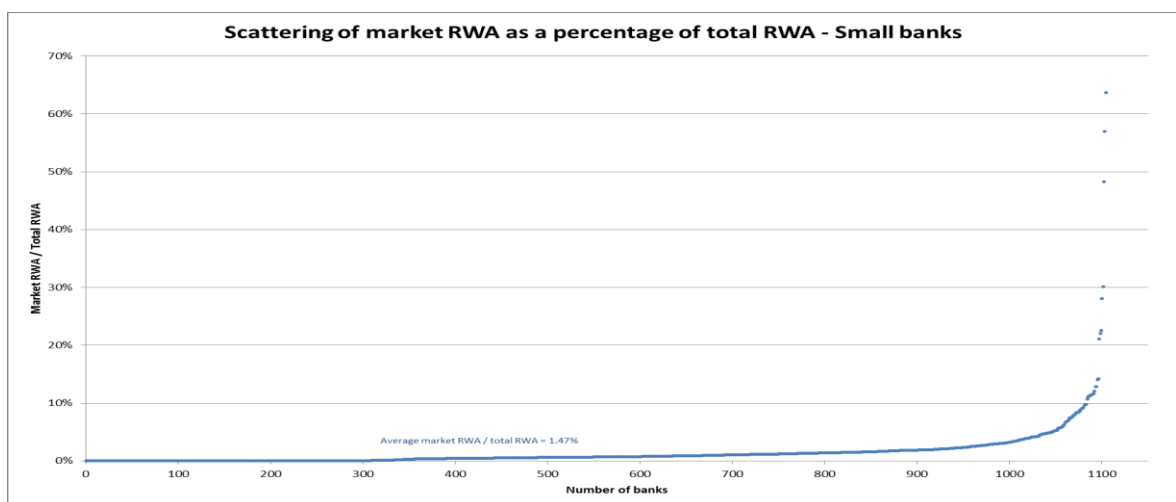


Figure 51. Scattering of market RWAs as a percentage of total RWAs by type of approach – Small banks



### e. Overall composition of market RWAs under the SA

Looking at the composition of market RWAs under the SA for the EBA sample, we see that SR and GR of TDIs clearly are the greatest risk exposures (constituting 46% and 30% respectively out of the total RWAs). EQ SR is the third largest risk exposure (with 9%), followed by EQ GR of 6%. Thus, for the EBA sample, it is clear that position risk (which also includes 'TDI other' and 'EQ other') in the TB is very significant and far greater than FX and commodity risk.

Looking at the small banks sample, we see that the composition of market RWAs is very different from the EBA sample. For small banks, FX is clearly the greatest risk exposure, constituting 79% of total RWAs. Items on the balance sheet subject to FX risk stem, in most cases, from the BB. Accordingly, the relatively large size of FX RWAs would predictably be due, in many cases, to these smaller institutions' BB activities and not because these banks have great FX risk in the TB. The second largest risk exposure is TDI GR, followed by TDI SR. The rest of the risk exposures are very limited, constituting only 8% of total RWAs. Thus, for the small banks sample, position risk in the TB is very limited compared to the EBA sample.

Figure 52. Overall composition of market RWAs under the SA – The EBA sample

**Standardised approach: Overall composition of market RWA - EBA sample**

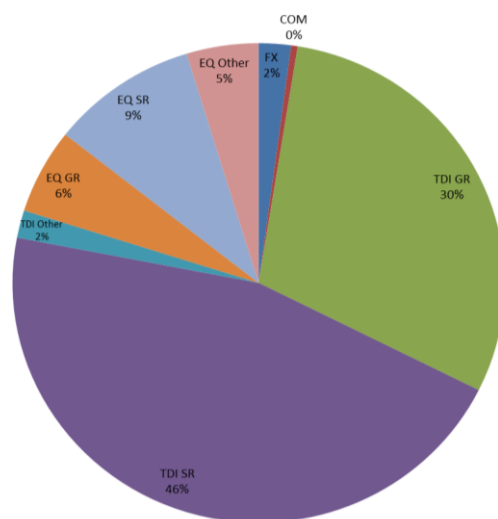
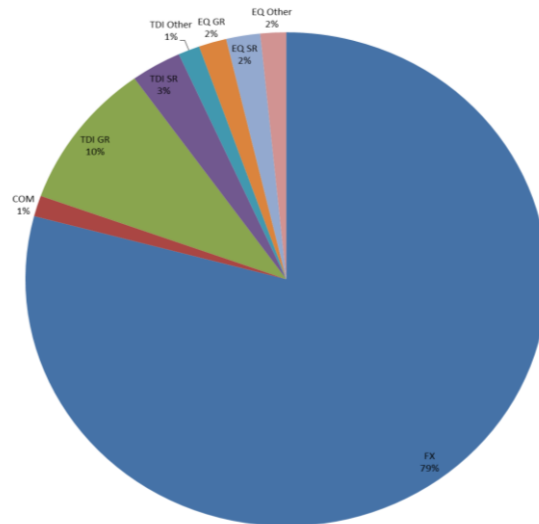


Figure 53. Overall composition of market RWAs under the SA – Small banks

Standardised approach: Overall composition of market RWA - Small banks



#### f. Breakdown of market RWAs under the SA by type of business model

Looking at the composition of market RWAs by type of business model, we see that, in most cases, TDI GR and SR are the largest risk exposures for the EBA sample. The exceptions to this are 'Div. no retail dep.' and 'Other taking retail dep.', where FX is the largest risk exposure. This picture is well aligned with what we saw earlier when looking at the overall composition of market RWAs for these banks. The chart also displays the number of banks included in each business model categorisation.

Looking at the composition of market RWAs by type of business model for the small banks sample, we see that, in almost all cases, FX is the largest risk exposure. The exceptions to this are 'Univ. Cross-Border', 'Custodian institutions' and 'Local Universal', where TDI GR and SR and EQ CIUs constitute a larger part. Once again, this picture is well aligned with what we saw earlier when looking at the overall composition of market RWAs for these banks. The chart also displays the number of banks included in each business model categorisation.

Figure 54. SA: Granular breakdown of market RWAs by type of business model – The EBA sample

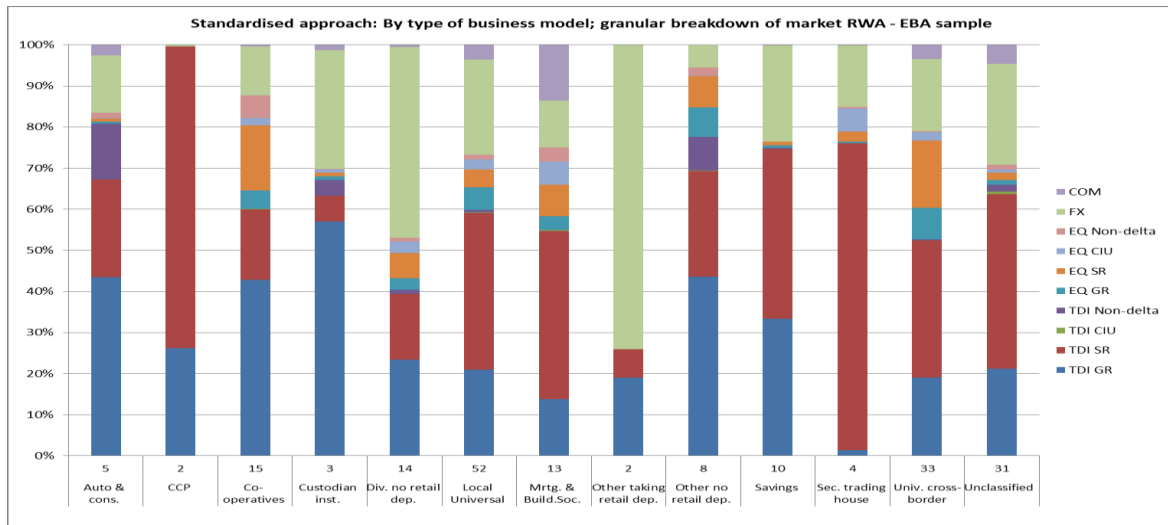
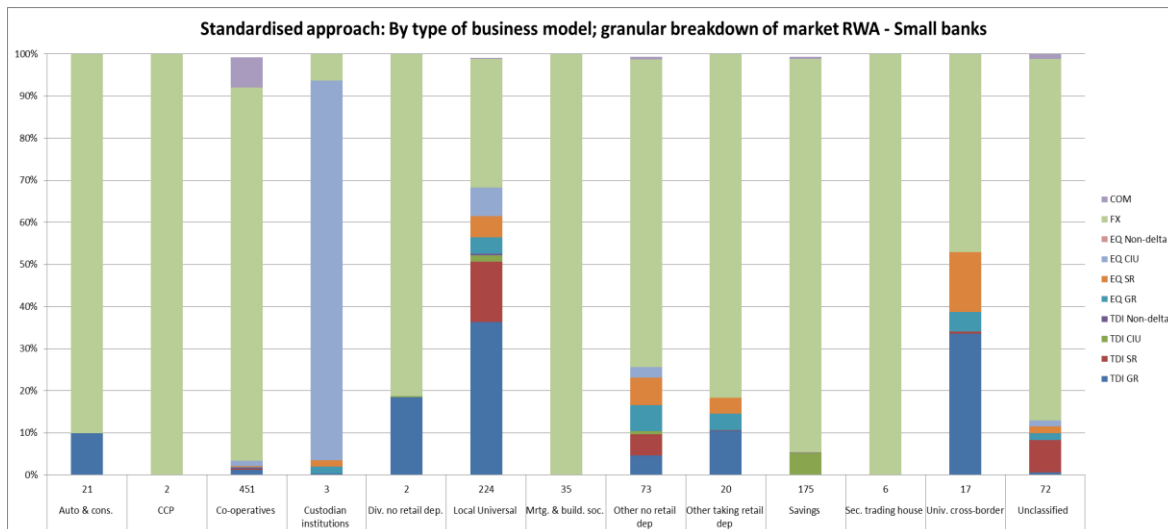


Figure 55. SA: Granular breakdown of market RWAs by type of business model – Small banks



**g. Breakdown of market RWAs under the SA by jurisdiction**

Looking at the composition of market RWAs by jurisdiction, we see that (in most cases) TDI GR and SR are the largest risk exposures for the EBA sample. Only a few jurisdictions deviate from this overall picture. In particular, this is the case for Malta, where banks only have RWAs stemming from FX; this is the primary risk exposure for Croatia, Greece, Hungary and Slovenia as well. The chart also displays the number of banks included in each jurisdiction.

Looking at the composition of market RWAs by jurisdiction for the small banks sample, we see that, for approximately half of the jurisdictions, FX is the primary risk while, for the other half, TDI GR and SR are the primary risk exposures. This might seem a bit surprising, as we have already seen that overall FX is by far the greatest risk exposure for this smaller banks sample and, therefore, would expect this to be so for more jurisdictions as well. However, since Germany is

the jurisdiction that is the most well represented in terms of the number of banks (649) and since these banks almost only have FX risk, this is likely the reason why there is a smaller divergence between the overall picture and the picture by jurisdiction. Belgium banks do not report any RWAs subject to OFRs, even though they in fact have FX exposure (and no other type of exposure). Accordingly, it can be assumed that these banks apply the de minimis exemption for FX risk referred to in Article 351 of the CRR.

Figure 56. SA: Granular breakdown of market RWAs by jurisdiction – The EBA sample

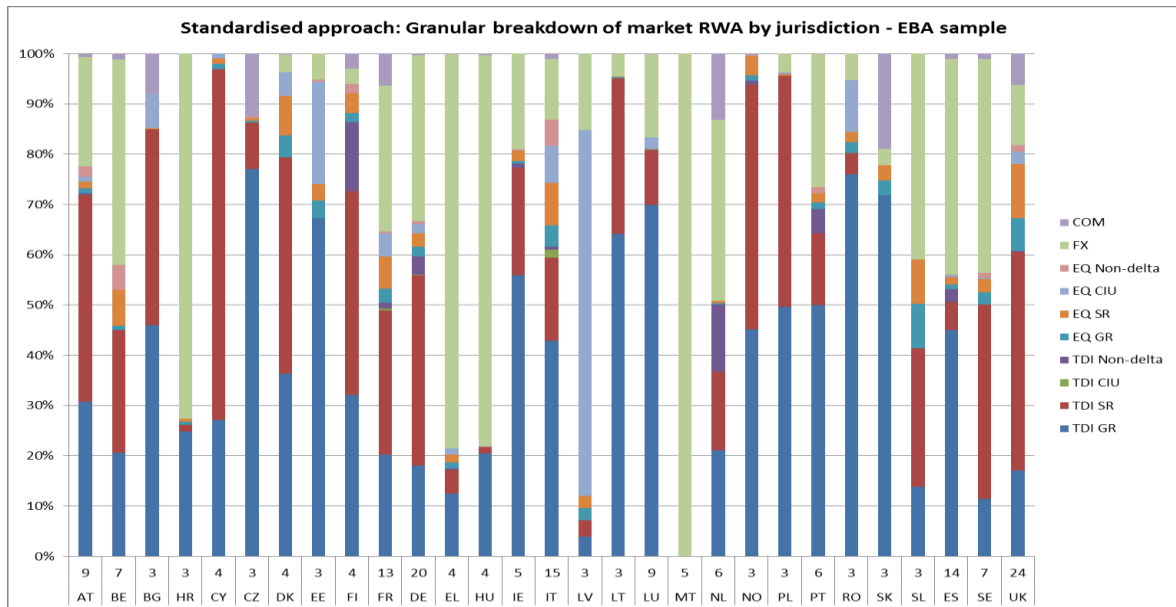
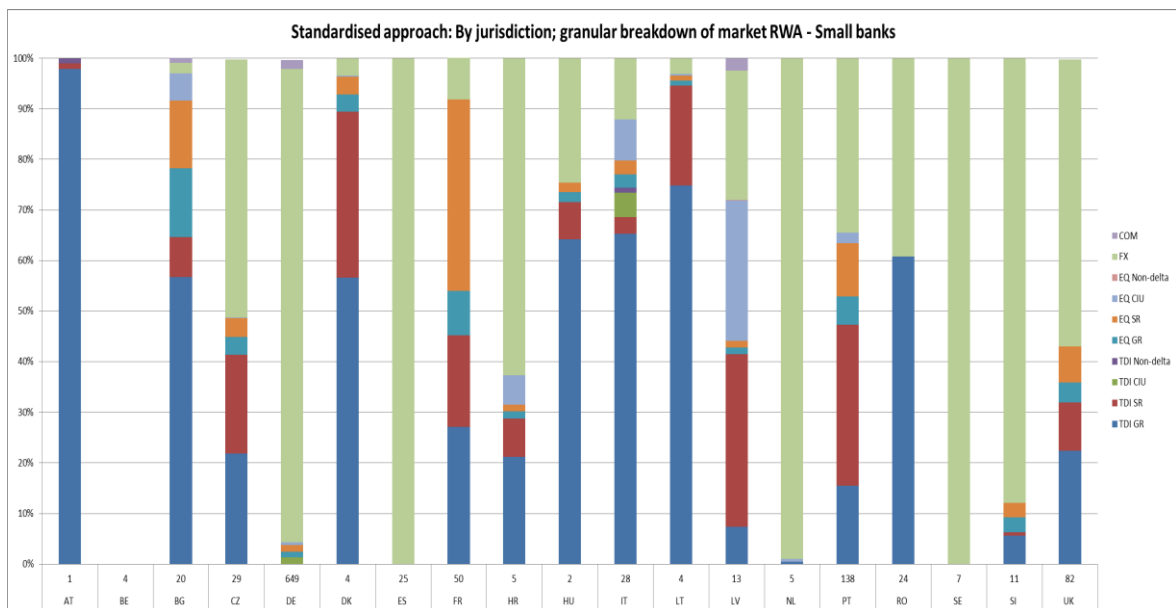


Figure 57. SA: Granular breakdown of market RWAs by jurisdiction – Small banks



**h. Non-delta risk as percentage of total market RWAs under the SA**

As could be expected, non-delta risk is limited in size compared to total market RWAs for both the EBA sample and the small banks sample. This is especially the case for the small banks sample, illustrating that these small banks have very limited trading in these types of more complex exposures.<sup>34</sup>

Figure 58. SA: Non-delta RWAs as a percentage of total market RWAs – The EBA sample

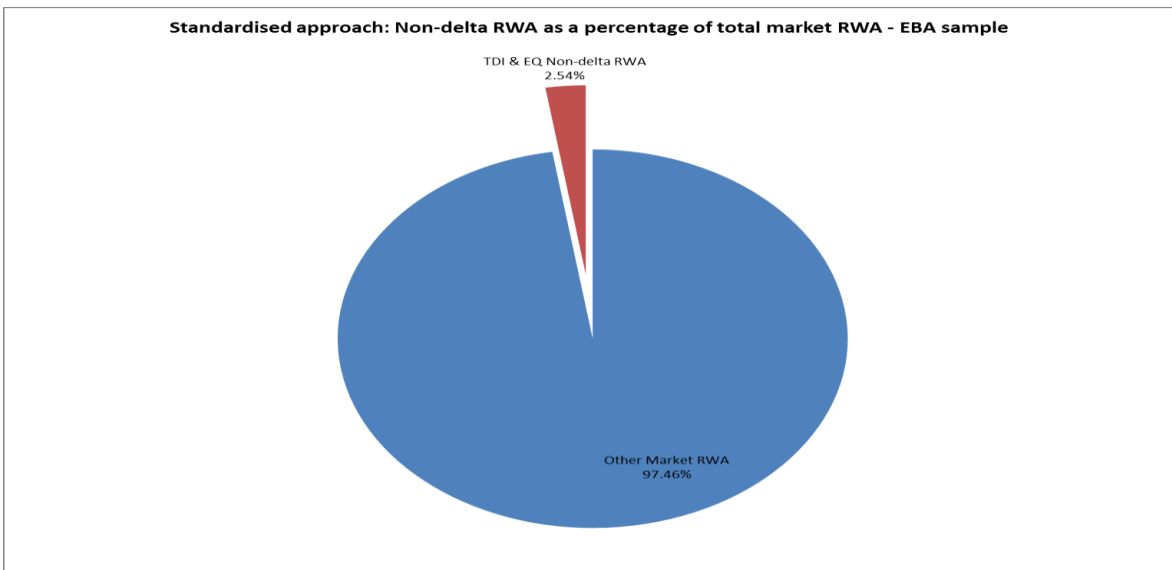
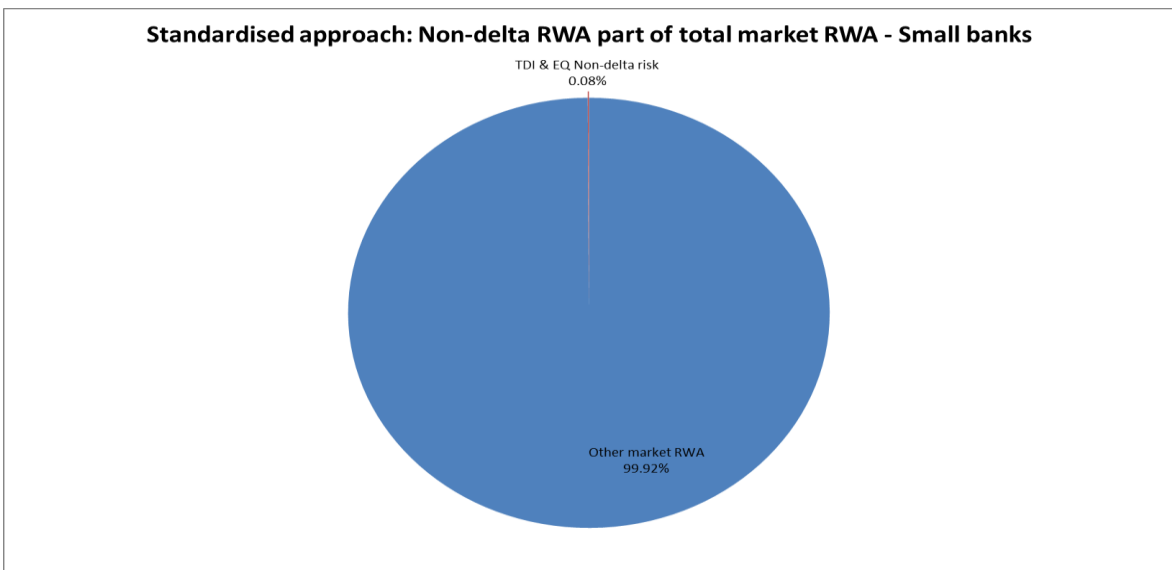


Figure 59. SA: Non-delta RWAs as a percentage of total market RWAs – Small banks



<sup>34</sup> Not all non-delta risk will show up in COREP reports used to conduct the analysis. This is especially the case for the EBA sample, where many non-delta risks will be measured by the IMA and thus not show up under the standardised RWAs. Additionally, some non-delta risk will be lost in the reporting of TDI GR when applying corrections to the modified duration of debt instruments.



i. Breakdown of market RWAs by type of exposure under the IMA

Regarding banks using the IMA, we see that SVaR constitutes the most significant share of total RWAs at 53%. This is followed by VaR (24%), IRC (20%) and CTP (3%). Looking at the average, median and maximum in terms of the absolute size of RWAs stemming from the different components of the IMA, it is implied that there is a significant variation between banks within the EBA sample.

Figure 60. IMA: Overall composition of RWAs – The EBA sample

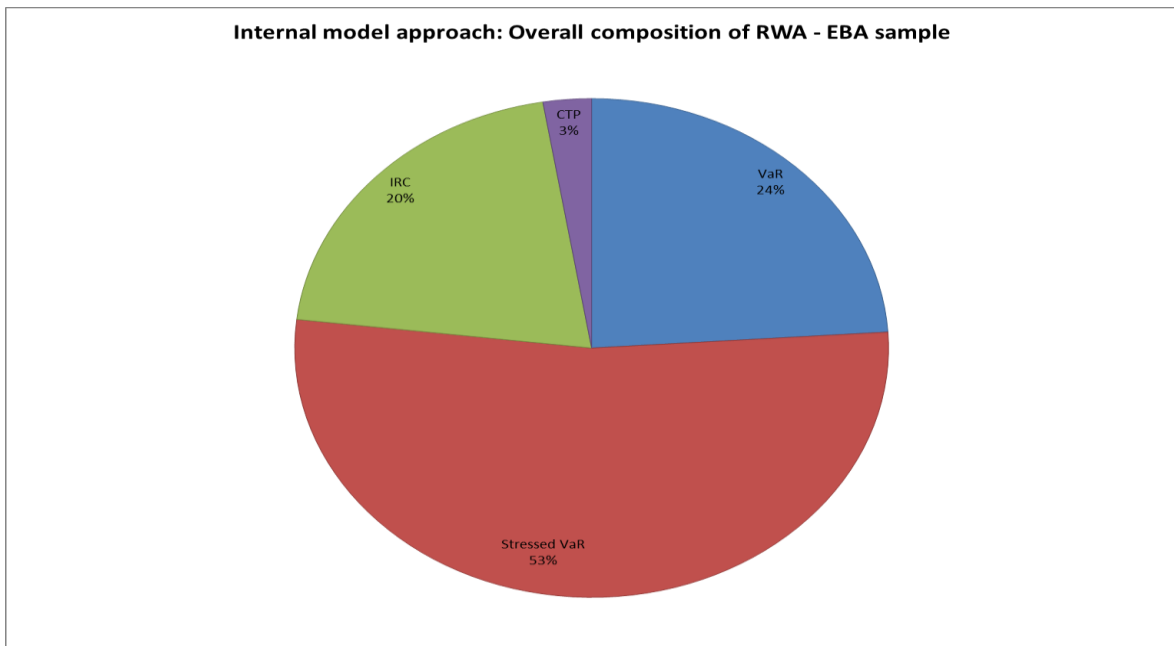
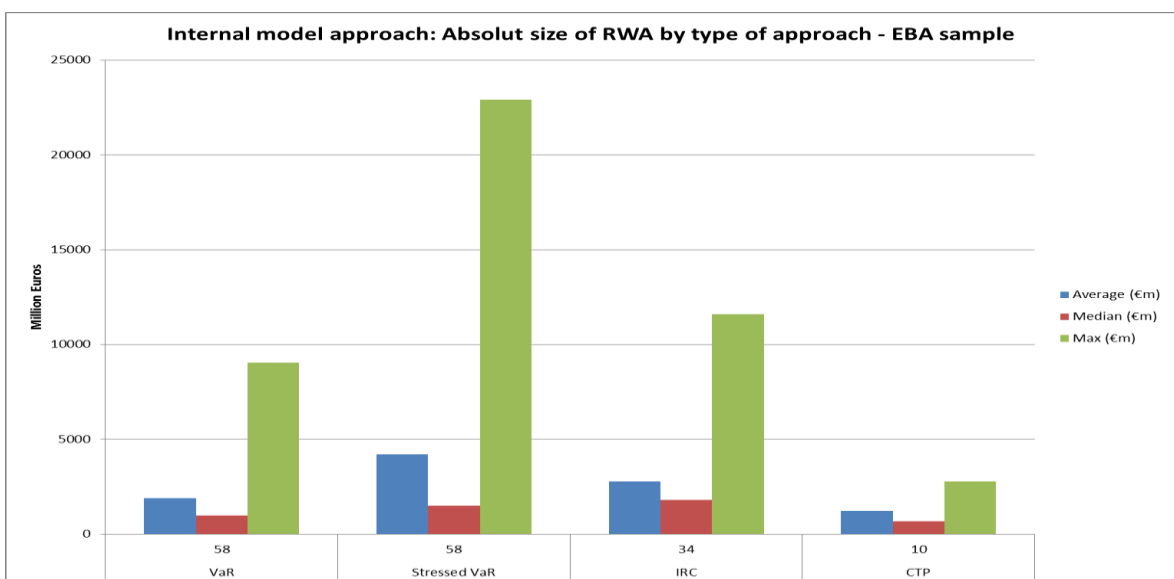


Figure 61. IMA: Absolute size of RWAs by type of approach – The EBA sample



## Summary

As may be expected, the size of FV instruments is far more important for large firms (i.e. the EBA sample) than for small banks. In terms of the balance sheet, FV instruments for the EBA sample account for 31% of assets and 20% of liabilities, while they represent less than 15% of assets and 1% of liabilities for small banks.

Regarding portfolio composition, it is remarkable that, for small firms, the AfS portfolio becomes an overwhelming portion of total FV assets, accounting for up to 82% of total FV instruments. Although still relevant, the size of the AfS portfolio (17% of total FV instruments) is far less important for large firms. In terms of type of instruments, the large banks concentrate nearly half (46%) of their FV exposure in derivatives, while this percentage is only 9% for small firms. For these small banks, EQ (7% vs 9%) and especially debt securities (79% vs 24%) are far more significant than for large firms, while the rest of the instruments (loans, short positions, deposits, debt securities issued and other financial liabilities) are far more relevant for large firms than for small banks (approximately 26% vs 5%).

Consistent with the accounting classification, the importance of market RWAs is far larger for the EBA sample than for small firms. MKR RWAs (SA and IMA), including CVA, amount to approximately 8.5% of total RWAs for large firms, while MKR RWAs, including CVA, amount to just below 2% of total RWAs for small banks. As expected, IMA banks generally show a larger share of RWAs stemming from TB activities, though a significant part of this stems from portfolios that remain under standardised rules.

Regarding the composition of market RWAs under the SA for the EBA sample, we see that SR and GR of TDIs are clearly the greatest risk exposures, constituting 46% and 30% respectively out of the total RWAs. EQ SR is the third largest risk exposure (with 9%), followed by EQ GR of 6%. Thus, for the EBA sample, it is clear that position risk (which also includes 'TDI other' and 'EQ other') in the TB is very significant and far greater than FX and commodity risk.

However, for the small banks sample, the composition of market RWAs is very different, with FX being the largest risk exposure by far (constituting 79% of total market RWAs). This is also consistent with the accounting analysis, which shows very limited trading activities for these small firms. In this regard, the relatively large size of FX RWAs would, in most cases, be due to BB activities and not because these small banks have great FX risk in the TB.

Finally, for banks using the IMA, the SVaR capital charge constitutes the most significant share of total market RWAs of 53%. This would be followed by VaR (24%), IRC (20%) and CTP (3%).

## 3.2 Second part of the first section of the CFA – Assessment of the derogation for small TB

### 3.2.1 Introduction

The TB derogation is applicable for debt and EQ positions only (in the TB). FX and commodities are not subject to this general derogation. In other words, it is a derogation for position risk, not for MKR as such. Position risk is regulated in Article 326 of the CRR:

*'The institution's own funds requirement for position risk shall be the sum of the own funds requirements for the general and specific risk of its positions in debt and equity instruments. Securitisation positions in the trading book shall be treated as debt instruments.'*

The scope of position risk is the same as the scope for TB—i.e. only debt and EQ positions in the TB are subject to OFRs for MKR—and, at least partially, there is an alternative treatment under BB rules. FX and commodity positions are subject to MKR regardless of whether they stem from BB or TB instruments, and there is no alternative treatment for them under BB rules.

It should, however, be noted that there is a separate specific derogation (in Article 351 of the CRR) for FX risk, while there is no derogation at all for commodities, only the possibility in Article 356 of allowing the calculation of OFRs annually ONLY for physical commodity stock in agricultural ancillary business, subject to quite burdensome requirements.

### 3.2.2 Definition of the thresholds

Considering that the mandate requests an assessment of the adequacy of the current threshold for the derogation of small TB business stated in Article 94 of the CRR, the EBA has focused on the derogation of the market requirements for these positions (i.e. excluding FX and commodities). The relevant CRR articles on the derogation are included in Annex I.

With reference to the current requirements in Article 94 of the CRR, four different types of thresholds have been tested in order to assess both the level and the practical articulation of the derogation.<sup>35</sup> The four thresholds are defined at an absolute level, but will also be tested relative to total assets. The different thresholds are defined with the intention of assessing the extent of banks' TB business within the different absolute levels of the derogation with the purpose of establishing an appropriate level. As already described, the different thresholds assessed are based on FINREP (accounting) figures as a best proxy for the size of TB business. Establishing this proxy was necessary to be able to collect data and conduct the analysis, as there is no COREP/FINREP information on banks' actual instruments included in their regulatory TB.

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<sup>35</sup> In principle, all instruments in the TB should be booked at FV and changes in their value should go through P&L. Accordingly, the EBA used, as a starting point, the 'Financial assets/liabilities held for trading' as well as 'Financial assets/liabilities designated at FV through P&L' when assessing the threshold to be applied for the derogation of small trading portfolios. However, additional threshold definitions have also been assessed in order to give a more comprehensive picture.

Accordingly, the type of data used in the analysis does not imply that the EBA recommends an accounting definition for the threshold.

The first threshold (threshold 1) is defined as the absolute sum of financial assets and liabilities held for trading and financial assets and liabilities designated at FV through P&L

The second threshold (threshold 2) is defined as the absolute sum of financial assets and liabilities held for trading without financial assets and liabilities designated at FV through P&L.

The third threshold (threshold 3) is defined as the absolute sum of financial assets and liabilities held for trading without financial assets and liabilities designated at FV through P&L but excluding FX and commodities derivatives that would not be considered under the current CRR treatment.

The fourth threshold (threshold 4) is defined as the absolute sum of notional value of trading derivatives, financial assets and liabilities held for trading, and financial assets and liabilities designated at FV through P&L but excluding the FV of derivative assets and liabilities.

As mentioned, the EBA has assessed the impact of considering the percentage size of TB business relative to total assets. To this end, a threshold of 5% over total assets (as the one established in Article 94 of the CRR) has been applied.

### **3.2.3 Sample of participating institutions**

As mentioned previously, the EBA received data for 1 153 banks. After cleaning the data, the number of banks was reduced to 1 105. However, the size of the samples that are included in the assessment according to the different thresholds will vary depending on the definition of the threshold. This is due to above-mentioned issues with obtaining sufficient FINREP data, as well as other minor data issues.<sup>36</sup> The size of the samples used for the different part of this analysis can be found in the sections concerning the different definitions of the thresholds.

The same impact assessment of the derogation, according to the same thresholds defined above, has been 'mirrored' for an alternative limited sample that contains only those banks that have non-zero position risk. The intention was to 'filter out' those banks that are likely to be applying the derogation.<sup>37</sup> Sorting these banks out decreases the size of the sample significantly and leads to a higher impact in terms of lost RWAs from applying the derogation. This is, of course, due to the fact that the limited sample only includes banks with a higher proportion of position risk. While this analysis contains useful information, the impact figures should be interpreted with caution due to the following reasons:

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<sup>36</sup> Certain CAs have not been able to attain all data points (total assets, notional derivatives, etc.) relevant to the analysis and certain data points for selected banks/jurisdictions have had to be removed following data checks conducted by the EBA.

<sup>37</sup> To establish the limited sample, all banks that report zero EQ and TDI RWAs have been removed from the full sample.

- The analysis provides only a worst-case scenario in terms of lost RWAs for banks that potentially will be able to apply the derogation depending on the final definition/level of the threshold;
- Some of those banks would not be actually applying the derogation, but, in fact, have no trading exposures. Thus, from a methodological perspective, they should have been reintegrated in the analysis;
- The analysis cannot consider the use of Pillar 2 to capitalise those risks currently not covered in Pillar 1, such as general interest rate in this case.

The full analysis of this limited sample of banks can be found in the annexes to this report.

### 3.2.4 Levels of the threshold assessed – RWA loss assumptions

In the analysis of the thresholds, all banks have been bucketed according to five levels (< EUR 20 m; > EUR 20 m and < EUR 50 m; > EUR 50 m and < EUR 150 m; > EUR 150 m and < EUR 300 m; and > EUR 300 m and < EUR 500 m) within the overall threshold of EUR 500 m, respectively referred to as levels 1, 2, 3, 4 and 5. For threshold 4, which includes the notional value of derivatives, one additional level that includes all banks above EUR 500 m has been added (i.e. level 6).

To assess the potential loss of RWAs that the application of the derogation might entail, the EBA has considered the following elements:

- General interest rate – Since there is no Pillar 1 capital charge in the BB, it has been assumed that all RWAs stemming from general interest rate would be lost. Nevertheless, as mentioned above, it should be noted that these positions are still subject to Pillar 2 requirements that include risks not captured in Pillar 1;
- Specific interest rate – As may be seen in the table below, Article 336 of the CRR maps the capital charges applicable under the Market SA for SR to the treatment applied under the BB standardised credit risk approach:

Categories	SR OFRs
Debt securities that would receive a 0% risk weight under the SA for credit risk.	0%
Debt securities that would receive a 20% or 50% risk weight under the SA for credit risk and other qualifying items as defined in paragraph 4.	0.25% (residual term to final maturity 6 months or less). 1.00% (residual term to final maturity greater than 6 months and up to and including 24 months). 1.60% (residual term to maturity exceeding 24 months).
Debt securities that would receive a 100% risk weight under the SA for credit risk.	8.00%
Debt that would receive a 150% risk weight under the SA for credit risk.	12.00%

- Accordingly, the EBA has followed the same mapping to determine the comparable BB charges for the market credit exposures. As can be observed in the table above, RWAs under BB rules have the same 'equivalent' value to MKR OFRs (i.e. if OFRs are multiplied by 12.5). The exception to this are those debt securities that would receive 20% or 50% RWAs (i.e. the second group of the table) under BB rules, which always receive more lenient treatment under market rules. For these exposures, an average of the BB RWAs was used to map the equivalent requirements;
- General/specific EQ risk – Article 133 of the CRR establishes that EQ positions are generally subject to 100% RWAs (i.e. 8% OFRs) under the BB standardised rules.<sup>38</sup> Accordingly, the EBA has taken the long exposures in EQs reported in COREP as the BB RWAs that would have been obtained in case the derogation was applied (i.e. 100% of long EQ exposures). This will always imply a loss of RWAs if we compare it to the current market OFRs for SR (8% of long plus short positions) and GR (8% of the net position of long minus short positions) EQ risks established respectively in Articles 342 and 343 of the CRR;
- FX and commodities – These are not affected by the derogation and so have not been modified in any way.

### 3.2.5 Analysis of the composition of market RWAs and the impact of the derogation

In this section, the composition of market RWAs and the potential impact of applying the derogation under the different levels of the threshold is analysed based on FINREP and COREP data submitted by CAs for small banks. Once again, it should be highlighted that, due to the above-mentioned data issues, the analysis of the composition of MKR and the impact of different definitions and levels of the thresholds will be based on different sample sizes.

The analysis will start by looking at the composition of MKR within each level (levels 1, 2, 3, 4, 5 and 6)<sup>39</sup> under the different definitions of thresholds (thresholds 1, 2, 3 and 4) for the sample of banks.<sup>40</sup>

Following the analysis of the composition of MKR, the impact on OFRs from applying the derogation has been assessed for each of the four threshold definitions. When conducting this analysis, the impact of a relative 5% threshold (absolute value of threshold/total assets) on top of the absolute level has also been assessed. It is important to note that, when looking at the difference in impact figures from applying the absolute threshold level compared to applying both the absolute and the relative threshold level, the sample sizes used for this comparison are not exactly the same. This is because the data point of total assets is needed in order to establish the

<sup>38</sup> The specific RWAs indicated in paragraph 2 of this article are applicable to both BB and TB exposures, so they have not been considered in the analysis.

<sup>39</sup> Level 6 only applies to threshold 4.

<sup>40</sup> As already mentioned, the annexes to this report includes a similar analysis for the limited samples of banks, where banks that report zero position risk or can be assumed to currently apply the derogation (i.e. reporting zero EQ and TDI RWA) are sorted out.

relative threshold, and this data point was not provided for all banks established under the absolute threshold. This comparison will, therefore, not be fully precise, but should nevertheless provide some useful information. The difference in sample sizes used for the two analyses (absolute threshold and absolute threshold plus relative threshold) is displayed in the figure below.

Figure 62. Number of banks included under the different threshold definitions

	Threshold 1	Threshold 2	Threshold 3	Threshold 4
# of banks in absolute threshold	1105	1105	382	384
# of banks in absolute + relative threshold	997	997	277	281

As described above, the impact in terms of RWAs lost is assessed by applying a relative threshold level of 5% on top of the absolute threshold. However, in order to also assess the impact in terms of the number of firms eligible for the derogation (but not in terms of lost RWAs) by applying either a 5% or 10% threshold, this analysis section is finalised by summarising, in table format, the number of firms eligible to apply the derogation when a relative threshold of 5% and 10% respectively is applied.

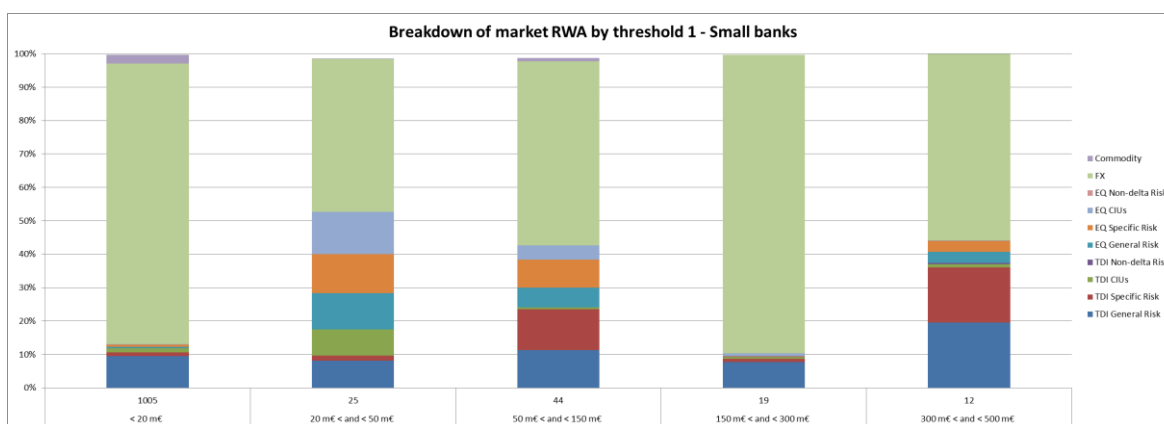
For the purpose of clarity, only the most important composition and impact charts are included in the analysis. Additional charts, used for more granular analysis, can be found in the annexes to this report.

a. Composition of market RWAs under the different levels of the established thresholds

**Threshold 1**

Looking at the sample of banks under threshold 1, we see that the analysis is based on 1 105 banks, with most of them (1 005) concentrated under level 1 (< EUR 20 m) of the threshold. FX is the largest risk exposure for all levels of the threshold, followed by TDI GR and TDI SR. Regarding threshold levels 2 (> EUR 20 m and < EUR 50 m), 3 (> EUR 50 m and < EUR 150 m) and 5 (> EUR 300 m and < EUR 500 m), EQ GR, EQ SR and EQ CIU risk exposures are notable as well.

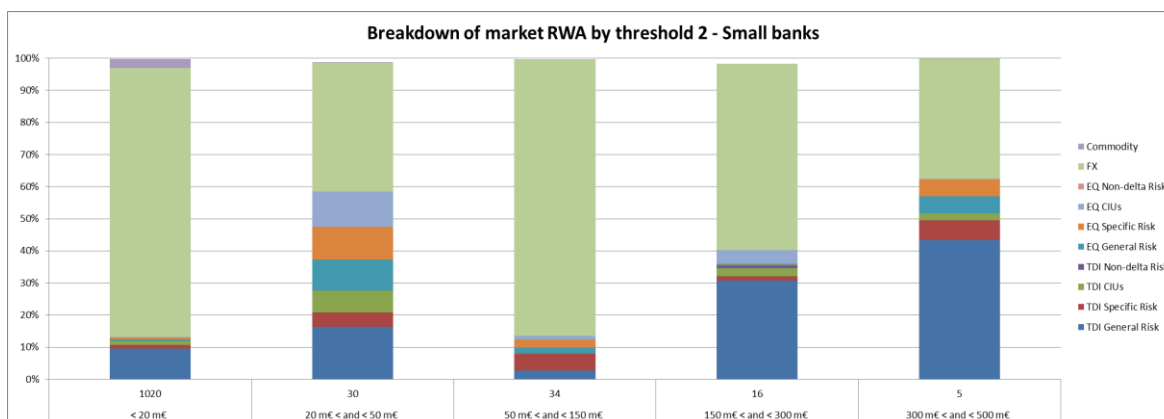
Figure 63. Composition of market RWAs by selected levels under threshold 1



**Threshold 2**

Looking at the sample of banks under threshold 2, we see that the analysis is based on 1 105 banks, with most banks (1 020) concentrated under level 1 of the threshold. Again, for all the levels except level 5, FX is the largest risk exposure, generally followed by TDI GR and TDI SR. For threshold levels 2, 3 and 5, EQ GR, EQ SR and EQ CIU risk exposures are notable as well.

Figure 64. Composition of market RWAs by selected levels under threshold 2

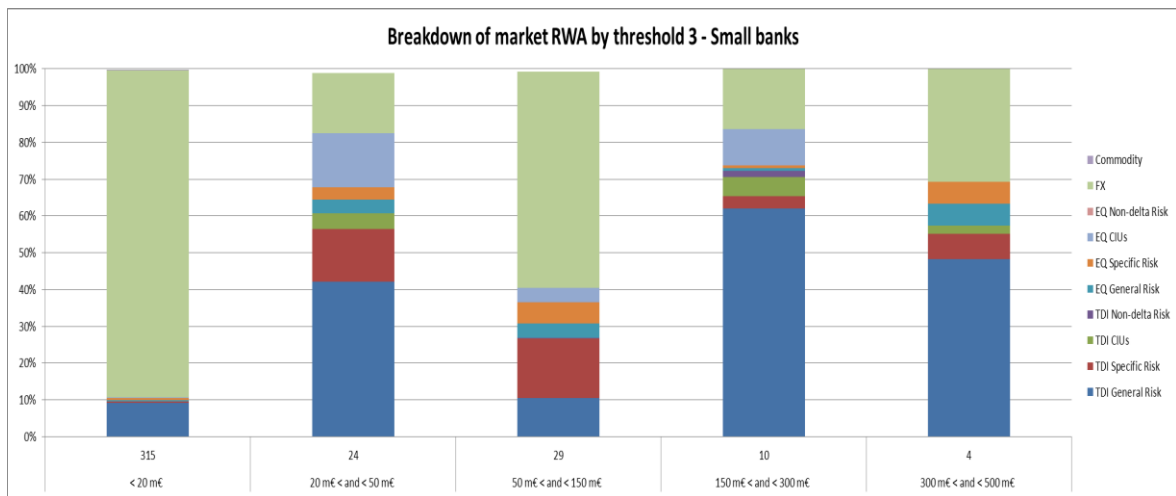




### Threshold 3

Looking at the sample of banks under threshold 3, we see that the analysis is based on 382 banks, with most banks (315) concentrated under level 1 of the threshold where FX is clearly the largest exposure. For the other levels, TDI GR and TDI SR are material as well, with TDI GR being the main risk exposure for levels 2, 4 and 5.

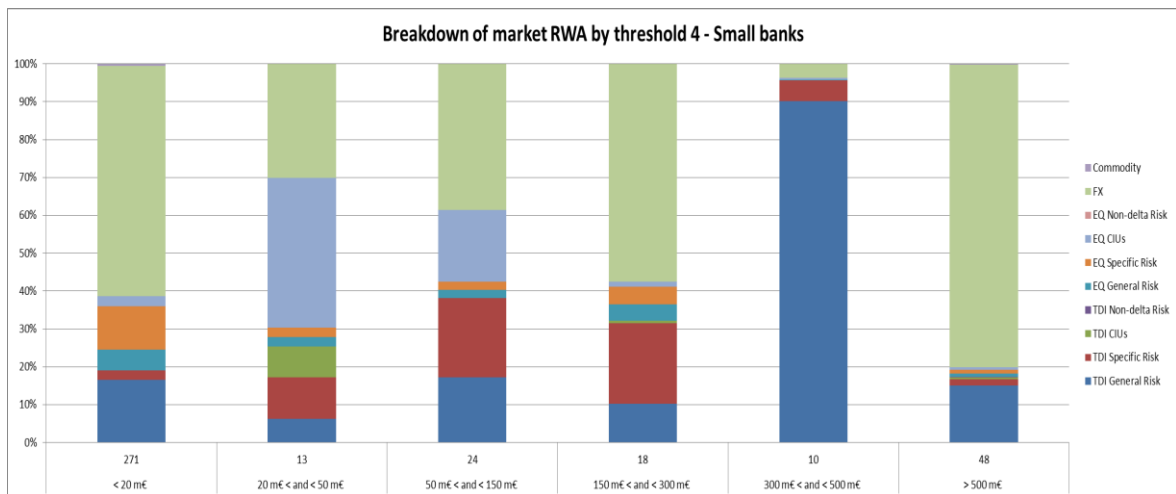
Figure 65. Composition of market RWAs by selected levels under threshold 3



### Threshold 4

Looking at the sample of banks under threshold 4, we see that the analysis is based on 384 banks, with most banks (271) concentrated under level 1 of the threshold. Overall FX, TDI GR and TDI SR are the main risk exposures, but EQ CIUs and EQ SR are also notable. As mentioned earlier, threshold 4 includes an additional level 6 (> EUR 500 m), which is due to the inclusion of the notional amount of derivatives in the definition of the threshold. For level 6, FX risk is the largest exposure.

Figure 66. Composition of market RWAs by selected levels under threshold 4



**b. Impact assessment on OFRs for EQ and debt positions relative to market RWAs and total RWAs from applying the different thresholds**

**Threshold 1**

Regarding threshold 1, we see that banks in level 3 have the highest impact in terms of lost RWAs relative to total market RWAs from applying the derogation (i.e. using a BB approach instead of a TB approach to EQ positions). Cumulatively, the impact is averaged out (smoothed); however, it still peaks at level 3. For all levels, the impact in terms of lost RWAs relative to total RWAs is negligible, which is consistent with the assumption that the business model for these small institutions tends to be primarily focused on BB activities (i.e. have very limited position risk in the TB). This will be the case for all threshold definitions and levels.

Figure 67. Impact relative to market RWAs and total RWAs under threshold 1 of applying the BB approach to EQ and debt positions

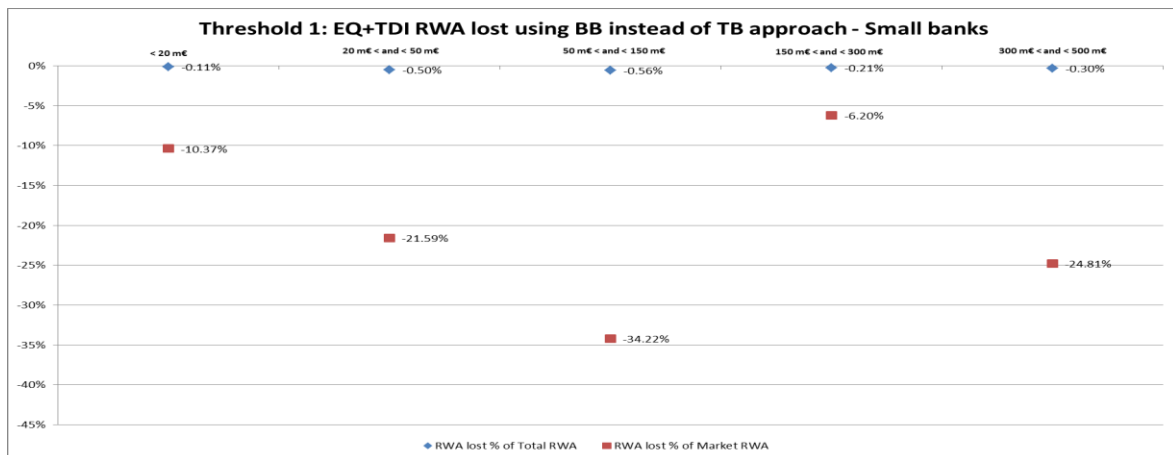
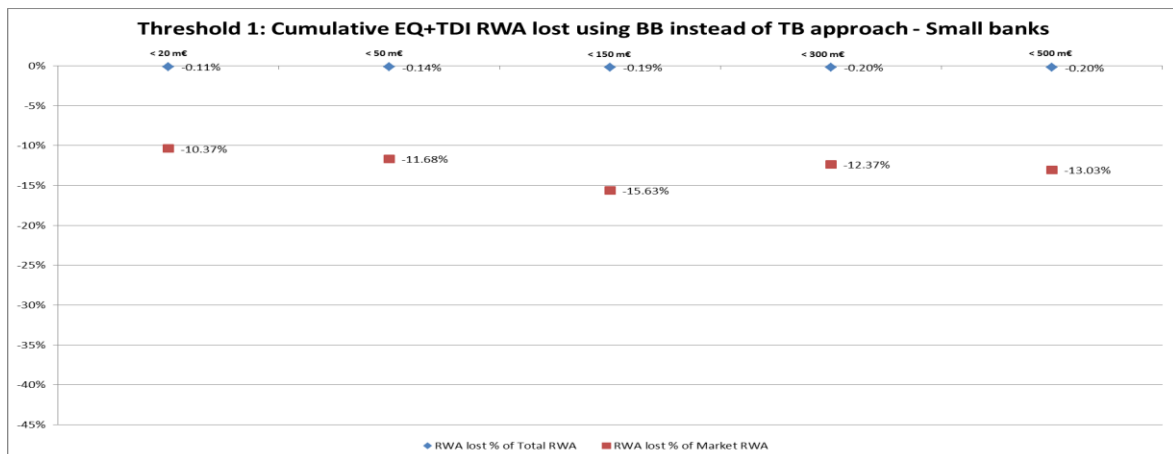


Figure 68. Cumulative impact relative to market RWAs and total RWAs under threshold 1 of applying the BB approach to EQ and debt positions



### Threshold 1 relative

The relative threshold implies that banks below the absolute level of the threshold should, at the same time, not exceed 5% of total assets. Adding an additional relative threshold will, therefore— if anything—decrease the number of banks eligible for applying the derogation and would, on average, lead to a lower impact in terms of lost RWAs (even though, in principle, the effect could be both an increase or a decrease in RWAs depending on the actual composition of the MKR of the banks that are excluded).

Adding the relative threshold of 5% on top of threshold 1, we see that this has a limited impact on all thresholds levels except for level 3, where RWAs lost relative to market RWAs actually increase significantly. Out of the full sample of banks, 33 are above the 5% threshold, meaning that this relative threshold would imply that 3.31% of the banks would not be able to apply the derogation even if the absolute level was set at its highest (EUR 500 m). Cumulatively, the impact of adding the relative threshold is non-material for all levels when compared to the impact figures from only applying the absolute threshold.

Figure 69. Impact relative to market RWAs and total RWAs under relative threshold 1 of applying the BB approach to EQ and debt positions

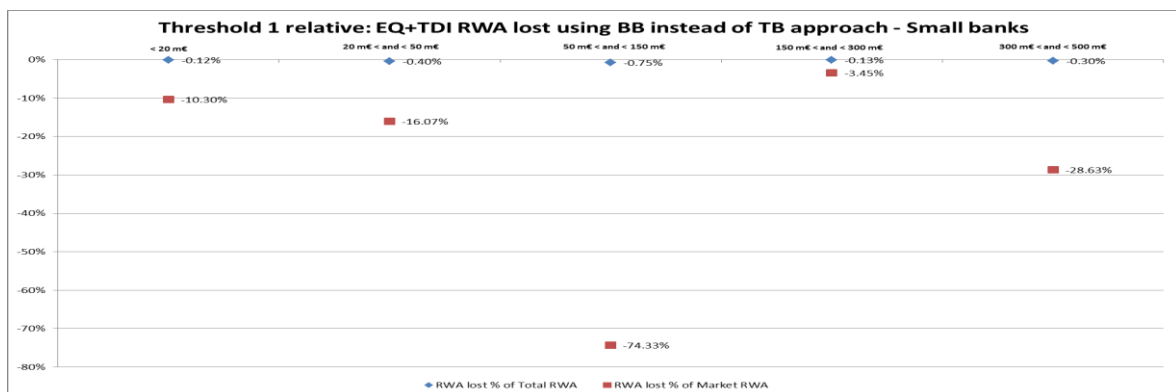
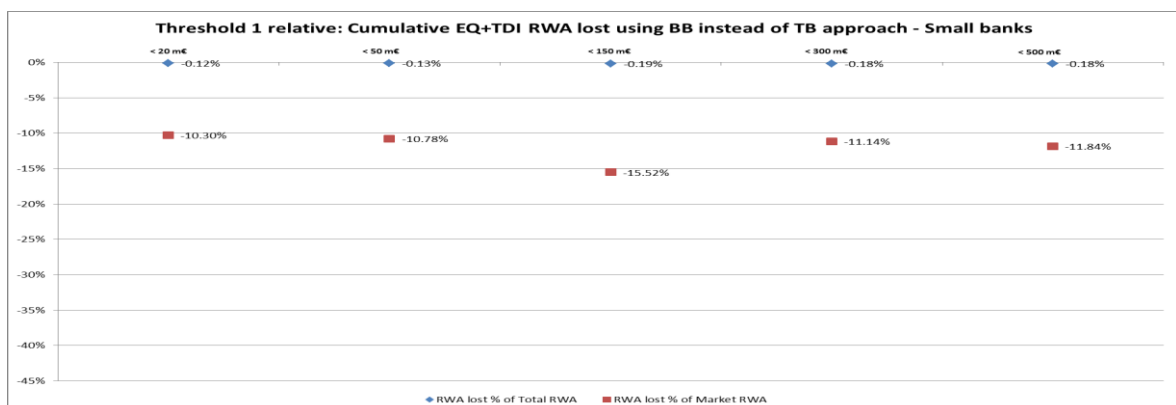


Figure 70. Cumulative impact relative to market RWAs and total RWAs under relative threshold 1 of applying the BB approach to EQ and debt positions



**Threshold 2**

Regarding threshold 2, the impact is limited for levels 1, 2 and 3 and for all levels on a cumulative basis. This corresponds well with the analysis conducted earlier on the composition of market RWAs for these banks under the different levels of threshold 2.

Figure 71. Impact relative to market RWAs and total RWAs under threshold 2 of applying the BB approach to EQ and debt positions

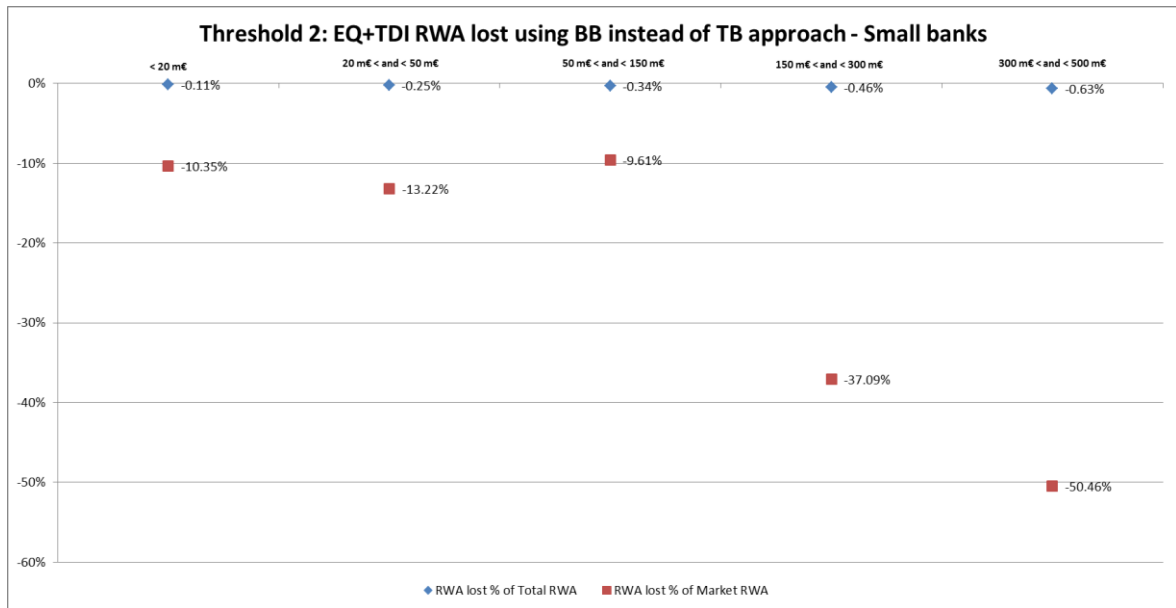
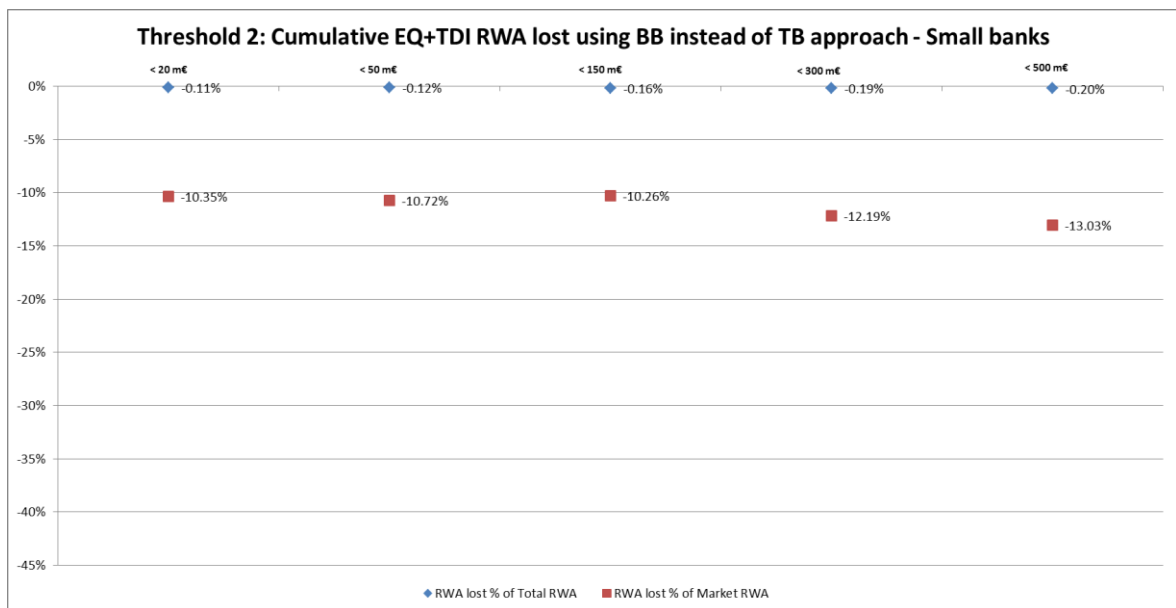


Figure 72. Cumulative impact relative to market RWAs and total RWAs under threshold 2 of applying the BB approach to EQ and debt positions



**Threshold 2 relative**

Looking at the impact of adding an additional relative threshold of 5% on top of threshold 2, we see that this seems to have a limited impact for levels 1 and 2 while being more relevant for levels 3, 4 and 5. There are 22 banks that are above the 5% threshold, meaning that this threshold level would imply that 2.21% of the sample banks would not be able to apply the derogation even if the absolute level was set at its highest (EUR 500 m). Cumulatively, the impact is non-material for all levels.

Figure 73. Impact relative to market RWAs and total RWAs under relative threshold 2 of applying the BB approach to EQ and debt positions

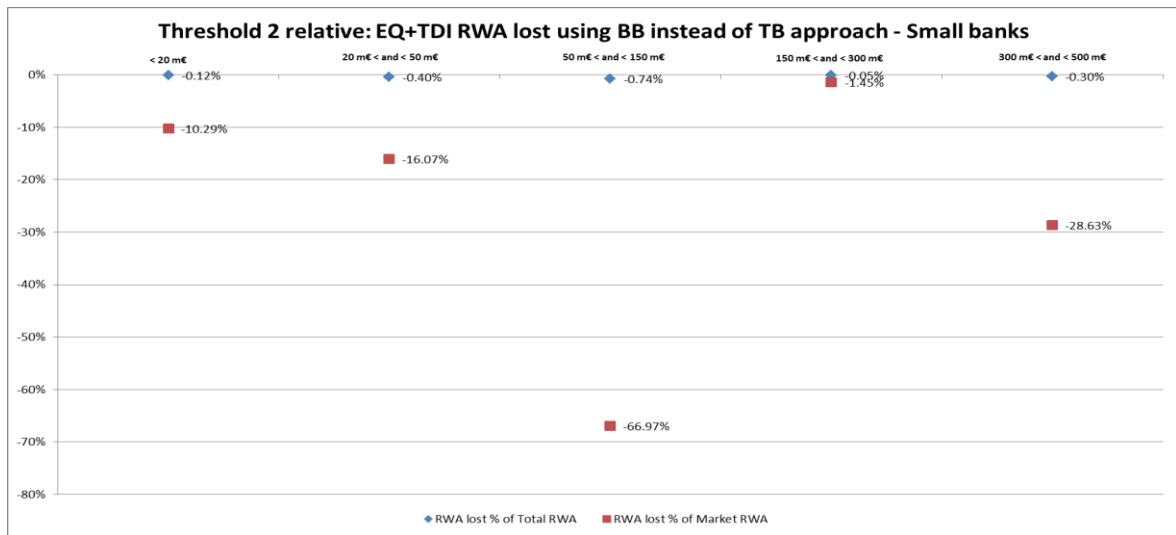
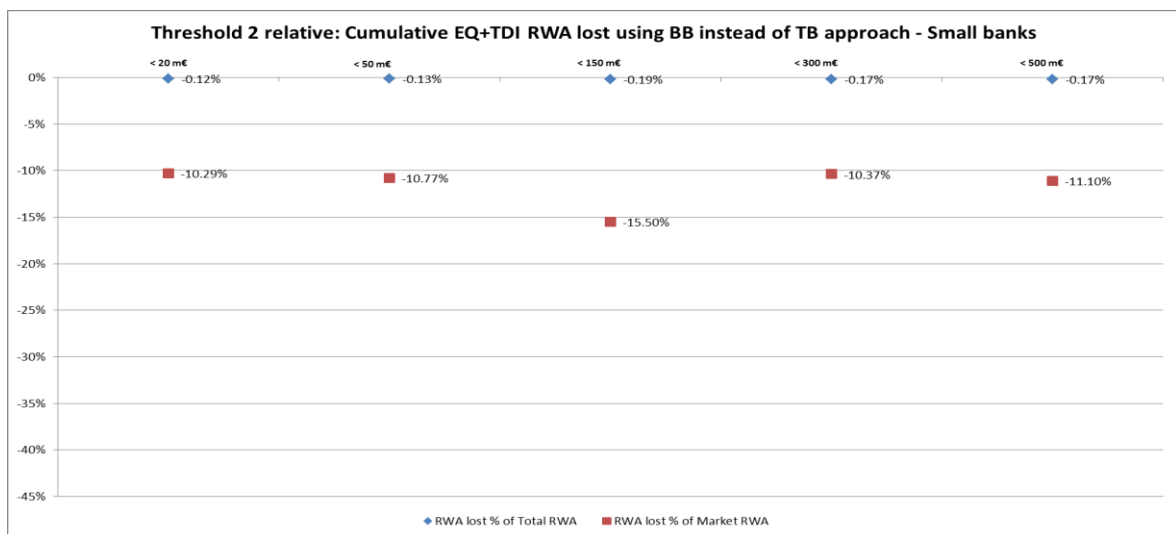


Figure 74. Cumulative impact relative to market RWAs and total RWAs under relative threshold 2 of applying the BB approach to EQ and debt positions



### Threshold 3

Regarding threshold 3, the impact is limited for levels 1, 2 and 3 but material for levels 4 and 5. On a cumulative basis, the impact is also limited.

Figure 75. Impact relative to market RWAs and total RWAs under threshold 3 of applying the BB approach to EQ and debt positions

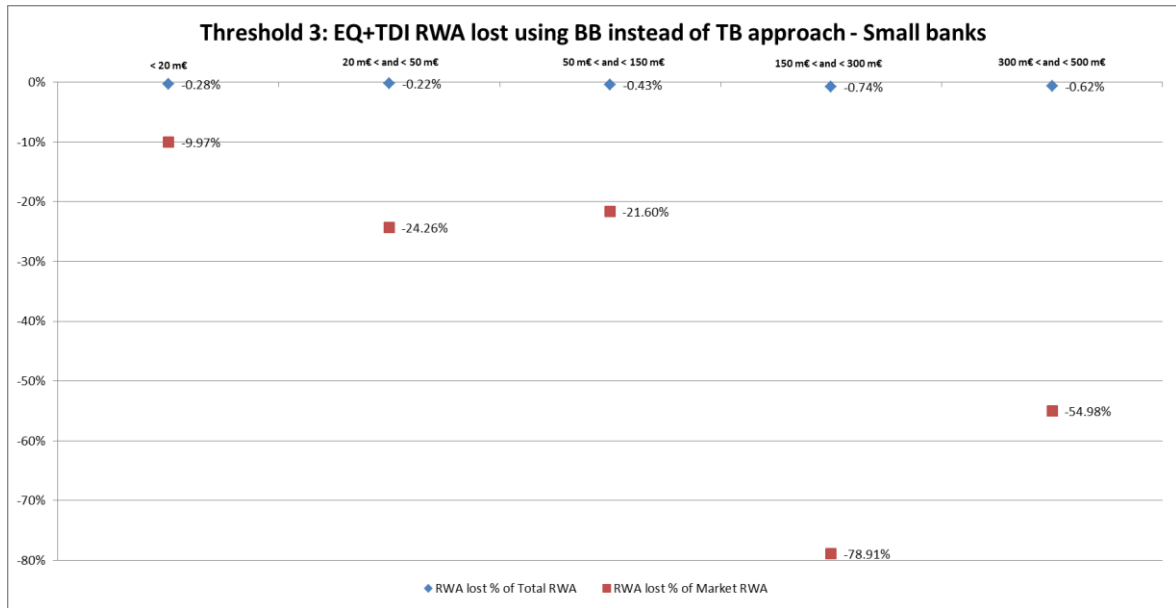
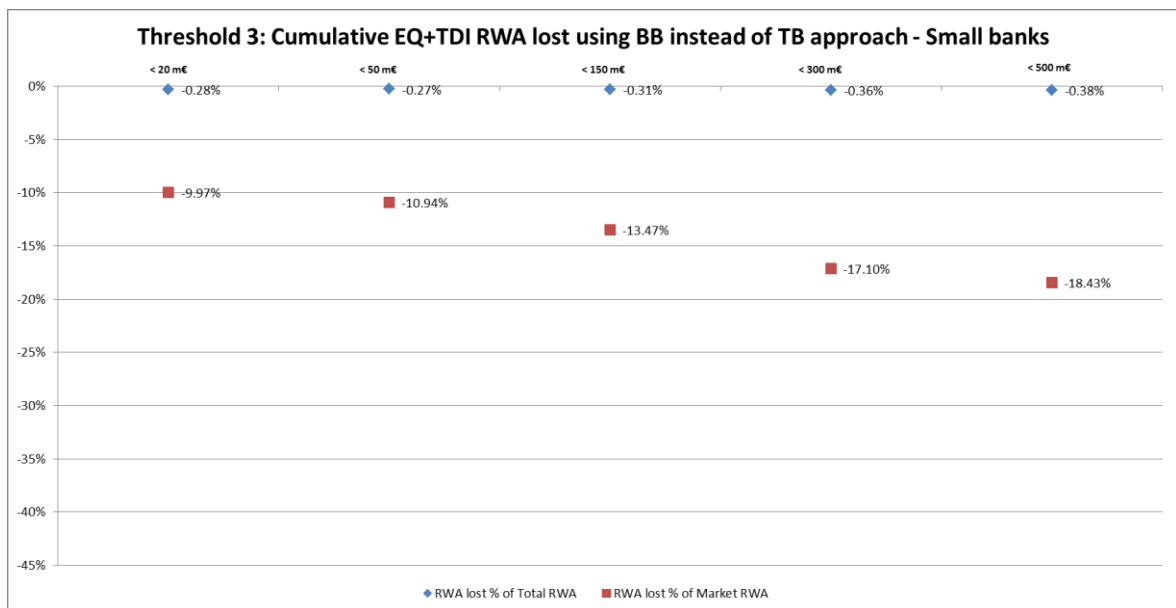


Figure 76. Cumulative impact relative to market RWAs and total RWAs under threshold 3 of applying the BB approach to EQ and debt positions



### Threshold 3 relative

If we look at the impact of adding an additional relative threshold of 5% on top of threshold 3, we see that this seems to have a limited impact for levels 1 and 5 while being more significant for levels 2, 3 and 4. There are 18 banks that are above the 5% threshold, meaning that this threshold level would imply that 6.50% of the sample banks would not be able to apply the derogation even if the absolute level was set at its highest (EUR 500 m). Cumulatively, the impact is non-material for all levels.

Figure 77. Impact relative to market RWAs and total RWAs under relative threshold 3 of applying the BB approach to EQ and debt positions

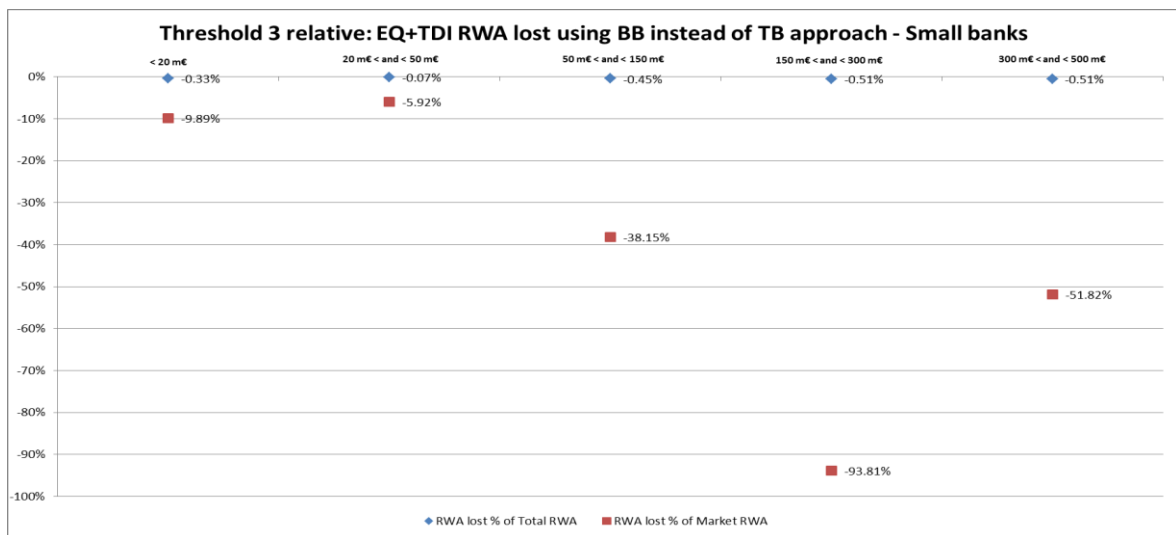
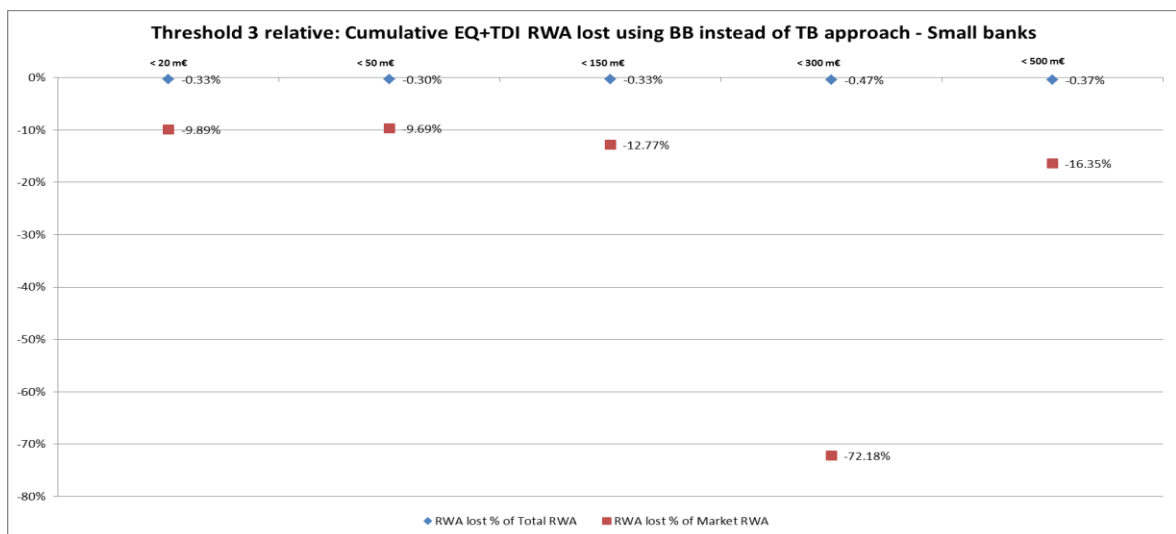


Figure 78. Cumulative impact relative to market RWAs and total RWAs under relative threshold 3 of applying the BB approach to EQ and debt positions



### Threshold 4

Under threshold 4, the impact is limited for levels 1, 4 and 6 while being material for the other three levels. Cumulatively, the impact decreases from level 3 to level 4 and stabilises around 20%. As mentioned previously, threshold 4 includes an additional level (> EUR 500 m) due to the substitution of the market value of derivatives with the notional value of derivatives in this threshold definition.

Figure 79. Impact relative to market RWAs and total RWAs under threshold 4 of applying the BB approach to EQ and debt positions

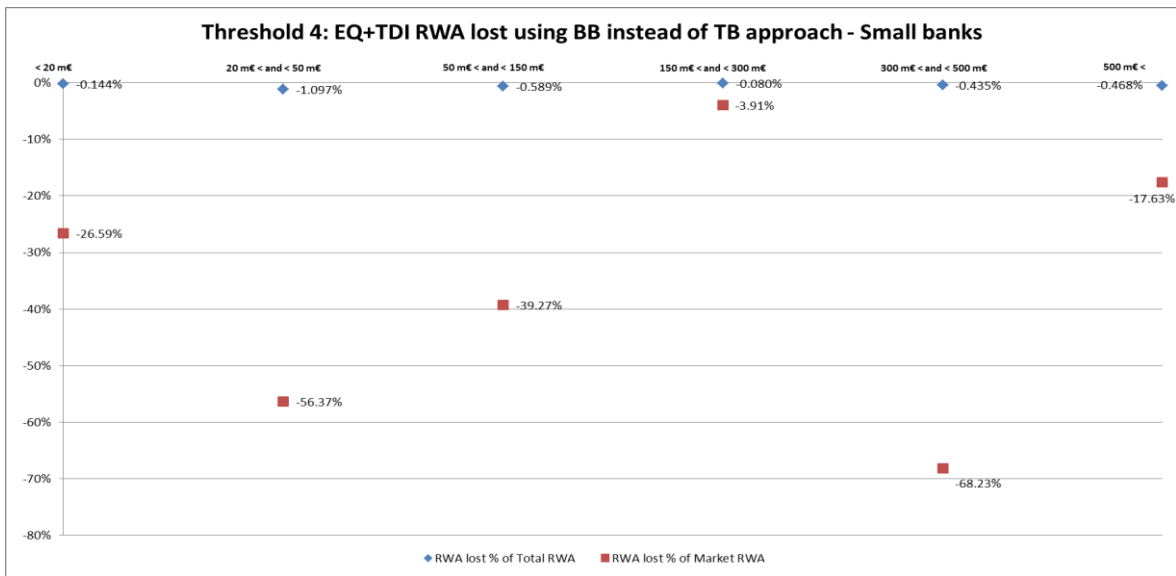
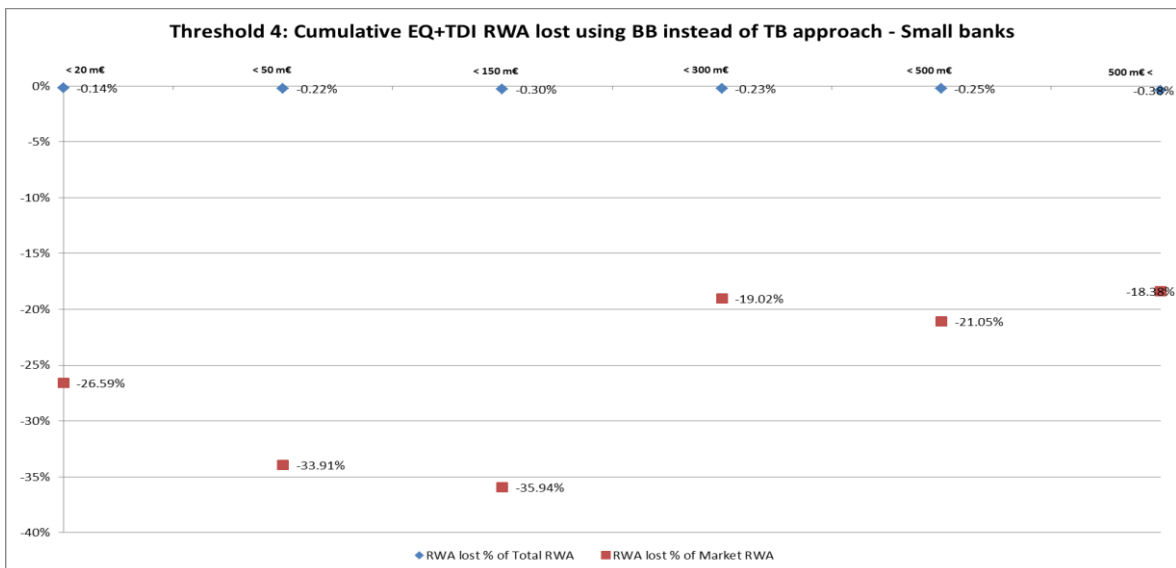


Figure 80. Cumulative impact relative to market RWAs and total RWAs under threshold 4 of applying the BB approach to EQ and debt positions





### Threshold 4 relative

If we look at the impact of adding an additional relative threshold of 5% on top of threshold 4, we see that only banks in levels 1 to 4 are left. Again, this is because threshold 4 includes the notional value (instead of the market value) of derivatives, making the 5% threshold (relative to total assets) a much more restraining factor with regard to the number of banks applicable for applying the derogation. There are 66 banks that are above the 5% threshold, meaning that this threshold level would imply that 23.49% of the sample banks would not be able to apply the derogation even if the absolute level was set at its highest (> EUR 500 m). This is a significantly higher proportion of banks compared to the other thresholds. The impact percentages do not change significantly for the remaining four levels. The same is the case on a cumulative basis.

Figure 81. Impact relative to market RWAs and total RWAs under relative threshold 4 of applying the BB approach to EQ and debt positions

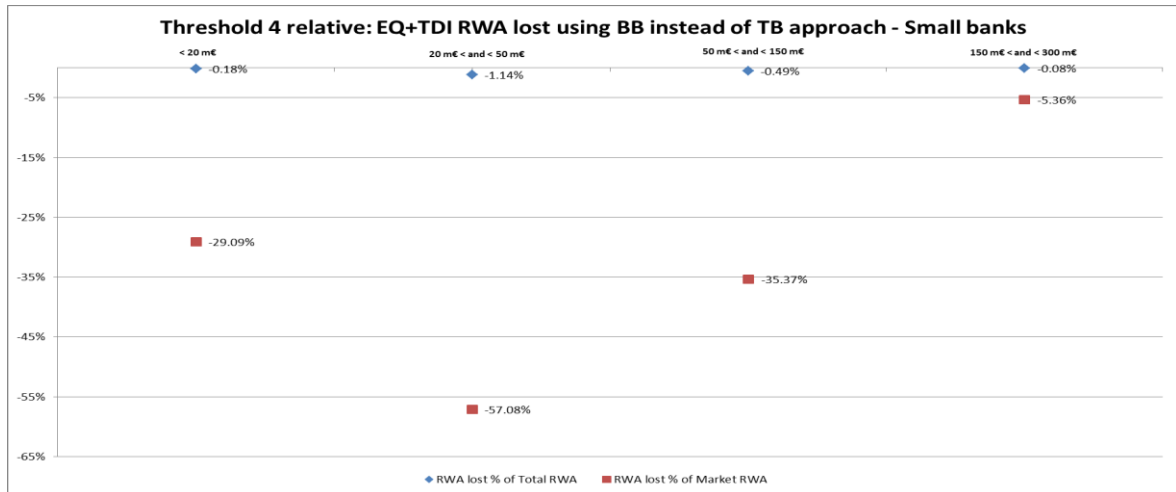
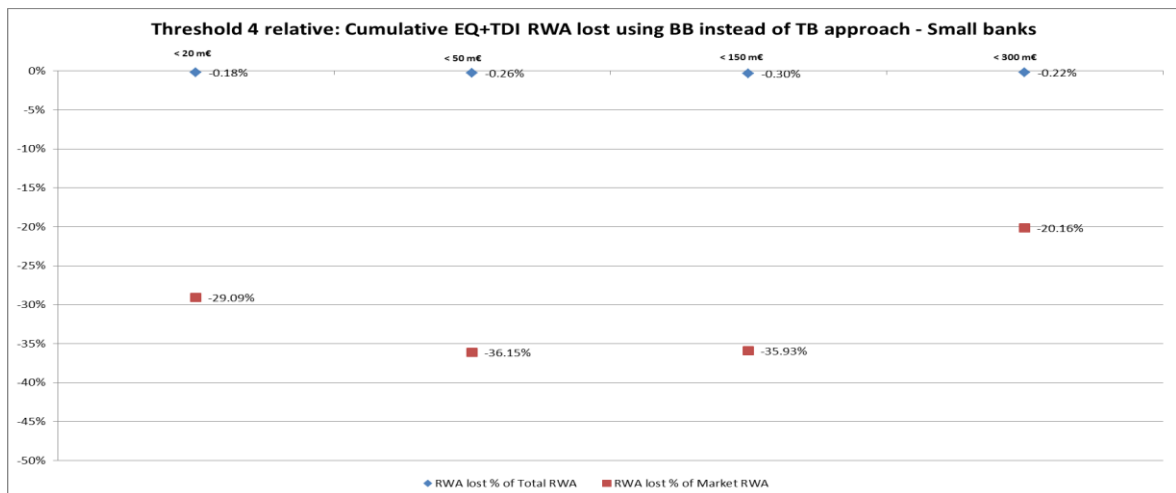


Figure 82. Cumulative impact relative to market RWAs and total RWAs under relative threshold 4 of applying the BB approach to EQ and debt positions



To further illustrate the effect of applying a relative threshold, the following tables show the impact in terms of the number of banks that are below the ratio of 5% and 10%. From the tables, we see that—in terms of the number of banks—the relative threshold primarily seems to have a binding effect when applying threshold 4 and mostly for the higher-level banks.

Figure 83. Threshold 1 – Impact of relative thresholds in terms of the number of banks applicable for the derogation

Threshold 1	# of banks included under each threshold level	Ratio below 5%	Ratio below 10%
< 20 m€	922	917	920
20 m€ < and < 50 m€	16	11	15
50 m€ < and < 150 m€	33	23	29
150 m€ < and < 300 m€	16	7	13
300 m€ < and < 500 m€	10	6	9

Figure 84. Threshold 2 – Impact of relative thresholds in terms of the number of banks applicable for the derogation

Threshold 2	# of banks included under each threshold level	Ratio below 5%	Ratio below 10%
< 20 m€	922	918	920
20 m€ < and < 50 m€	16	11	15
50 m€ < and < 150 m€	33	28	31
150 m€ < and < 300 m€	16	12	15
300 m€ < and < 500 m€	10	6	9

Figure 85. Threshold 3 – Impact of relative thresholds in terms of the number of banks applicable for the derogation

Threshold 3	# of banks included under each threshold level	Ratio below 5%	Ratio below 10%
< 20 m€	227	223	225
20 m€ < and < 50 m€	17	13	16
50 m€ < and < 150 m€	21	16	19
150 m€ < and < 300 m€	8	5	7
300 m€ < and < 500 m€	4	2	4

Figure 86. Threshold 4 – Impact of relative thresholds in terms of the number of banks applicable for the derogation

Threshold 4	# of banks included under each threshold level	Ratio below 5%	Ratio below 10%
< 20 m€	202	195	199
20 m€ < and < 50 m€	10	6	9
50 m€ < and < 150 m€	16	7	11
150 m€ < and < 300 m€	15	7	11
300 m€ < and < 500 m€	6	0	3
> 500 m€	32	0	0

## Summary

From the analysis of the composition of market RWAs within the different levels of the four thresholds, we see that the overall exposure is FX risk. TDI GR is clearly the second largest risk exposure and, in the case of threshold 3, even larger than FX risk for several threshold levels. TDI SR is generally the third largest risk exposure, followed by EQ CIUs. While the picture is not unique, there is a general tendency that other types of risk exposure besides FX risk—namely, TDI GR, TDI SR, EQ GR, EQ SR, TDI CIUs and EQ CIUs—become more significant as the threshold level is increased. Clearly, commodity and non-delta risk exposures are minimal for all four thresholds and within all threshold levels. This is consistent with the previous analysis of the overall composition of market RWAs for the small banks sample, where we saw that commodity and non-delta risks only constituted 1% and 0.08% respectively.

As described, banks eligible for the derogation would use a BB approach when calculating OFRs. Applying a BB approach leads to a partial loss in the OFRs for GR and SR for EQ and TDI position risks, as the BB approach is more lenient compared to the TB approach. Accordingly, there is a clear correlation between the density of position market risk RWAs within a given threshold level and the market RWAs lost from applying the derogation.

The analysis of the impact of the derogation has shown that there is some variation in impact in terms of lost RWAs from applying the different levels and definitions of the thresholds. In this regard, it is important to keep in mind that the number of banks included in the analysis for some of the higher levels of the thresholds is rather limited, making it more challenging to draw any certain conclusions. Nevertheless, the overall tendency is a positive correlation between an increased threshold level and the impact in terms of more lost RWAs, as was expected.

A threshold level of EUR 50 m seems to ensure that most institutions from the small banks sample are eligible to apply the derogation in fact capturing 93% of banks under threshold 1, 95% of banks under threshold 2, 77% of banks under threshold 3 and 74% of banks under threshold 4. At this threshold level of EUR 50 m, thresholds 1, 2 and 3 show that no more than 25% of total market RWAs are lost. On average (cumulatively), the loss of market RWAs for banks below EUR 50 m is around 14%, with threshold 2 showing the lowest loss of 10.94%. Threshold 4 leads to a greater loss of market RWAs (up to 56.37%). Of course, it is important to highlight that, in the case of the lost RWAs relative to total RWAs, the impact is negligible for all thresholds (in most cases, less than 1%). This is consistent with the assumption that the business model for these small institutions tends to be primarily focused on BB activities. This assumption was also confirmed from the analysis of the composition of FV instruments and RWA exposures where, on an aggregated basis, the small banks have very limited position risks in the TB compared to the full RWAs stemming from other types of exposures such as credit and operational risks.

Establishing a relative threshold of 5%<sup>41</sup> on top of the absolute threshold, as currently required in Article 94 of the CRR, leads to a lower loss of RWAs. However, the impact seems to be non-material for most threshold definitions and levels, threshold 4 being the exception. For thresholds 1, 2 and 3, the 5% criterion would imply that between 2.21% and 5.5% of the banks are restricted from applying the derogation. For threshold 4, the impact is somewhat higher at 23.49%, owing to the inclusion of notional derivatives in this threshold definition. Thus, if the threshold level is established at EUR 50 m, the relative threshold has a negligible effect both in terms lost RWAs and with regard to the number of banks eligible to apply the derogation for thresholds 1, 2 and 3, while threshold 4 seems to be unfit for the purpose.

The analysis was finalised by looking at the increase in the number of banks that would be able to apply the derogation if, instead of 5%, a relative level of 10% was introduced. While a 10% level entails that almost all banks in the sample are the eligible to apply the derogation, the impact is not significantly different from applying a 5% threshold.

While threshold 2 seems to perform slightly better than thresholds 1 and 3 in terms of limiting the market RWAs lost and with regard to increasing the number of banks eligible to apply the derogation, it is highlighted again that all these thresholds are based on FINREP figures, which were used as a best proxy for banks' TB business. As such, none of the accounting definitions for the thresholds would be appropriate. Indeed, the EBA proposes to carry on basing the derogation on the size of FV assets and liabilities subject to position risk. However, at the same time, there is a clear need for further transparency; accordingly, the EBA recommends that COREP reporting templates should be expanded to include relevant reporting for banks that apply, or intend to apply, the derogation. At a minimum, this would entail more information on the actual mapping between banks' trading instruments and activities from regulatory and accounting perspectives.

Therefore, based on the analysis conducted in this report, the EBA considers that a threshold level of EUR 50 m is appropriate. This level introduces greater proportionality by enabling more banks with small TB business to apply the derogation whilst at the same time limiting the impact in terms of lost RWAs.

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<sup>41</sup> The relative threshold implies that banks below the absolute level of the threshold should, at the same time, not exceed 5% over total assets. Thus, when applying the 5% criteria in the analysis, it could be expected that fewer banks would be eligible to apply the derogation and that, on average, the impact in terms of lost RWAs would be lower (even though, in principle, the effect could be both an increase or a decrease in RWAs depending on the actual composition of MKR of the banks that are excluded).

## 3.3 Second section of the CfA – Impact of the new framework

### 3.3.1 Introduction

According to the CfA mandate, this section assesses the capital impact that the introduction of the FRTB will likely have on EU institutions. In addition, the EBA was requested to provide an estimate of the ratio of the new standardised to internal models capital requirements for different types of trading activities or business models and, in light of this, assess whether any calibration adjustment is needed when implementing the new framework. The Commission also requested that the impact analysis included an impact of the framework on market-making activities and, subsequently, on market liquidity.

The EBA assessment has been based on data coming from two wide QIS exercises coordinated at Basel level. It is worth noting that these two QIS exercises cover all the regulatory changes introduced by Basel III/CRD IV, so they are not focused on the FRTB as such. Nevertheless, some specific elements of the market framework are assessed, particularly:

- The first exercise was designed to mainly assess the potential use of floors and the new attribution tests. Accordingly, the data from this template (CRD IV exercise) allows an assessment of the new validation tests by desk and, in addition, it also gathered detailed information on the capital charge delivered by applying the SBA instead of the IMA by desk in order to allow an assessment of the potential use of a floor. However, it does not include any information on the current MKR charges, so the calibration of the new IMA vs the existing one by risk category cannot be assessed;
- The data from the second QIS template (Basel III monitoring exercise) allows an assessment of the impact of the new SBA for standardised banks, so it includes detailed data on the current SA risk categories (and some breakdown for securitisation non-sec positions) and for the new SBA capital charges.

Accordingly, for IMA banks, it has not been possible to properly assess the impact of the FRTB by broad risk category. However, for banks applying the SBA, the data available allowed this mapping between the old and the new SA capital charges.

### 3.3.2 Data quality issues

It should be highlighted that the quality of the data collected in these two QIS exercises is quite questionable. While it is true that QIS data generally present quality issues, the templates submitted for the two exercises referred above have shown lots of deficiencies that hinder the reliability of the analysis and do not allow to draw strong conclusions. The large number of deficiencies may have likely been produced by the novelty of the framework and its relative complexity, particularly for small and medium standardised firms that have not been previously involved in QIS exercises in Basel.

In addition, due to the quality issues and the need to go back to participating banks to clarify or correct the templates, the EBA has received the data very late in the process and has done its best to incorporate the main conclusions on the impact of the FRTB for IMA and SA banks. Accordingly, it should be stressed that no strong conclusions should be derived from the analysis provided.

After the quality checks and data cleaning processes were performed in Basel, the EBA decided to also eliminate from the analysis those banks showing either: (i) a decrease of nearly 100% in capital charges or (ii) an increase above 10 times the current capital charge reported. These banks were considered as outliers and eliminated from the sample. In the end, data from a total of 48 EU institutions was used in the SA/IMA analysis—though, of course, not all of them are included in each chart shown.

### **3.3.3 Calibration of the new SA compared with the IMA**

One of the key objectives of the reform was to create a new SA that could work as a credible fallback for internal models while maintaining the incentives for banks to use the IMA. After the final FRTB calibration, the use of SA would imply an average increase of 40% compared with the IMA frameworks.<sup>42</sup>

### **3.3.4 Overall impact of the FRTB for IMA banks**

An estimation of the overall effect of IMA implementation is shown below, both by individual institution and on an aggregated basis.

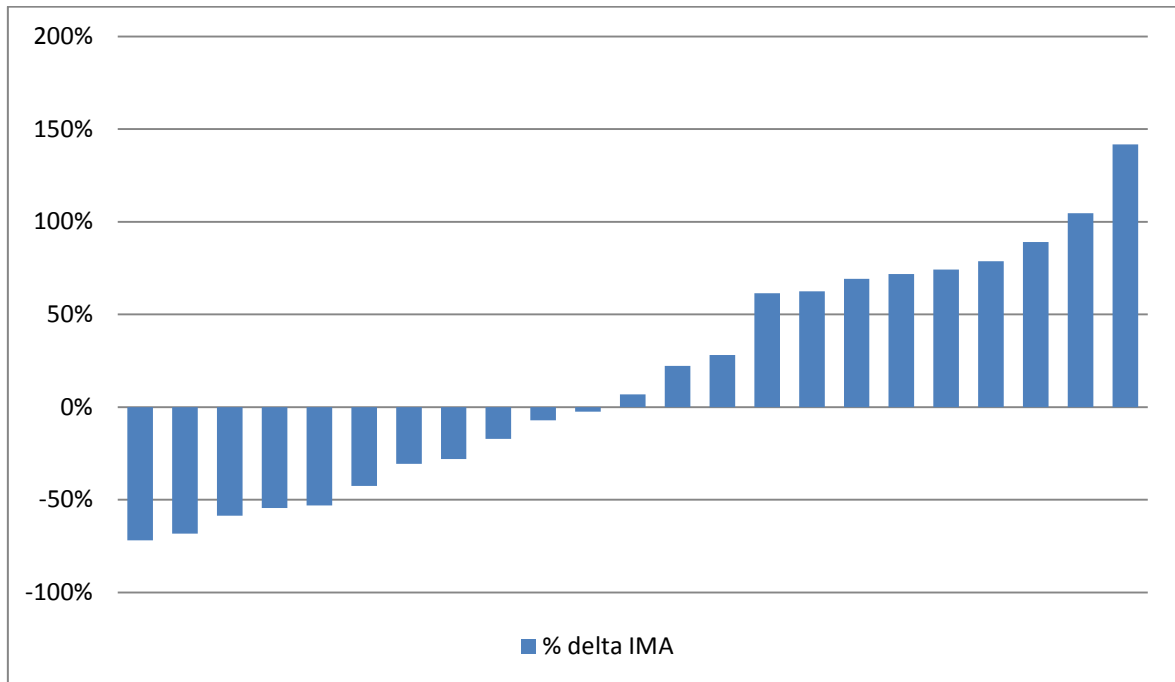
The overall effect is relatively small, with the median bank showing a 7% increase in capital when compared to the current MKR internal model framework. Of course, the impact varies largely across firms, with some banks showing a decrease above 50% and others showing an increase of more than 100% compared with current model capital charges.

The mean impact is larger than for the median bank (16%) and, if we ponder the results of each bank by the size of its market capital requirements (i.e. weighted mean), the impact is around 29%. These results suggest that the impact is larger for firms with a more relevant trading portfolio.

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<sup>42</sup> It should be noted that no data from the Basel III monitoring and the EU-specific CRD IV exercises on the calibration between the IMA and the SA was available when this report was drafted. Accordingly, only the overall estimation used when the FRTB final calibration was conducted is provided.

Figure 87. IMA-only desks

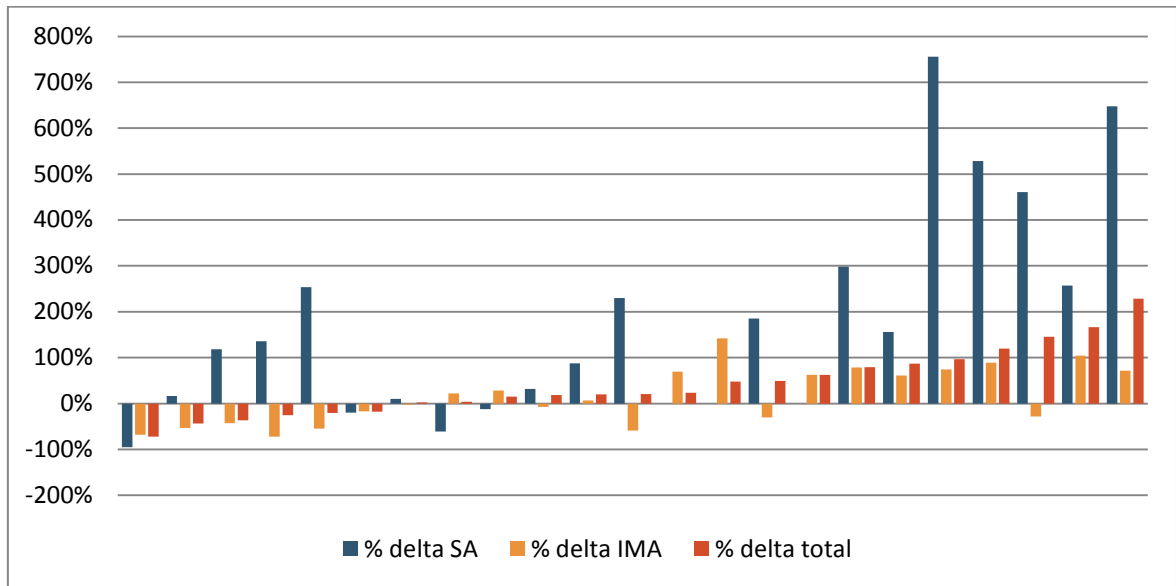


Percentile	Value
0.25	-37%
0.5	7%
0.75	70%
Simple mean	16%
Weighted mean	29%
Count	23

If we now include the positions that IMA banks compute under standardised rules, we can observe that the overall increase is clearly more pronounced, with the median bank showing a 36% increase in capital. In this case, the impact varies more widely, with one bank still showing a decrease above 50% and another one showing an increase of more than 200% compared with the current capital charges.

The mean impact is also larger than for the median bank (63%) and the weighted mean is a bit lower (50% increase). These results suggest that the importance of standardised charges may be lower for larger firms (at least relative to their overall market activities).

Figure 88. IMA banks (including SA desks of IMA banks)



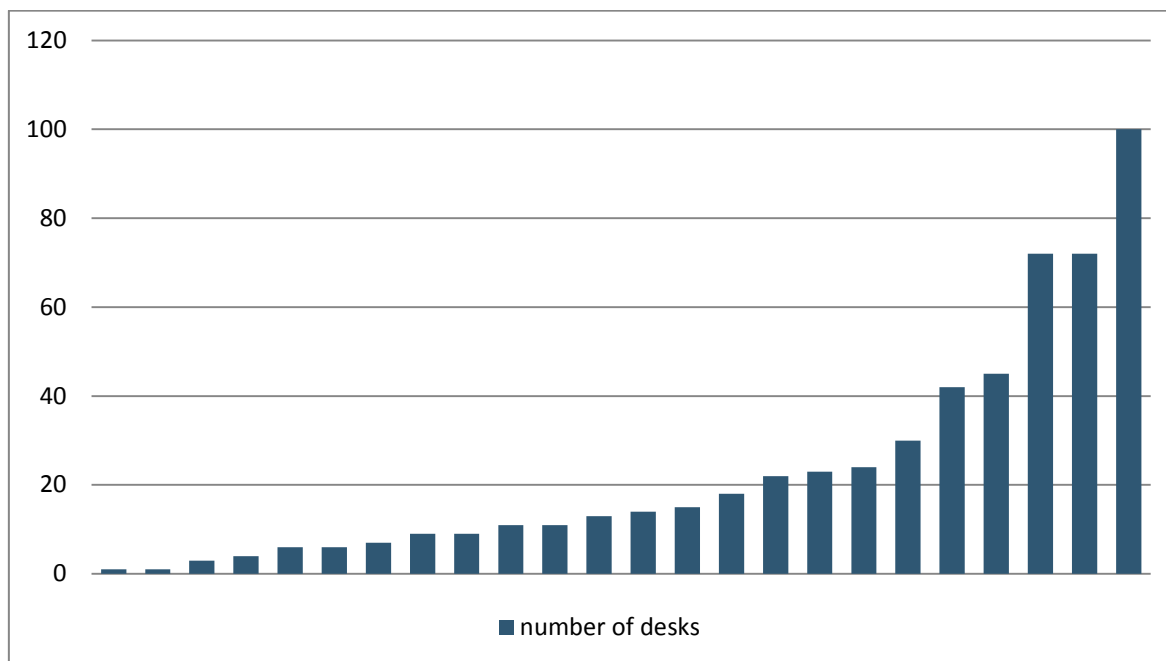
Percentile	Value
0.25	3%
0.5	36%
0.75	94%
Simple mean	63%
Weighted mean	50%
Count	26

### 3.3.5 Analysis of the internal desk structure for IMA banks

Banks participating in the two QIS were mapped between internal desk names to a regulatory list that had been originally provided in the first BCBS Consultative Document (CP1) of the Trading Book Group (TBG). According to the data from 24 EU banks, on average, 23 desks are reported by firm, though it varies a lot from 1 to 100 (that was the maximum number that could be reported).



Figure 89. Desk number by institution

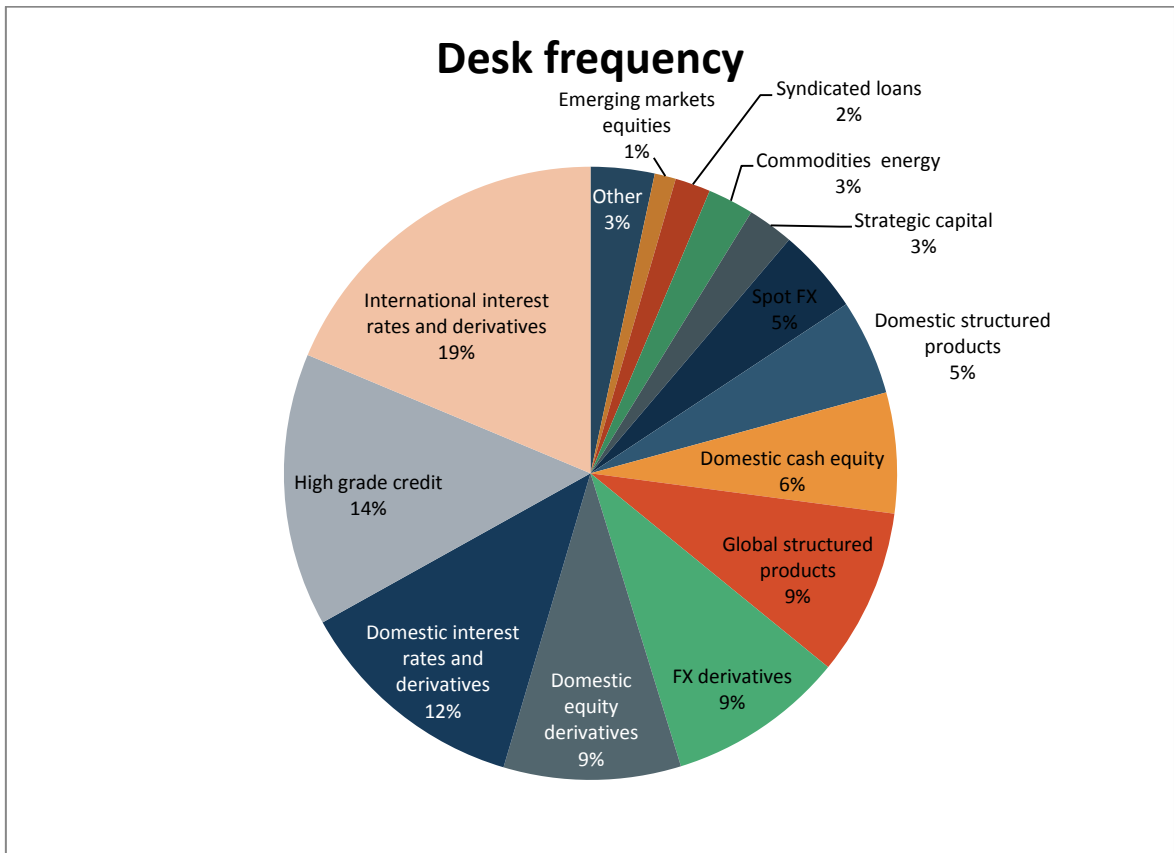


Percentile	Value
0.25	6.25
0.50	13.50
0.75	28.50
Simple mean	23.25
Count	24

Regarding how frequently each desk is reported, Figure 116 below illustrates the distribution of the regulatory trading desk types to which internal trading desks were mapped. This graph shows that there are three groups:

- The six trading desk types, ‘International interest rates and derivatives’, ‘High grade credit’, ‘Domestic interest rates and derivatives’, ‘Domestic EQ derivatives’, ‘FX derivatives’ and ‘Global structured products’, are used most frequently (9 to 19%);
- The second-most frequently used group is composed of ‘Domestic cash EQ’, ‘Domestic structured products’ and ‘Spot FX’ (5 to 6%);
- The remaining group of 13 trading desk types are used far less frequently.

Figure 90. Desk frequency



With regard to the new P&L attribution tests, the QIS data provided suggests that, for many activities, around 40% of the desks would fail one or both of the tests required in the FRTB text. This has been a recurrent concern for the industry that (as explained later in the report) has repeatedly requested additional flexibility, as well as a long monitoring period before the new requirements are introduced. It should nevertheless be stressed that the quality of the data is questionable, so no strong conclusions should be derived at this stage.

Figure 91. P&amp;L attribution test

	% of desks that fail the test – Abs (E (Unexplained P&L)/Std(Hypo. P&L)) > 0.1	% of desks that fail the test – Var (Unexplained P&L)/Var(Hypo. P&L)>0.2	Total number of desks
Distressed debt	17.6	41.2	17
Domestic cash EQ	14.9	22.4	67
Domestic EQ derivatives	17.3	21.0	81
Domestic interest rates and derivatives	23.1	31.1	225
FX derivatives	19.3	28.4	109
Foreign EQs	30.0	35.0	20
Global structured products	22.4	29.3	58
High grade credit	23.2	28.6	315
High yield credit	28.0	30.0	50
International interest rates and derivatives	23.7	34.8	540
Quantitative EQ strategies	33.3	33.3	21
Spot FX	23.3	35.4	189
Strategic capital	22.5	25.0	80
<b>Total number of desks</b>	<b>403</b>	<b>551</b>	<b>1784</b>

### 3.3.6 Impact of the FRTB by trading activity – Industry feedback

In addition to the quantitative assessment provided above, the EBA has discussed with the industry the implications of the introduction of the FRTB<sup>43</sup> in general, but also for specific business or trading activities.<sup>44</sup> The EBA has also discussed with associations representing small banks the potential implications—both from a capital and operational point of view—that the introduction of the new SBA might have for small and medium firms.<sup>45</sup> Finally, the EBA staff also met with Markit representatives and discussed some of the implications posed by the introduction of the new requirements on the ‘modellability’ of risk factors.<sup>46</sup>

The feedback received from the industry is also presented in this report, though it should be noted that the EBA does not necessarily support the arguments and conclusions provided by the industry.

<sup>43</sup> Ideally, the EBA would have conducted a full consultation; however, considering the short time frame given to the EBA for producing the report, the mandate already noted that it was not expected that the EBA could publicly consult on its findings. However, to the extent possible, the mandate encouraged the EBA to discuss the consequences of the proposals with the EU banking industry.

<sup>44</sup> The Sub Group of Market Risk (SGMR) met with representatives from ISDA/AFME in London on 24 May 2016 and received written feedback on 1 July.

<sup>45</sup> On 21 July, the EBA staff held a conference call with representatives from the Associations of German Public, Cooperative and Saving Banks.

<sup>46</sup> The EBA also discussed with the industry the main FRTB implementation and/or interpretative issues that can be envisaged at this stage.

### a. P&L attribution

One of the main implementation issues raised by the industry relates to the P&L attribution test, which intends to be a detailed and stringent test of P&L capture by the ES risk model. The test applies to all IMA positions grouped by desk (following the FRTB trading desk definition), rather than for a representative type of portfolio.

According to the industry, the implementation of these tests would require several years of testing and systems development. Without significant testing and involvement from technology, risk and business experts, the system may produce spurious results, either obfuscating model failings or leading to false rejections due to data or statistical noise.

As it has been previously mentioned, the QIS data shown above would indicate that, for many activities, the percentage of desks that would fail any of the two validation tests (or both) designed in the framework might exceed 40% (although, due to data quality issues, this conclusion should be considered with due caution).

As an alternative, before the final P&L attribution test is implemented, the industry suggests using other test statistics in place of the variance ratio. In particular, they suggest: testing a longer sampling period than 1 month; testing the ratio of average large<sup>47</sup> hypothetical loss to risk model loss; or testing the variance of standardised hypothetical P&L.<sup>48</sup> They also request that the authorities monitor and understand results before setting thresholds and adopting a desk rejection criterion.

In addition, the industry is concerned that an approach to valuation adjustments based on 'one P&L' would lead to a test that a model that performs perfectly well may not pass. They highlight that adjustments such as CVAs, DVAs and XVAs are subject to another part of the framework, as are valuation uncertainty from pricing models or pricing model limitations. The current practice is generally to not include adjustments for the items above in hypothetical P&L. Accordingly, they would favour capturing pricing uncertainty in the independent price verification process outside the P&L attribution test; this would ensure that the consistency between hypothetical P&L and risk theoretical P&L is maintained, reducing noise and increasing the power of the test.

Other issues relate to data misalignment—for example, time zone basis, which has been identified as one of the key reasons for the potential failure of the P&L attribution test, or the use of contradictory definitions of risk theoretical P&L in Appendix B of the framework text and the glossary.

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<sup>47</sup> This is, the worst 25% of all hypothetical 1-day P&L over a 1-year period and average risk theoretical P&L for the same days.

<sup>48</sup> This is standardised by comparing it with the risk P&L distribution each day.

### b. Stressed correlations under the SBA

According to small firms, the SBA approach of stressing correlations symmetrically works well for directional portfolios; however, in the case of hedged portfolios, it may lead to unduly high capital requirements, setting wrong incentives (as risk hedging would become unattractive).

### c. NMRF impact on liquidity for corporate bonds and small EQ caps

The criteria established in the FRTB for determining whether an instrument is 'modellable' is considered problematic, particularly for the corporate bond and the EQ small cap markets. Based on an industry analysis, only around half of bond issuers would fulfil the requirements for continuously available 'real' prices (i.e. 24 observations per year with a maximum interval of 30 days between two consecutive observations).<sup>49</sup>

The analysis suggests that the 30-day maximum interval between consecutive real price observations is generally the binding constraint, as many markets (particularly in Europe) tend to show seasonal behaviour with limited trading during the summer months or at the end of the year.

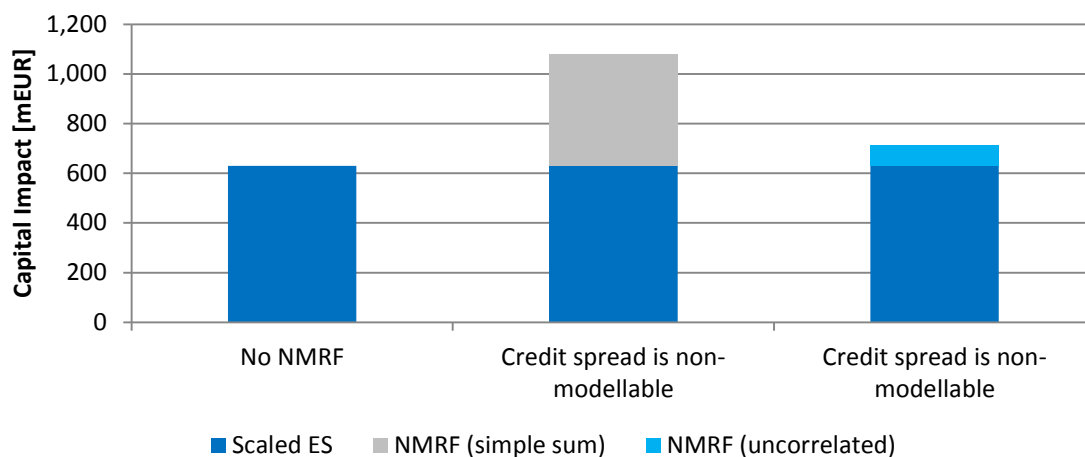
Furthermore, by definition, all new issuances will not exhibit the necessary time series of real prices for the first 12 months post issuance.

The industry ran an analysis for a portfolio of 80 corporate bonds that are components of the ITRAXX 125 (PV: EUR 9.3 bn). The modellable risk of the portfolio amounts to EUR 600 m. Assuming the credit spread risk factors are non-modellable, the industry estimates an additional NMRF add-on of EUR 85 m to EUR 450 m, depending on whether it may be considered that the non-modellable idiosyncratic credit risks are uncorrelated or not.

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<sup>49</sup> CDS and corporate bond volumes and committed quote data from DTCC, TRACE, Euroclear, Trax and ICE were used, covering approximately 10 000 names over a 12-month period.

Figure 92. Impact of capital charge for NMRFs in a bond portfolio



The industry notes that—considering that being classified as NMRF significantly increases capital requirements—these provisions would likely have a negative impact on market-making activities in these bonds, decreasing the overall available liquidity in the European bond market, which would run counter to the Commission’s intention to develop the Capital Markets Union.

The results also illustrate the significance of the aggregation scheme, particularly in cases where the NMRF charge is driven by a large number of idiosyncratic risks, such as the corporate bond market. The final BCBS FRTB aims to address this issue for corporate bonds. However, the industry is concerned that several of the techniques used to demonstrate the appropriateness of the 0 correlation will not be appropriate during a stressed market period. In addition, they consider that allowing only two sub-clusters in the aggregation formula for the idiosyncratic credit risk factors is not realistic, as, in reality, there would be several sub-clusters consisting of risk factors that are not pair-wise correlated to the other risk factors of the pool.

As a result, the industry recommends removing or relaxing the 30-day maximum between consecutive observations in case 24 real prices can be observed and/or exempt new bond issuances from the real price criterion. They also request that ‘alternative methods’ (developed by institutions)<sup>50</sup> to demonstrate that risks are materially not correlated should be allowed, as well as greater flexibility regarding the determination of the sub-clusters for which the 0-correlation aggregation scheme can be used when calculating the sub-cluster capital charge.

Regarding small cap EQs, the industry notes that the uncorrelated aggregation scheme for idiosyncratic credit risks is not allowed for EQ portfolios, while similar methods are commonly used by banks to calculate the risks of these portfolios. While the EQ market is less fragmented compared to the credit market, the observability assessment may be challenging, particularly for small- and medium-sized enterprises (SMEs). This, again, would have a negative impact on the

<sup>50</sup> No indication is given regarding what these alternative methods might consist of.

liquidity that banks are able to provide to these markets and will have a negative impact on the funding costs for these companies.

The industry and particularly data providers such as Markit are also working on data pooling initiatives that would group together data from market transactions from all firms for each relevant risk factor/instrument in order to facilitate their consideration as 'modellable' for MKR purposes. Although it is very early in the process to tell, these requirements may also foster the standardisation of instruments in order to improve their 'modellability'.

#### d. Covered bonds – Standardised treatment

The industry considers the covered bond market a cornerstone of the European fixed income market, characterised by: its double recourse to cover pool and issuer; assets that are ring-fenced; the segregation of the cover pool assets in case of insolvency; a strong legal framework; and supervision.<sup>51</sup> Typically, ratings of covered bonds are much stronger than for senior unsecured debt (up to six notches).

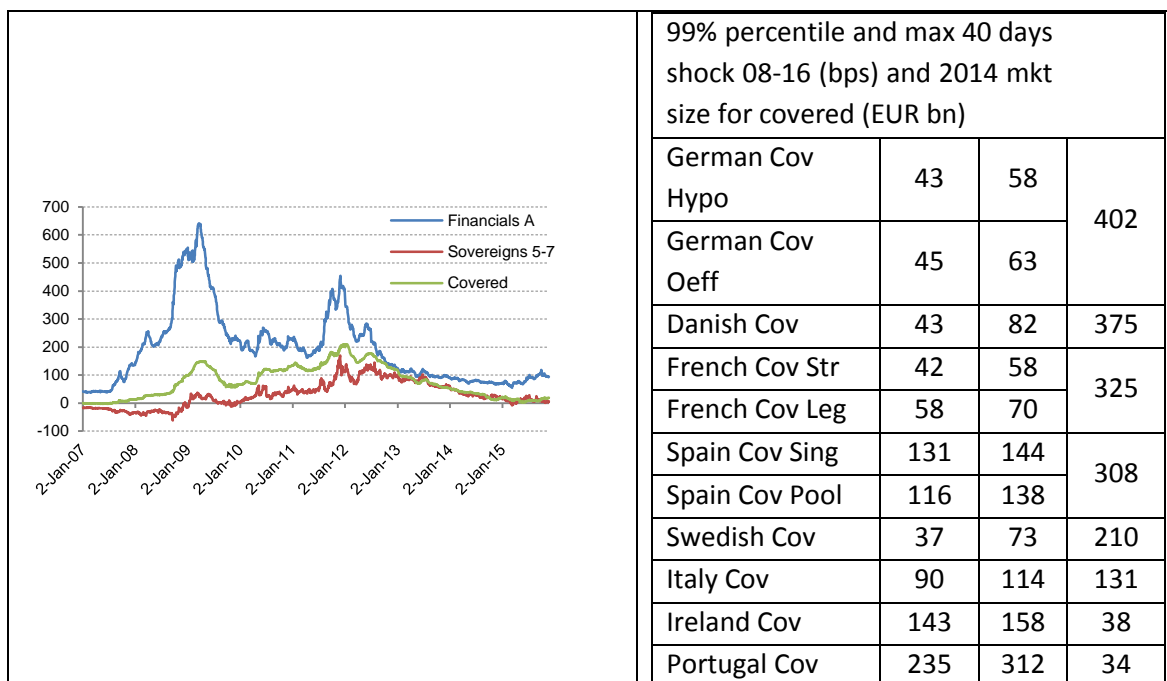
The industry provided an analysis showing that, during the crisis in 2008, spreads remained relatively stable for these mostly AAA-rated structures, with only a couple of peripheral markets experiencing a short period of market volatility. On the other hand, spreads soared for senior financial bonds, leading to a spread increase of up to four times from previous levels. Overall covered bonds are more highly correlated to government guaranteed agency bonds than bonds issued by financial institutions in the way they are trading, and should have a similar risk-weighting treatment.

Hence, the industry strongly believes that the 4% covered bond risk weights under the new SBA is too punitive, and may lead to severe impacts on market liquidity and future issuance of covered bonds. Subsequently, this may lead to changes in the market structure in jurisdictions where covered bonds play an important role in financing the broader economy. Even though this overly conservative metrics only affect the SA, the potential floor between the SBA and the IMA may diffuse the RWA penalty to the IMA.

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<sup>51</sup> The German pfandbriefe and the Danish mortgage bond markets are two of the key Member State specific markets where the covered bond asset class is particularly dominant.

Figure 93. During the crisis, financials were far more volatile than covered or sovereigns



In addition, there appears to be preferential treatment for the covered bonds under the Solvency II rules compared to corporate debt and securitisation, which is not reflected in the new SBA framework.

The EBA members generally share some of the industry’s concerns regarding the calibration of the covered bonds under the new standardised rules. Based on the good market behaviour observed during the crisis and considering the relevance of the covered bond market for the EU as a whole, the calibration under the SBA may be revised.

**e. FX**

The industry notes that the FX market is already undergoing a fundamental change. According to the 2016 Euromoney Survey, global volumes were down by 23% year on year. The industry considers that these trends suggest that regulations are already having an impact on the cost of longer duration hedging products.

The industry is concerned that the FRTB, in conjunction with the revised CVA charges contemplated by the BCBS, will result in further increases in end-user costs and reduce incentives to hedge economic exposures. According to industry data, the SBA would attract approximately 6.2 times more capital than the IMA. This is likely to have a significant impact on FX market liquidity, particularly for non-major currencies.

The industry recommends that the SBA FX shocks are recalibrated back to the July 2015 text level (15%). In addition, the FRTB establishes a shorter horizon—10 days instead of 20—under the IMA



(as well as a differential treatment under the SBA) for liquid currency pairs; however, it does not recognise that some currency pairs implicitly stemming from liquid ones are also liquid. For example, USD/EUR and USD/SEK are both liquid markets; it would, in theory, be possible to trade SEK/EUR via the two liquid USD markets, implying that SEK/EUR should also be liquid. The FRTB ignores this ‘currency triangulation’ rationale and treats most non-EUR European markets as illiquid (SEK, DKK, PLN, etc). The EBA also acknowledges that the SBA does not recognise some EU specificities under the CRR, such as the treatment for Exchange Rate Mechanism (ERM II) currencies as well as for closely correlated currencies.

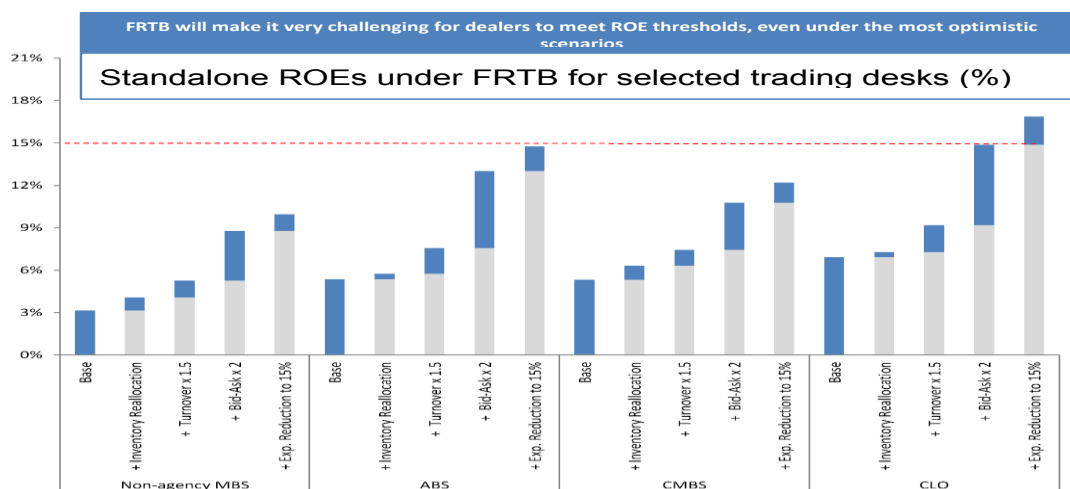
Finally, the industry also notes that the new SBA excludes the currency of emerging markets versus EUR from the lower liquidity horizons, and could thus hinder the flow of capital and increase pricing for FX transactions for these markets.

**f. Securitisation**

The industry appreciates the significant movement that the TBG undertook in order to reduce the capital for securitisations held in the TB. Despite that, however, they are still concerned that it will remain challenging for securitisation trading desks to be profitable. This might hinder the revival of STS securitisation in Europe, a key policy objective of the Commission and a major element of the CMU.

However, the lack of profitability suggested is questionable, as the minimum threshold level (15% of return on equity – ROE) is quite high under the current business circumstances<sup>52</sup> (though the assumptions followed are ‘optimistic’ according to the industry). In addition, the treatment for STS has been recently published by the BCBS and, when incorporated to the FRTB framework, should help to foster this type of securitisation.

Figure 94. Estimated ROE by securitisation desk



<sup>52</sup>The ROEs shown for the different desks are, at a minimum, above 9% and, for Collateralised Loan Obligations (CLOs), it even exceeds 15%.

#### g. Sovereign impact stemming from 3 bps Probability of Default Floor

The industry also expressed concerns that an increased capital requirement for sovereigns would considerably impact the liquidity of the trading of sovereign debt and negatively impact funding costs.

According to their view, the proposed 3 bps PD floor in the DRC is not sufficiently risk sensitive and results in overstated capital requirements for sovereign exposures. Furthermore, a blanket 3 bps PD floor across all sovereigns could create incentive to hold riskier positions in the trading portfolio. They also note that sovereign exposures will be negatively impacted by the increased shocks for interest rates under the SBA, which went up by roughly 50% in the final version of the FRTB text.

### 3.4 Third section of the CfA – Impact of the new SA for EU banks

The CfA mandate asks the EBA to estimate the operational and capital impacts of the implementation of the new SBA, using a representative sample of EU banks currently applying the SA:

- The operational impact – Assessment of the feasibility and potential costs for banks currently using the SA to adapt to the new SA, with special reference to the calculation of sensitivities and the implementation of aggregation methodologies;
- Capital impact – Assessment of the effect in RWAs of the introduction of the new SA compared with the CRR treatment for EU banks using the current SA for MKR for all or most of its exposures.

#### 3.4.1 Operational impact of the implementation of the new SA

As has been previously mentioned, the EBA has engaged with the industry, particularly with representatives of small firms, to discuss the operational impact that the implementation of the new SBA might entail. The main issues flagged by firms include:

- Categorisation of financial instruments – Small firms consider that it is not always clear in which of the FRTB categories certain instruments are placed;
- Availability and use of sensitivities – Firms agree that the use of sensitivities can be taken for granted generally; however, there are some cases where risk management approaches may be based on alternative metrics, so sensitivities might not always be available, particularly for commodity business where the market value of the contracts may be more commonly used. The need to use a look-through approach for funds, indices or index-linked options is also seen as problematic for many small firms;

- Mapping of sensitivities – The maturity bands established in the SA will not correspond, in many cases, to those used for risk management purposes. Small firms consider that the mapping may involve inaccuracies.
- Treatment of back-to-back transactions – No exemption for back-to-back transactions is contemplated, so sensitivities have to be calculated in all cases. This might be burdensome for those firms that operate back-to-back without assuming MKRs, particularly for complex derivatives;
- Treatment of commodities – Some small institutions<sup>53</sup> have noted that the granularity of the required data for commodity risk will impose a considerably larger collection of data than currently required. This will be a challenge for the small cooperative banks. According to these firms, a complete new set-up of IT support would be required<sup>54</sup> (entailing employee training). Additionally, they consider that the differentiation across commodity types proposed is not risk sensible and imply treating the same underlying as if it were different depending on arbitrary factors such as where it has been traded.<sup>55</sup> They also note that it may not be possible to allocate the contracts to the maturity bands provided, as most of the contracts have delivery periods of several months—depending on the harvest time (e.g. ‘Starting of today in 5 to 7 months’).<sup>56</sup>

### 3.4.2 Capital impact of the implementation of the new SA

#### a. Overall impact

The overall capital impact of the new SA is quite significant, certainly more pronounced than for the IMA. According to the data received, the implementation of the new SA would increase capital requirements by 170% for the median bank; on average, the increase is even higher (moving till 183%), though it is reduced to 145% when we ponder the relative importance of each institution by its current market requirements.

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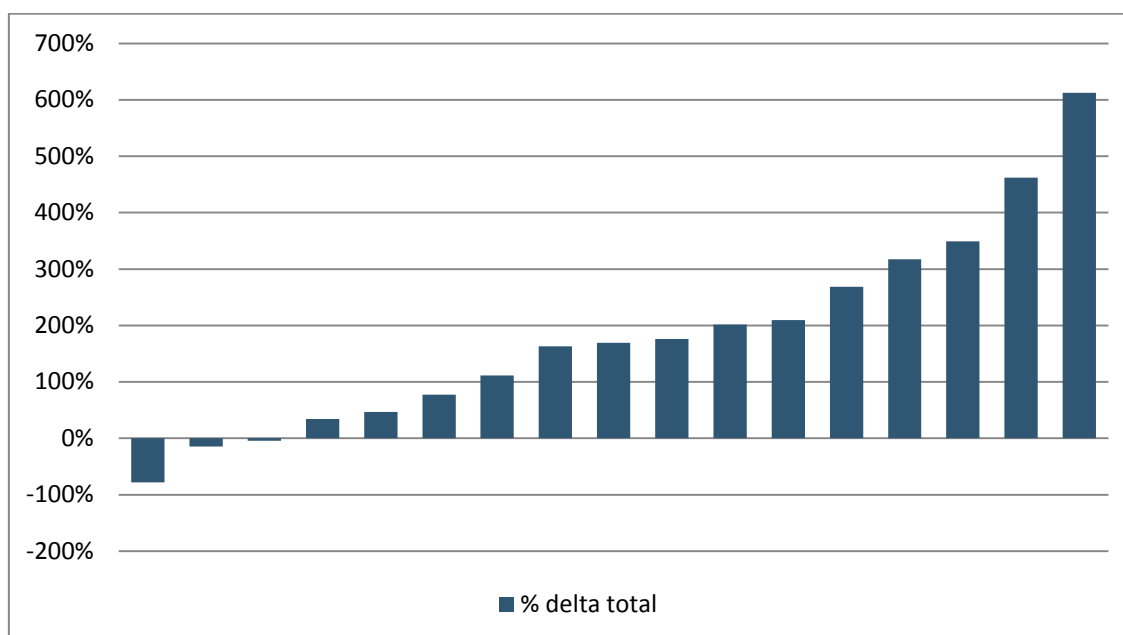
<sup>53</sup> National Association of German Cooperative Banks (BVR).

<sup>54</sup> These firms have had access to a preliminary proposal for the reduced SA currently discussed at the Basel level. They agree with the proposal and consider that the alternative computation is practicable for small firms.

<sup>55</sup> They note that, for example, the market differentiates between ‘feed wheat’ (traded, for example, on the London International Financial Futures and Options Exchange (LIFFE)) and ‘wheat’ (traded, for example, on the Marché à Terme International de France (MATIF)). While, in practice, they would be the same underlying, they may be treated differently.

<sup>56</sup> These small firms also request that the SA should only apply to commodities that are traded on an exchange since, in their view, only for these products there would be a market risk. With regard to others, the main risk would be the distribution risk. However, the current MKR framework includes all commodities in the scope of application of MKR capital charges, regardless of whether they are traded on exchanges or of the accounting treatment. This has not changed under the FRTB.

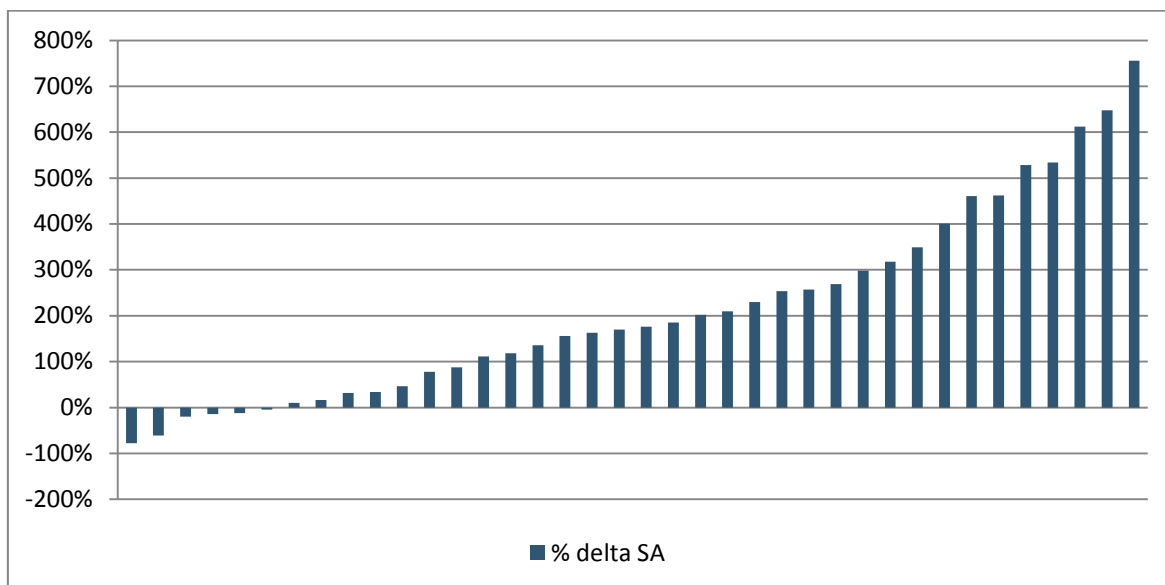
Figure 95. SA-only banks



Percentile	Value
0.25	47%
0.5	170%
0.75	269%
Simple mean	183%
Weighted mean	145%
Count	17

If we also consider the impact of the standardised portfolio provided by those institutions that apply the IMA, the picture is similar for the median bank (an increase of 173% in capital requirements). The average impact is even higher than for pure SA banks (214%); however, the weighted average is significantly lower (117%), which suggests that the impact for the institutions with larger market activities is less significant.

Figure 96. SA desks (SA banks + SA desks of IMA banks)



Percentile	Value
0.25	37%
0.5	173%
0.75	313%
Simple mean	214%
Weighted mean	117%
Count	38

Accordingly, the data indicates that the impact of the introduction of the new SA is quite significant. However, as has been previously mentioned, any conclusions should be considered with due caution, considering the questionable quality of the data received.

In addition, while it is clear that the impact is quite significant, it may also be true that—after the implementation of the so-called Basel 2.5 package,<sup>57</sup> which significantly changed the IMA framework<sup>58</sup> and left the existing SA unchanged—the ‘old’ SA became, in many cases, more advantageous from a capital perspective than the IMA; this situation eliminated any ‘capital incentives’ to develop an internal model.

Finally, it should be noted that this estimated impact does not reflect any ‘corrective’ actions that firms will take to minimise the impact of the implementation of the new framework. It may be generally observed that, when a new framework is introduced, the final impact is less acute than

<sup>57</sup> According to Figure 62, only 24% of the IMA total capital charge comes from the pre-Basel 2.5 VaR. The other 76% stems from capital charges introduced by Basel 2.5.

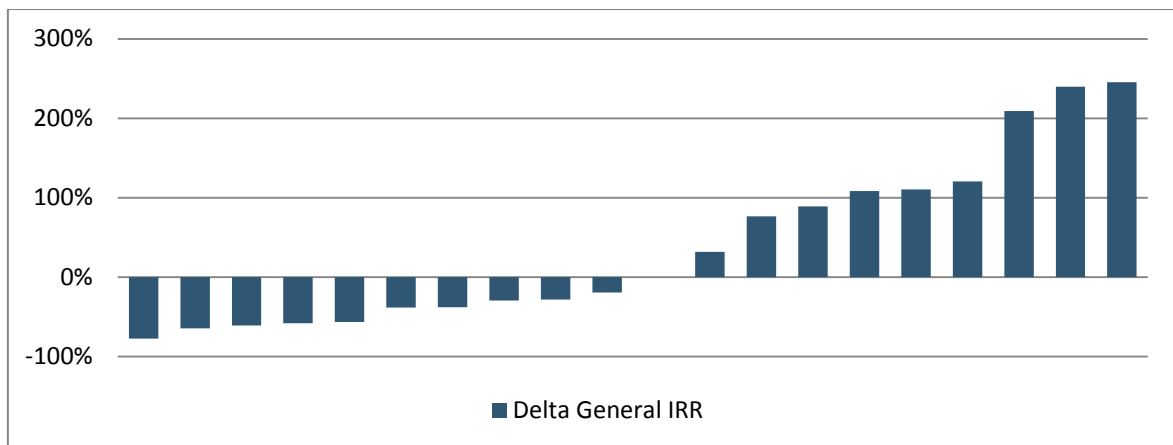
<sup>58</sup> Among other things, Basel 2.5 introduced a capital charge for SVaR and an IRC that were aggregated to the existing VaR charge.

originally anticipated. It may also be worth remembering that market RWAs are generally quite low for SA firms, as shown in Figure 52.

**b. Impact by risk category**

The impact of the new SA for general interest rate risk is not very significant, at least for the median bank. As may be seen below, the result for the median bank even shows a reduction of 10% in capital, though it is also true that an increase above 200% may be observed for three banks. On average, the capital charge increases 38%, but if we weigh the impact by the relative importance of the SA current market charge, a decrease of 6% is observed.

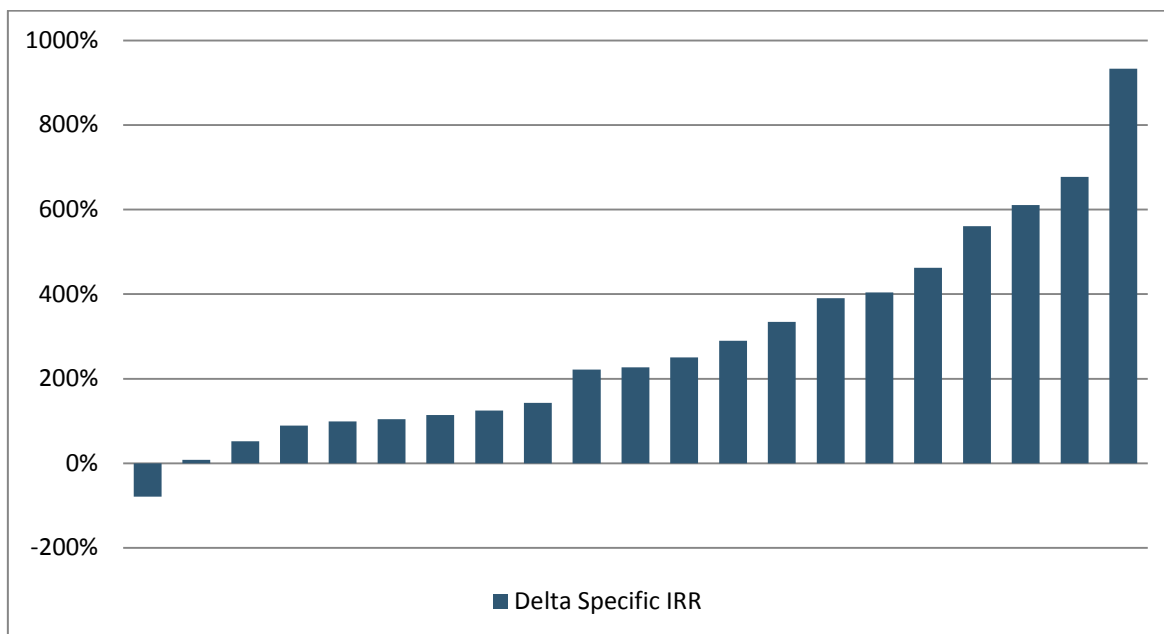
Figure 97. SBA vs current SA – General interest rate risk



Percentile	Value
0.25	-52%
0.50	-10%
0.75	110%
Simple mean	38%
Weighted mean	-6%
Count	20

For specific interest rate, the impact is far more relevant, with the median bank showing an increase of 227% in capital. The impact for the weighted average is very similar (225%), while the mean value is 286%.

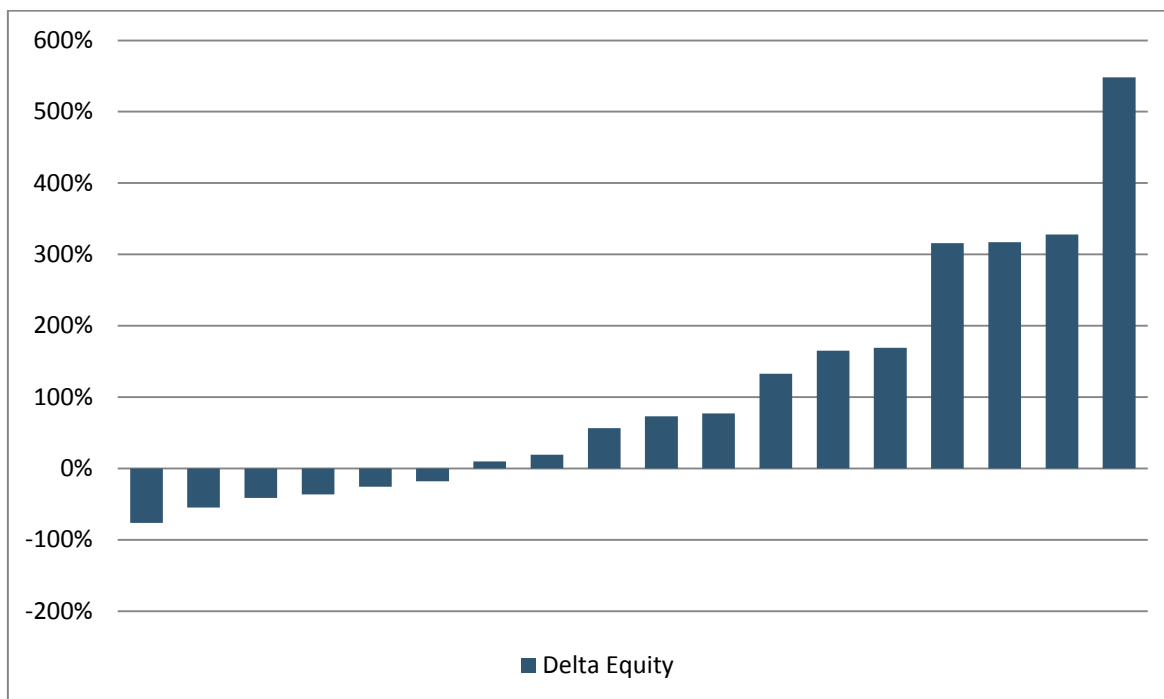
Figure 98. SBA vs current SA – Specific IRR



Percentile	Value
0.25	102%
0.50	227%
0.75	433%
Simple mean	286%
Weighted mean	225%
Count	21

The effect on EQ risk is not that relevant, with the median bank showing an increase of 65%. The simple average increase is larger (109%), while the weighted average impact is much smaller (an increase of just 14%).

Figure 99. SBA vs current SA – EQ

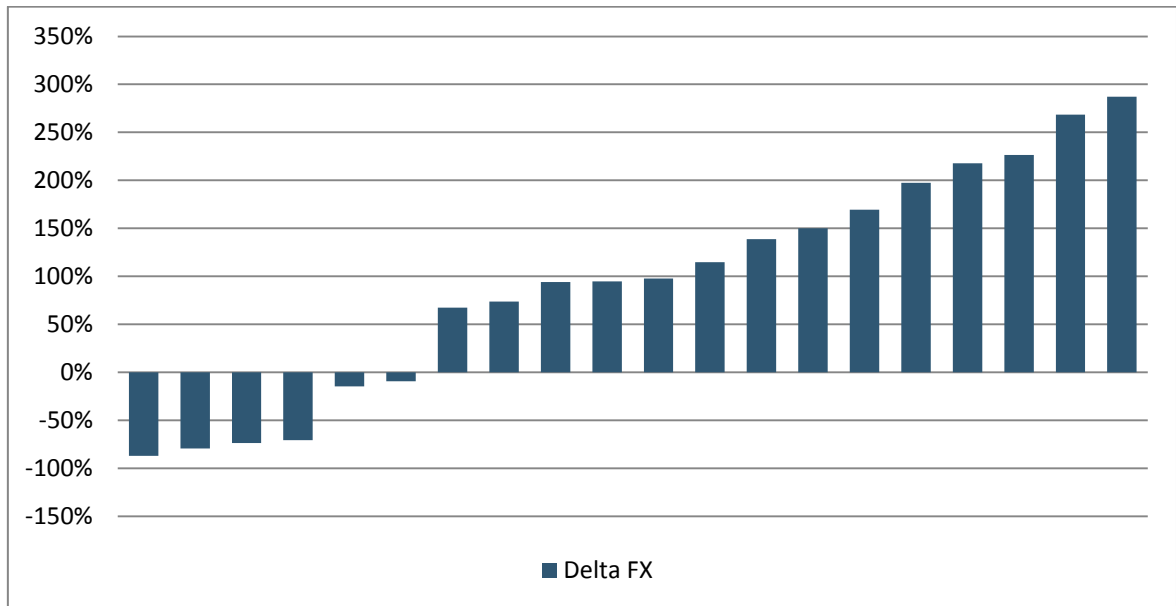


Percentile	Value
0.25	-28%
0.50	65%
0.75	206%
Simple mean	109%
Weighted mean	14%
Count	18

Regarding FX, the impact is negative for six firms but quite significant for the other 14 banks. The increase for the median bank (as well as for the simple average) is close to a 100%, while the increase for the weighted average is a bit less pronounced (76%).



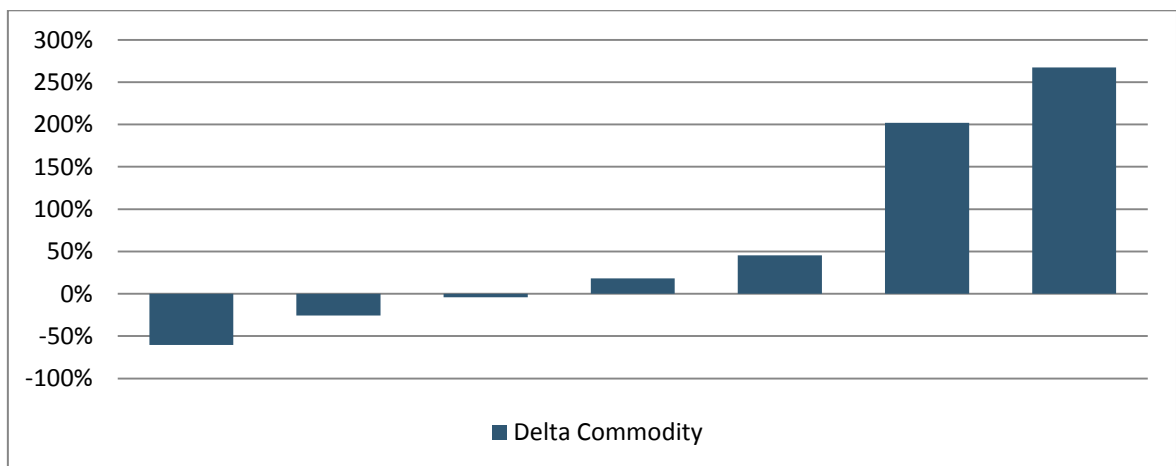
Figure 100. SBA vs current SA – FX



Percentile	Value
0.25	-13%
0.50	96%
0.75	190%
Simple mean	93%
Weighted mean	76%
Count	20

Finally, for commodity risk, the sample is quite limited (just seven institutions). The median bank shows an increase of 18% in capital requirements, while the weighted/simple average impact is around 65%.

Figure 101. SBA vs current SA – Commodities



Percentile	Value
0.25	-26%
0.50	18%
0.75	202%
Simple mean	63%
Weighted mean	67%
Count	7

## 3.5 Fifth section of the CfA – Interpretational issues regarding the revised MKR framework

According to the implementation calendar included in the FRTB text, the new framework should be implemented in jurisdictions' legal frameworks by January 2019, and firms are expected to report under the new standards by the end of the year. However, the industry has already flagged a number of issues that would need to be clarified before the new rule is been fully implemented and, where feasible, incorporated in the transposition into EU regulation.

### 3.5.1 Issues with broken hedges due to uncertainty in maximum loss application

The final rule publication for the FRTB included a limited maximum loss provision,<sup>59</sup> which the industry welcomes:

*'The SA capital charge for an individual cash securitisation position can be capped at the fair value of the transaction.'*

The industry considers that there are two possible interpretations regarding how this provision should be applied. Under the first interpretation, those positions where the total SA capital charge is greater than FV would be excluded from SA capital calculations, with stand-alone capital held equal to FV. The industry is concerned that this approach can lead to increased overall capital, as hedges are broken. The broken hedge position is then capitalised on a one-sided basis in SA capital charges. Accordingly, under this interpretation, risk-reducing hedging activity may actually increase capital charges.

Under the second interpretation, firms would continue to capitalise those positions subject to the maximum loss provision within the SA capital calculations, but limit the capital contribution of such positions to their FV. As these positions remain within the SA aggregation framework, hedges would not be broken and hedging activity will not increase capital.

<sup>59</sup> Paragraph 161.

The industry would obviously prefer the second interpretation and suggests that, where the SA capital charge for an individual cash securitisation position exceeds the market value of that position, the individual components of the SA capital charge should be reduced in the following order, until the SA capital charge for the individual position is equal to its market value:

- 1<sup>st</sup>: Residual Risk Add-on
- 2<sup>nd</sup>: DRC
- 3<sup>rd</sup>: Credit spread risk charge

### 3.5.2 IMA

This section covers technical issues related to ES, NMRF and DRC. P&L attribution, which is a central part of the IMA, has already been discussed in previous sections.

#### a. P&L attribution SR

In relation to the treatment of multifactor models, the FRTB framework allows<sup>60</sup> the use of the actual return of the name without specifying if this covers (i) models calibrated on the specific name or also (ii) models calibrated on a representative pool.

The industry has concerns about a narrow interpretation that would only allow the first possibility, and considers that the calibration on a representative pool is a risk management approach widely used when good-quality market data for each issuer is not available. According to their view, not allowing use of actual returns when models are calibrated on representative pools would likely trigger eligibility test failures across banks that use such a risk management model.

#### b. ES

The industry considers that the main points of clarification required around ES are concerning the following topics:

- Mapping of risk factors to liquidity horizons;
- Backtesting.

The industry considers that the currently provided mappings of risk factors to liquidity horizons<sup>61</sup> are not very granular. As a consequence, the liquidity horizon classification of material risk factors—such as interest basis risk factors, inflation rates, EQ dividends or EQ indices—is not explicitly covered and could give rise to different interpretations across banks.

<sup>60</sup> Page 71, Appendix B-II.

<sup>61</sup> As given on page 55, 181(k).

Another point of uncertainty refers to the capping of liquidity horizons at the maturity of the trade.<sup>62</sup> This could be either interpreted as assigning the next highest liquidity horizon or even introducing a new horizon that matches the trade maturity. The latter, for example, would have a severe impact on the ES calculation due to an increasing number of additional liquidity horizons.

In the context of eligibility for internal models, the industry notes that it is not clear from the FRTB final rules if securitisation hedges should be treated mandatorily under standardised rule.

Regarding backtesting requirements, the exclusion of securitisations from the ES model raises the question of how P&L attribution tests and VaR backtesting should be performed for desks that contain securitisations along with other trades that are neither securitisations nor associated hedges. A straightforward solution would be to exclude all products from the desk that undergo standard rules eligibility. The VaR of this sub-portfolio could then be compared against the actual and hypothetical P&Ls of the desk, where the P&Ls of all positions capitalised under standard rules are removed.

#### c. DRC – IMA

The industry considers that the requirements for DRC under the IMA introduce uncertainty regarding the liquidity horizon for EQ positions. The text refers to a minimum liquidity horizon of 60 days that can be used for EQ sub-portfolios at the discretion of the bank. The concept of sub-portfolio is not defined or used elsewhere in the FRTB text; it would hence be unclear what the scope of the 60-day provision is. It is proposed to resolve this ambiguity by introducing an explicit option for banks to use a 60-day liquidity horizon for EQ positions. Any restriction to the use of this option could have the effect that the same position could be assigned a different liquidity horizon depending on the portfolio/book it belongs to.

The industry also notes that the concept of ‘constant positions’<sup>63</sup> requires further clarification in relation to positions that expire prior to the capital horizon. In these cases, it is not clear if ‘constant position’ has to be interpreted as being replaced by an identical position upon expiry or as not being replaced. It is proposed to resolve this by giving banks the option to model the replacement of expiring positions, as this reflects the running of the trading portfolios. Non-replacement of expiring positions would lead to unmatched hedges between expiry and the liquidity horizon, which does not correspond to the management of TB positions in practice.

#### d. NMRFs

The industry considers that there are some points where clarification should be provided around NMRFs, particularly when they relate to:

- Real price data;

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<sup>62</sup> On page 55, 181(k).

<sup>63</sup> Introduced in paragraph 186 (e).

- Non-modelled risks and NMRFs;
- Idiosyncratic credit risk treatment.

According to the industry, there are no clear definitions or guidelines when a quote can be considered to be 'committed', leading to potentially widely different interpretations between industry participants. Furthermore, the final framework document allows using real price evidence from third-party vendors under the condition that these prices are 'processed' by vendors.<sup>64</sup> The exact meaning of this condition is not clear.

The industry would like to receive confirmation that banks can define and select risk factors for the IMA (ES and NMRFs) in line with paragraph 185. According to their rationale, it should be possible to omit risk factors for IMA purposes after justifying their omission to the satisfaction of the supervisor (e.g. using the results from the eligibility tests). As a result, risks that are not modelled in the IMA will not automatically require an NMRF charge, but banks would be allowed to introduce NMRF charges at their own discretion to increase their risk coverage for better P&L attribution results. These additional NMRF charges may also be calculated for risk factors that are considered modellable according to Section 183c).

### 3.5.3 SBA

This section covers technical issues related to the SBA.

#### a. The application of low, medium and high correlation scenarios and aggregation formulae

The SBA capital charge takes the maximum capital across three correlation scenarios. The industry would like to clarify whether this maximum should be applied (i) after the aggregation of the whole portfolio or (ii) applied to each asset class individually and then summed. The variation in capital between these two cases can be highly material.

In addition, the industry notes that there are issues regarding the application of the low correlation scenarios (which is defined as the medium correlation multiplied by 75%). Basis risk positions—e.g. 3m vs 6m Libor—are correlated at 99.90% in the medium case, but 74.925% in the low correlation case. Clarification is sought on whether basis risk should be exempt from the 75% scalar in the low correlation scenario in order to avoid highly inflated charges for highly correlated positions.

Finally, when aggregating  $K_b$  across buckets, an alternative aggregation formula is applicable if the term under the square root is negative. This can occur simply when computing low, medium and high scenarios on the same set of positions. The industry notes that severe cliff effects have been observed when switching between the two formulae.

<sup>64</sup> As previously mentioned, data providers and institutions are working on this kind of initiative.

## b. The curvature capital calculation

The industry considers that the curvature specification lacks detail on how to proceed when the negative shock scenario causes model failures and/or incoherent market data configurations. This would be particularly pertinent with respect to negative credit spreads, which should be floored at zero.

In addition, the curvature risk weights for the non-securitised credit risk class may be problematic. The text defines the risk weight to be used as the highest prescribed delta risk weight for each risk class; the industry considers this too broad and believes it should say 'risk bucket'. Within rates, the risk weight structure is the same for each bucket; hence, the term 'risk class' is appropriate for rates. However, for credit, using the term 'risk class' implies that the maximum risk weight of 1 200 bp is to be applied to all buckets. According to the industry, this seems overly punitive, particularly for investment grade instruments that receive only a 50-400 bp shock in the delta charge calculation. Instead, they suggest that the curvature risk weight is aligned with the risk weight applicable to each bucket.

Another issue stems from the fact that the curvature charge only applies to instruments subject to optionality. This excludes natural convexity arising from long-dated fixed income instruments—e.g. government bonds and interest rate swaps. The industry requests that a bank should have the flexibility to include non-option products in the curvature calculation if they materially contribute towards the second order sensitivity profile of a portfolio.

Finally, further guidance is required on the decomposition methodology and the risk weights to be applied to options on baskets and indices when computing the curvature (and vega risk) charges.

## c. The FRTB definition of 'optionality'

The industry considers that the FRTB definition of optionality is not sufficiently clear. In particular, clarity is sought on whether option hedges for vega exposure arising from non-option products (e.g. CMS swaps or Quanto swaps) can be included in the vega and curvature charges. If this is not permitted, then material broken hedge situations will often result.

## d. Risk factor definitions and scope

According to the industry, the delta risk factor is defined in a rigid manner. Market practitioners will often use a variety of subtle variations to that specified in the instructions. The industry considers that a bank should have the flexibility to use internal delta measures, which may vary from the exact specification.

Another potential issue stems from the fact that the sticky delta convention should always be applied when calculating delta. According to the industry, this would often be contrary to market convention, and compliance could require significant implementation work. The industry

considers that banks should be able to choose the appropriate sticky delta/strike methodology that best approximates market dynamics.

**e. Treatment of government agency in the non-securitised credit charge**

The industry notes that government agency products without an explicit government guarantee (e.g. Fannie and Freddie MBS bonds) are currently allocated to the 'Financials including government-backed financials' bucket of the non-securitised credit charge, attracting a risk weight of 500 bp. This would be highly punitive when compared to (a) the risk weight attributable to prime investment grade RMBS (90 bp) and (b) the risk weight attributable to local government debt (100 bp). The industry considers that this category of instrument should be bucketed separately with a less punitive risk weight.

**f. Default risk (non-securitised instruments)**

There are concerns about the offsetting of cash EQ positions with derivative exposures. Cash EQ positions can be allocated to a maturity of 3 months or greater than 1 year at firms' discretions. This might result in broken hedges. Furthermore, the restriction solely to cash products would not exist within the IMA, where all EQ exposure within a sub-portfolio can be allocated to the same liquidity horizon.

There would also be a need for further clarity on: (i) how to compute JTD on single name positions that have been decomposed from basket or index positions and (ii) how to compute JTD in the presence of complex payoffs.

Finally, the industry is concerned about the treatment of distressed debt products, including defaulted instruments, which are subject to a default risk weight of 100%. It would therefore follow that the total SBA capital charge, including the (non-default risk) sensitivity-based components, would exceed the market value of the instrument. Furthermore, distressed debt products would be typically price-based and, as such, are not directly suitable for a sensitivity-based calculation. The industry considers that, in this case, the standardised capital charge should be based on the default risk component alone.

**g. The RRAO**

The RRAO is computed on gross derivative notional value. The only exception is when positions are identically equal and opposite, in which case netting can occur. The industry believes that there should be further exceptions in order to avoid broken hedge situations—e.g. hedges to embedded derivatives within exchange-traded products and dividend swaps acting as hedges.

The industry considers that the 1% charge associated with instruments dependent on future unrealised volatility (e.g. variance swaps) is too punitive. Clarity is also sought as to why variance swaps have been explicitly designated exotic risk status.

Finally, the industry argues that, if a collection of tranches within the CTP is economically equivalent to a position in the underlying portfolio that is not subject to the RRAO, then it should

be exempt from the RRAO. It is not necessarily clear within the rules whether this logic can be applied.

#### **h. Securitisations**

The industry considers that the meaning of notional overlap within the context of risk aggregation would not be clear, as it could refer to: (i) the notional value of exposure underlying a particular tranche of a securitisation or (ii) the overlap between the attachment/detachment points of any two tranches. A precise formulaic definition would be required in order to ensure it is uniformly implemented.

The treatment of MBS with stochastic but regular prepayment schedules within vega, curvature and the RRAO is unclear. The industry proposal is that the instruments should be exempt from vega and curvature but subject to the RRAO.

#### **i. The CTP**

According to the industry, the 'liquid two-way market' criterion would be overly restrictive within the FRTB text. The requirement is that all reference entities are single name products for which a liquid two-way market exists; however, it will often be the case that a small subset of names may temporarily fail to meet this criterion, and this should not be the only reason to exempt a securitisation from the CTP. The treatment of non-securitised hedges to the CTP would also be unclear, particularly within the default risk context.

### **3.5.4 TB/BB boundary**

The industry appreciates the efforts to create a more objective and less permeable TB/BB boundary to ensure more consistent capital outcomes across the industry and jurisdictions. In this respect, they understand that regulators want to increase oversight over TB/BB designation and want to ensure that positions are only reassigned across the boundary in rare cases. The industry is concerned, however, about certain aspects of the TB/BB boundary definition and seeks further clarification to ensure a consistent implementation. The main concerns and questions regarding the framework are given below.

#### **a. Conflicting requirements based on mandatory and presumptive lists**

The industry has a number of questions on how the different requirements with respect to the boundary interact with each other, such as:

- Relevance of paragraph 15 with reference to 'unless specifically provided otherwise in this framework' – The industry believes that a position that is in the mandatory BB list of paragraph 15 but is held as a trading asset per accounting should be assigned to the TB, as the TB presumption under paragraph 16(a) should take precedence given the reference to 'unless specifically provided otherwise in this framework' in paragraph 15;



- Relevance of paragraph 13(b), ‘instrument that is managed on a trading desk...’ – The industry is concerned that positions that are ‘best capitalised’ under the BB framework would be included in the TB just because they are held by a trading desk. However, the industry does not provide any detail regarding what ‘best capitalised’ means and it is not clear why positions that are managed on a trading desk should be excluded (in this case, broken hedges do not seem to be an issue). The removal of this requirement would generally allow banks to exclude positions from the TB on an ad hoc basis.

Finally, the industry is seeking overall clarification on which requirements of the presumptive and mandatory lists take precedence in case a position falls into multiple categories listed.

#### b. Treatment of positions where change in status may require TB/BB redesignation

The industry understands that TB/BB redesignations should be rare and, therefore, generally require supervisory approval. In addition, any capital benefits that result from switching would need to be offset by a capital add-on according to paragraph 28. In this context, there are a number of instances where the potential need for redesignation is driven by a change in the status of the position and is unrelated to the bank’s deliberate reassessment of the position’s TB/BB assignment, such as:

- Listing or unlisting of EQ securities in the context of paragraph 15(a);
- Change in net EQ or credit position from short to long and vice versa in the context of paragraph 13(c);

The industry seeks to confirm that such instances of necessary redesignation would not require supervisory approval. Since these redesignations are not driven by the bank’s reassessment, the industry also wants to ensure that a bank does not need to calculate a capital add-on according to paragraph 28 in case there is a capital benefit as a result of the redesignation.

In addition, the industry would like to understand how banks should operationalise the inclusion of net short credit and EQ positions in the TB that otherwise would be in the BB. In particular, the industry wants to understand how frequently banks are expected to calculate net short positions in the BB to determine which positions need to be included in the TB or whether this determination would only be made at the inception of the position.

#### c. Hedges of non-TB positions

The industry notes that banks may hedge BB positions/risks with instruments that generally would belong in the TB—i.e. derivatives. Such derivatives could, for example, hedge the following risks:

- XVA hedges, particularly DVA and uncollateralised FVA hedges;
- Single name CDS/CDS index hedges of BB loan exposures;

- Interest rate hedges of BB exposures.

With respect to DVA, the argument is that the DVA component of the FV should be excluded from the P&L as per footnote 44 of the rule text. Similarly, uncollateralised FVA relates to the bank's funding cost, which is not a risk factor that would generally be captured by MKR.

The industry seeks to confirm that these types of hedges can be considered BB positions as long as they do not represent net short credit or EQ exposures and are considered effective by the bank in mitigating these non-trading related risks.

#### d. EQ mutual funds TB/BB designation

Paragraph 15(e) requires a bank to include funds in the BB in case it:

- Cannot look through them daily; or
- Cannot obtain daily real prices of the funds.

In the example of a fund where the bank cannot look through (i.e. first condition is not met) but has daily real prices for the investment (i.e. second condition is met), the 'or' condition means that this fund needs to be assigned to the BB.

The industry does not think that this is the intended classification, as this would inadvertently scope market-making activity into the BB, where funds are held for the purposes of hedging client facing trades. In particular, daily liquidity UCITS Mutual Funds, for which daily pricing is available, would be caught by paragraph 15(e) as currently drafted.

The industry recommends that the 'or' condition should be replaced by an 'and' condition such that only funds for which neither a look through can be performed nor daily real prices are available must be assigned to the BB. Furthermore, they think that paragraph 69(b) should be consistent with this interpretation of paragraph 15(e).

## 3.6 Conclusion

With regard to the overview of EU trading instruments and current market capital charges, the importance of market RWAs appears to be far larger for the EBA sample than for smaller banks. MKR RWAs (SA and IMA), including CVA, amount to approximately 8.5% of total RWAs for large firms, while for the small banks sample, MKR RWAs (including CVA) amount to just below 2% of total RWAs. As expected, IMA banks generally show a larger share of RWAs stemming from TB activities, though a significant part stems from portfolios that remain under standardised rules.

Regarding the composition of market RWAs under the SA, position risk is very significant and far greater than FX and commodity risk for the EBA sample. However, the composition of market RWAs is very different for the small banks sample, where FX is, by far, the largest risk exposure (with 79% of total market RWAs). The relative large size of FX RWAs would, in most case, be due to BB activities and not because these small banks have great FX risk in the TB.

Finally, for banks using the IMA, the SVaR capital charge constitutes the most significant share (53%) of total market RWAs, followed by VaR (24%), IRC (20%) and CTP (3%).

With regard to the mandate of the CfA requesting the EBA to reassess the derogation for small TB business, the EBA considers that—based on the quantitative analysis conducted—a threshold level of EUR 50 m is appropriate. This level would ensure that most institutions from the small banks sample are eligible to apply the derogation, while—at the same time—limiting the impact in terms of lost RWAs from applying the derogation. Accordingly, the EBA considers that this level would be adequate for the purpose of introducing a greater degree of proportionality for small TB banks, as well as consistent with the assumption that the business model for these small institutions tends to be primarily focused on BB activities.

However, as the impact of establishing a relative threshold of 5% in addition to the absolute threshold (as currently required in Article 94 of the CRR) seems to be non-material for most threshold definitions and levels, the EBA considers that a relative threshold would have limited added value.

At the same time, the analysis has shown that there is a clear need for further information with respect to the computation of the threshold by institutions. Accordingly, the EBA recommends that COREP reporting templates should be expanded to include relevant reporting for banks that apply, or intend to apply, the derogation. At a minimum, this would entail more information on the actual mapping between banks' trading instruments and activities from regulatory and accounting perspectives.

#### **EBA recommendation on a threshold for small TB business**

The EBA recommends keeping a threshold for small TB business, below which institutions are able to use the non-trading book approach for the computation of capital requirements. In any case, the EBA considers that institutions below the threshold should not be exempt from capital requirements.

The threshold should be applicable in the case of position risk only. Institutions would still be required to compute FX and commodity capital requirements for BB and TB according to the corresponding provisions in the relevant sections.

Considering the still material divergences in terms of accounting across EU Member States, the EBA recommends the definition of a threshold in terms of **the sum of the absolute market value of an institution's long positions and short positions in EQ and debt instruments included in its TB (i.e. subject to position risk)**. The computation of the threshold would be a mandatory field for all institutions in COREP. In addition to the computation of the threshold, information on the FV of derivative and non-derivative positions in the regulatory TB would be inserted in COREP for supervisors to be able to perform consistency checks.

To ensure a holistic view of institutions' TB business, information on TB positions could be mapped onto FINREP information on the market value of trading and held for trading assets and liabilities, as well as the market value of off-balance-sheet derivative instruments when derivative instruments are off-balance-sheet according to the relevant national GAAP. This mapping could also include other relevant FINREP information on assets in the regulatory TB, such as information on financial assets and liabilities designated at FV through P&L or measured at FV through other comprehensive income. A single COREP template could be used for the information on small TB business, the threshold for small derivative business, and the threshold for prudent valuation purposes, as all of them need to be checked against accounting data.

With regard to the level of the threshold, the EBA recommends the definition of a relatively low threshold level of **EUR 50 m** as evidenced in the report. Were a low absolute threshold level defined such as EUR 50 m, a relative threshold would probably have a limited added value.

In addition, with regard to the general mandate of the two calls for advice, the EBA considers that there is room to increase the proportionality of regulation in general, which is (of course) particularly relevant in the context of the implementation of the new Basel standards. Whereas the development and calibration of the international standards primarily focus on large internationally active institutions, it is worth highlighting that the vast majority of institutions in the EU are small- and medium-sized banks that generally apply the SAs developed in Basel and have not been generally involved in the rulemaking process.

In this regard, it is worth remembering that one of the key developments that the FRTB will introduce once implemented will be a new, more risk-based and, inevitably, more complex SA. Adding this complexity to the framework was unavoidable, as the 'old' SA was not suited for many internal model portfolios, and one of the key objectives of the new SA is that it has to work as a credible fallback for the internal model. Regarding the new counterparty risk framework, the changes also only affect the SA, leaving the IMM completely unchanged. Of course, implementing new and complex SAs is going to impose considerable burden on the small and medium firms that currently apply them to calculate their RWAs.

Accordingly, in addition to specifically assessing the relevance of maintaining or increasing the current thresholds applied for the small TB business derogation, the EBA has also considered additional proportionality solutions, which could include (for both CCR and MKR purposes) the definition of higher thresholds below which SAs that are simpler and more conservative than the ones developed in Basel could be applied for smaller banks not included in the scope of the Basel standards.

In particular, for MKR, the current SA could be kept for institutions that fall between the threshold of EUR 50 m proposed and the higher threshold to be defined. This should, however, be subject to appropriate recalibration.

Indeed, the final calibration of the FRTB shows that banks would see a small increase in the capital charges for the IMA, with the median bank showing a 7% increase in capital when

compared to the current MKR internal model framework. However, the overall capital impact of the new SA is quite significant (certainly more pronounced than the impact for the IMA). According to the data received, the implementation of the new SA would increase capital requirements by 170% for the median bank (i.e. 2.7 times the current SA). It is clear that—after the implementation of the so-called Basel 2.5 package, which, among other elements, introduced an IRC and a capital charge for SVaR—the ‘old’ SA became, in many cases, more advantageous from a capital perspective than the IMA. This situation eliminated any of the previous capital incentives for which firms would have had to request modelling permission. The substantial increase in capital requirements under the SA can be considered as contributing to reverting this situation back to ‘normal’. In any case, it seems that any continuation of the existing standardised methodologies would only be acceptable subject to appropriate recalibration.

#### **EBA recommendation for consideration of additional proportionality solutions**

Whereas the calls for advice requested the EBA to essentially reassess the small TB business derogation, including with regard to the use of the OEM, the EBA recommends the consideration of additional proportionality solutions that could include—for both CCR and MKR purposes—the definition of higher thresholds below which SAs that are simpler and more conservative than the ones developed in Basel could be applied for smaller banks not included in the scope of the Basel standards.

The additional thresholds should broadly be consistent in terms of definition with the one proposed in this report, as well as subject to reporting under COREP.

In particular, for MKR, the current SA (subject to appropriate recalibration) could be kept for institutions that fall between the threshold of EUR 50 m proposed and the higher threshold to be defined. Although being broadly consistent with the threshold of EUR 50 m, this second threshold would need to consider all financial instruments subject to market capital requirements, including those subject to FX and commodity risks.

For CCR, either a conservative, simplified version of SA-CCR or the current MtM method (subject to appropriate recalibration) could be used by institutions falling between the threshold of EUR 20 m proposed in Recommendation 1 and the higher threshold to be defined.

The use of these approaches would be reassessed in light of international regulatory developments.

## 4. Annex 1 – Relevant CRR articles related to the derogation

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### Article 94 – Derogation for small trading book business

#### *Article 94*

#### *Derogation for small trading book business*

1. Institutions may replace the capital requirement referred to in *point (b) of Article 92(3)* by a capital requirement calculated in accordance with point (a) of that paragraph in respect of their trading-book business, provided that the size of their on- and off-balance sheet trading-book business meets *both* the following conditions:

- (a) is normally less than 5 % of the total assets and €15 million;
- (b) never exceeds 6 % of total assets and €20 million.

2. In calculating the size of on- and off-balance sheet business, institutions shall apply the following:

- (a) debt instruments shall be valued at their market prices or their nominal values, equities at their market prices and derivatives according to the nominal or market values of the instruments underlying them;
- (b) the absolute value of long positions shall be summed with the absolute value of short positions.

3. Where an institution fails to meet the condition in point (b) of paragraph 1 it shall immediately notify the competent authority. If, following assessment by the competent authority, the competent authority determines and notifies the institution that the requirement in point (a) of paragraph 1 is not met, the institution shall cease to make use of paragraph 1 from the next reporting date.

### Article 92(3) – Points b and c

(b) the own funds requirements, determined in accordance with Title IV of this Part or Part Four, as applicable, for the trading-book business of an institution, for the following:

- (i) position risk;
- (ii) large exposures exceeding the limits specified in Articles 395 to 401, to the extent an institution is permitted to exceed those limits;

(c) the own funds requirements determined in accordance with Title IV or Title V *with the exception of Article 379*, as applicable, for the following:

- (i) foreign-exchange risk;

- (ii) settlement risk;
- (iii) commodities risk;

### **Specific and general risks**

*Article 362*  
*Specific and general risks*

Position risk on a traded debt instrument or equity instrument or derivative thereof may be divided into two components for purposes of this Chapter. The first shall be its specific risk component and shall encompass the risk of a price change in the instrument concerned due to factors related to its issuer or, in the case of a derivative, the issuer of the underlying instrument. The general risk component shall encompass the risk of a price change in the instrument due in the case of a traded debt instrument or debt derivative to a change in the level of interest rates or in the case of an equity or equity derivative to a broad equity-market movement unrelated to any specific attributes of individual securities.

### **Independent derogation for FX**

*Article 351*  
*De minimis and weighting for foreign exchange risk*

If the sum of an institution's overall net foreign-exchange position and its net gold position, calculated in accordance with the procedure set out in Article 352, including for any foreign exchange and gold positions for which own funds requirements are calculated using an internal model, exceeds 2 % of its total own funds, the institution shall calculate an own funds requirement for foreign exchange risk. The own funds requirement for foreign exchange risk shall be the sum of its overall net foreign-exchange position and its net gold position in the reporting currency, multiplied by 8 %.

### **No derogation for commodities – Specific treatment for firms with ancillary commodity business**

*Article 356*  
*Ancillary commodities business*

1. Institutions with ancillary agricultural commodities business may determine the own funds requirements for their physical commodity stock at the end of each year for the following year where all of the following conditions are met:

- (a) at any time of the year it holds own funds for this risk which are not lower than the average own funds requirement for that risk estimated on a conservative basis for the coming year;
  - (b) it estimates on a conservative basis the expected volatility for the figure calculated under point (a);
  - (c) its average own funds requirement for this risk does not exceed 5 % of its own funds or EUR 1 million and, taking into account the volatility estimated in accordance with (b), the expected peak own funds requirements do not exceed 6.5 % of its own funds;
  - (d) the institution monitors on an ongoing basis whether the estimates carried out under points (a) and (b) still reflect the reality.
2. Institutions shall notify to the competent authorities the use they make of the option provided in paragraph 1.



## 5. Annex 2 – Impact analysis of the limited sample

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As described in the report, the composition of market RWAs and the impact of the derogation have also been analysed for an alternative limited sample of banks mirroring the analysis conducted in the main body of the report. The limited sample contains only those banks that have non-zero position risk. The intention is to ‘filter out’ those banks that are likely to be applying the derogation.<sup>65</sup> Sorting these banks out decreases the size of the sample significantly, changing the composition of RWAs within the defined threshold levels and leading to a higher impact in terms of lost RWAs from applying the derogation. As explained in the report, this is due to the fact that the limited sample only includes banks with a higher proportion of position risk. It is important to highlight once again that, while this analysis contains useful information, the impact figures should be interpreted with caution due to the following reasons:

- The analysis provides only a worst-case scenario in terms of lost RWAs for banks that potentially will be able to apply the derogation depending on the final definition/level of the threshold;
- Some of those banks would not be actually applying the derogation, but, in fact, have no trading exposures. Thus, from a methodological perspective, they should have been reintegrated in the analysis;<sup>66</sup>
- The analysis cannot consider the use of Pillar 2 to capitalise those risks currently not covered in Pillar 1, such as general interest rate in this case.

### Composition of market RWAs under the different levels of the established thresholds

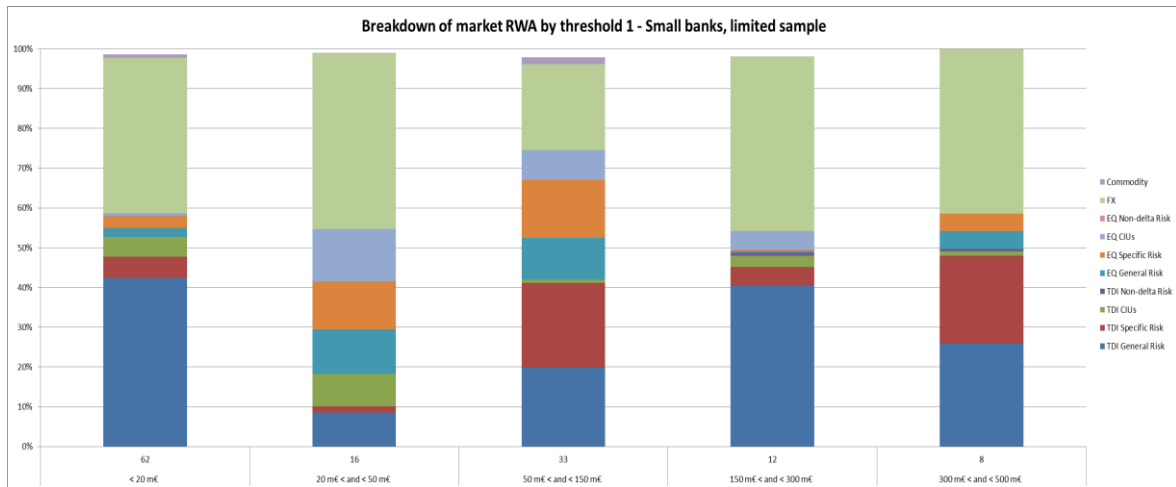
Looking at the limited sample, we see that the number of banks included in the analysis decreases significantly to 131 after sorting out those banks that can be assumed to currently apply the derogation (i.e. reporting zero EQ and TDI RWAs). Clearly, for this sample, especially TDI GR and TDI SR are more material, meaning that the impact of applying the derogation for this sample would expectably be a higher loss of OFRs for MKR.

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<sup>65</sup> To establish the limited sample, all banks that report zero EQ and TDI RWAs have been removed from the full sample.

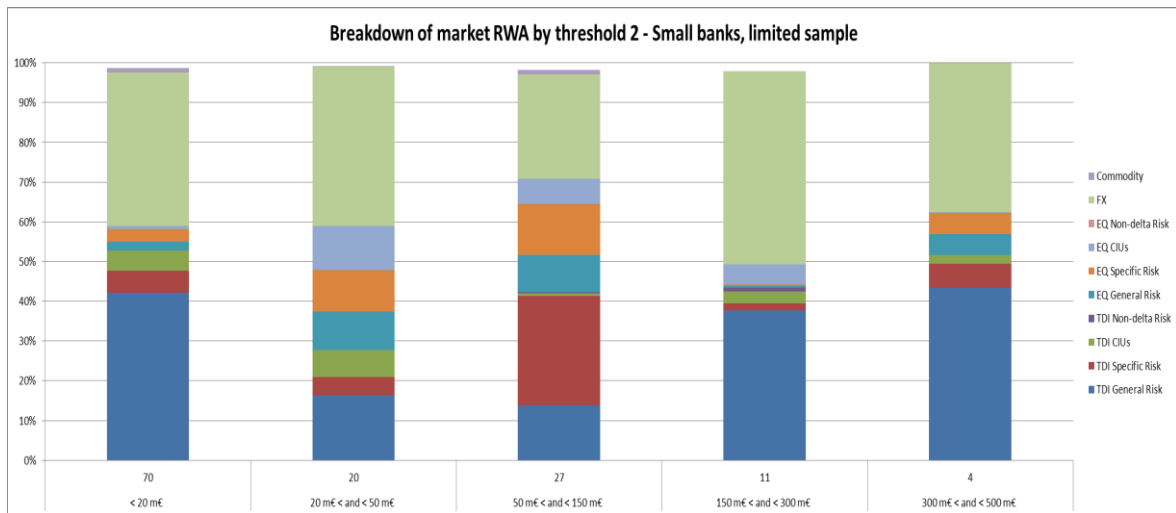
<sup>66</sup> This was, however, not possible because current reporting in COREP/FINREP does contain the information necessary to separate banks that apply the derogation from banks that have zero position risk.

Composition of market RWAs by selected levels under threshold 1, limited sample



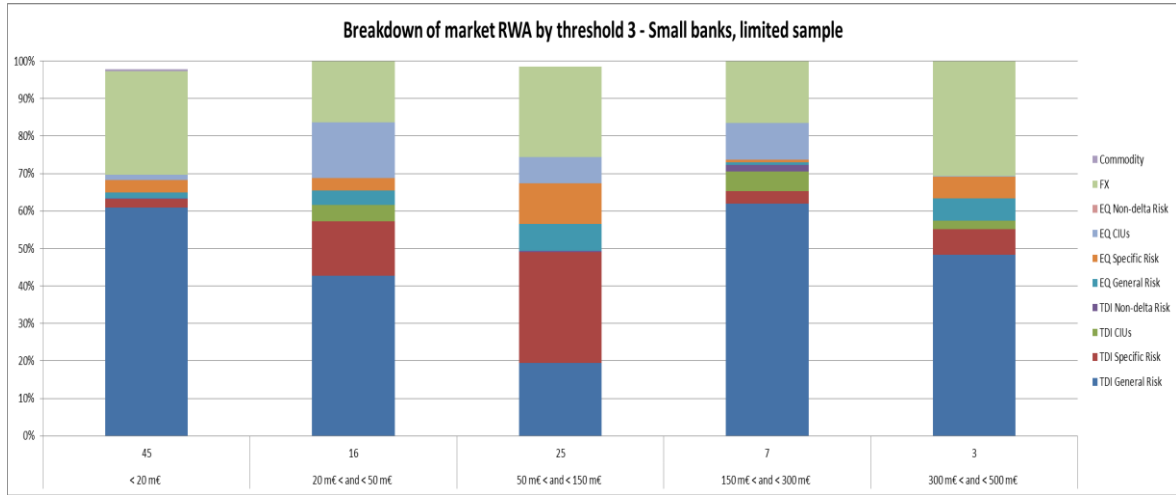
Looking at the limited sample, we see that the number of banks included in the analysis decreases significantly to 131. Again, for this sample, especially TDI GR and TDI SR are more material, meaning that the impact of applying the derogation for this sample would expectably be a higher loss of OFRs for MKR.

Composition of market RWAs by selected levels under threshold 1, limited sample



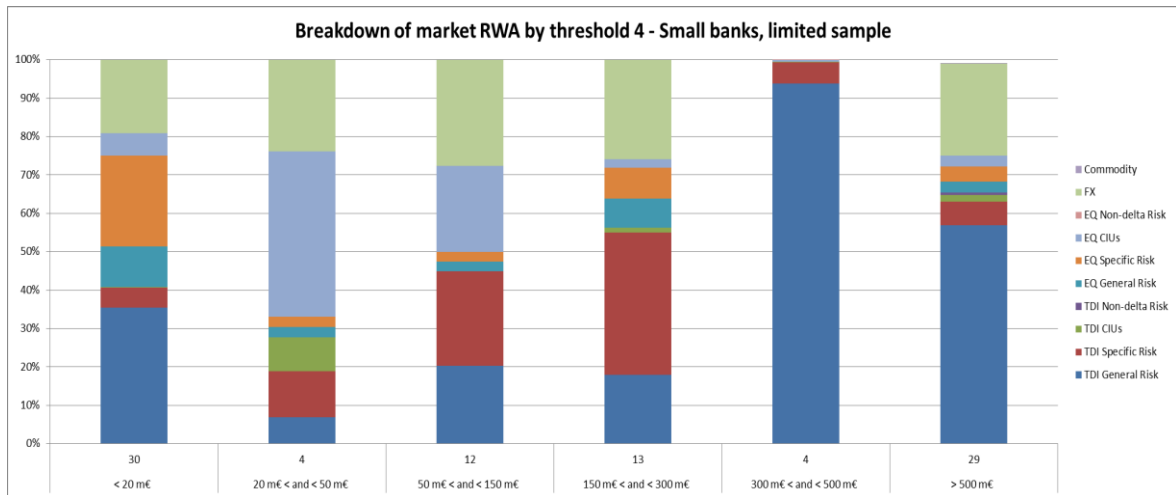
Looking at the limited sample, we see that the number of banks included in the analysis decreases to 96. Here, TDI GR is also the largest exposure for level 1. Overall, FX is the second largest exposure followed by TDI SR. Again, this would imply that the impact of applying the derogation for this sample would expectably lead to a higher loss of OFRs for MKR.

Composition of market RWAs by selected levels under threshold 3, limited sample



Looking at the limited sample, we see that the number of banks included in the analysis decreases to 92. For this sample, TDI GR, TDI SR and FX are the most material risks, but all risks except non-delta risks seem notable. This composition of risks would also imply that the impact of applying the derogation for this sample would expectably be a material loss of OFRs for MKR.

Composition of market RWAs by selected levels under threshold 4, limited sample



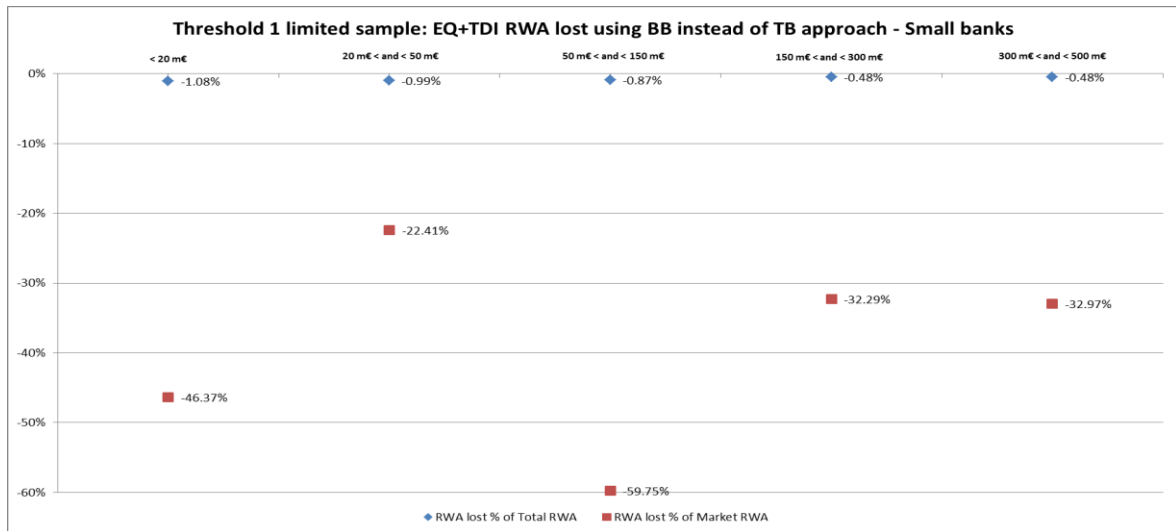
Regarding the limited samples of banks, it is clear that TDI and EQ position risks are more material parts of the total RWAs compared with the full sample of banks. Recalling that the limited sample of banks constitutes those banks that (out of the full sample) reported non-zero exposure from position risk, it is not surprising that this is the case. FX is still a main risk exposure in most cases, but TDI GR, TDI SR, EQ SR and EQ CIU exposure constitute a far greater part of total RWAs compared to the full sample, indicating that the impact of applying the derogation is greater for the limited sample compared to the full sample of banks.

## Impact on OFRs for EQ and debt positions relative to market RWAs and total RWAs from applying the different thresholds

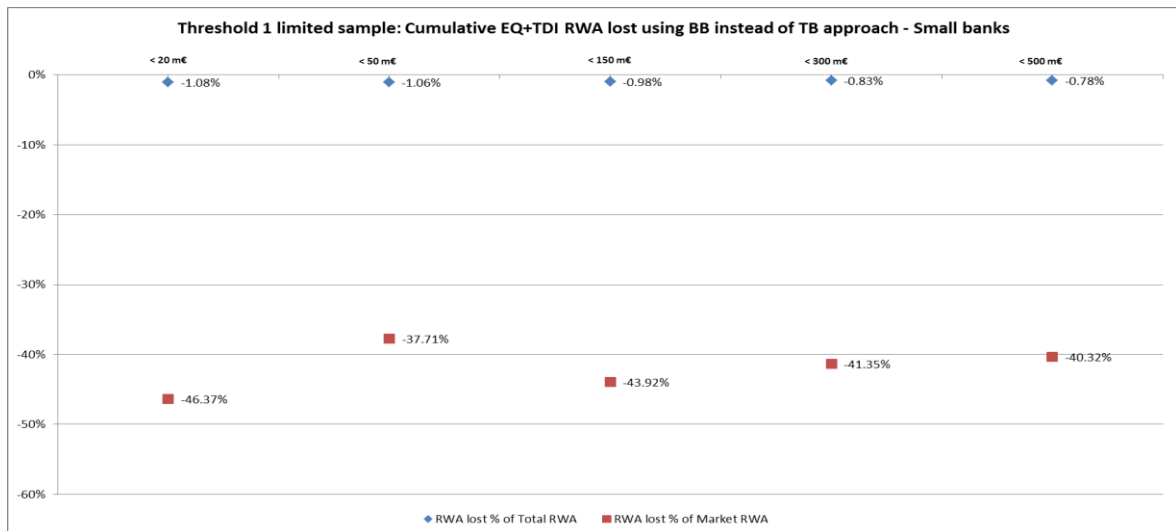
### Threshold 1 limited sample

When looking at the limited sample, the impact of applying the derogation is more material, although it varies quite a bit between the different levels. This is in line with what we expected when looking at the composition of MKR exposures for the limited sample of banks, where position risk is more substantial. The cumulative impact is also high and around 40%.

Impact relative to market RWAs and total RWAs under threshold 1 limited sample of applying the BB approach to EQ and debt positions



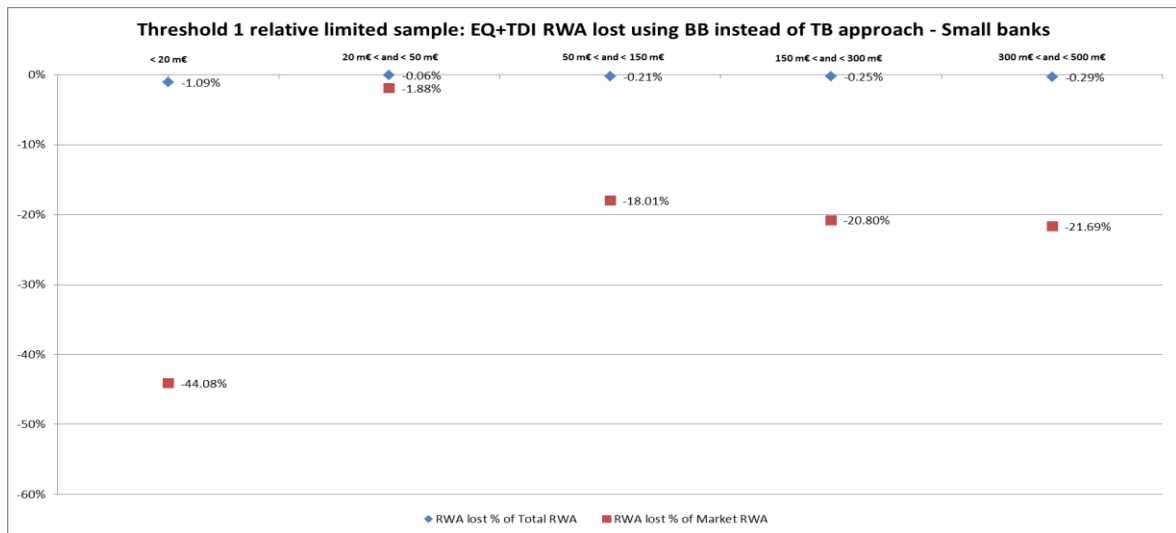
Cumulative impact relative to market RWAs and total RWAs under threshold 1 limited sample of applying the BB approach to EQ and debt positions



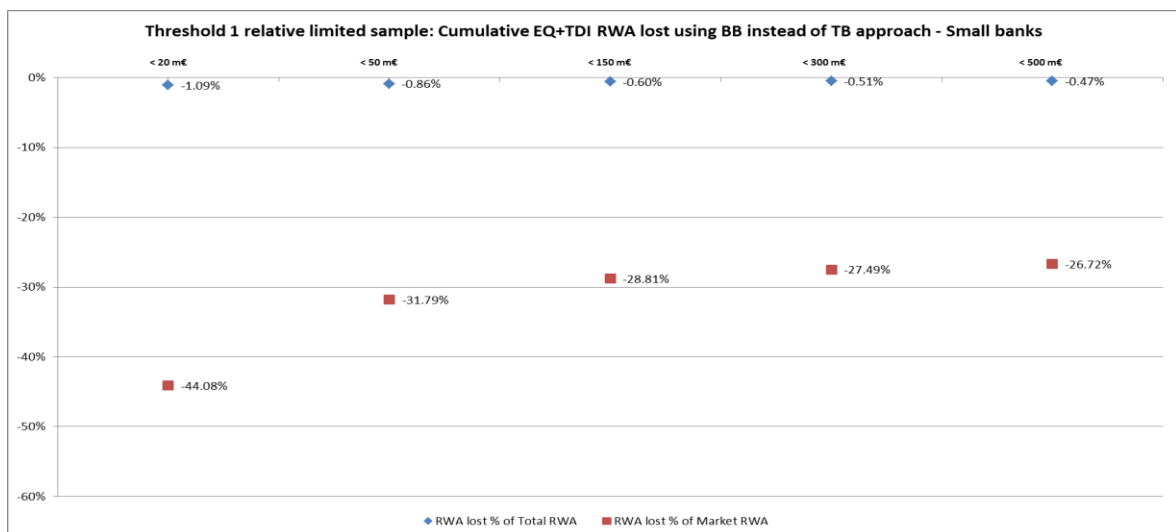
### Threshold 1 relative, limited sample

Looking at the impact of adding an additional relative threshold of 5% on top of threshold 1 for the limited sample, we see that the impact is notable for all levels (except level 1), decreasing the RWAs lost significantly compared to the impact without the relative threshold. There are 26 banks that are above the 5% threshold, meaning that this threshold level would imply that 22.81% of the limited sample of banks would not be able to apply the derogation even if the absolute level was set at its highest (EUR 500 m). Cumulatively, the impact is also notable, decreasing the impact below 30%.

### Impact relative to market RWAs and total RWAs under relative threshold 1 limited sample of applying the BB approach to EQ and debt positions



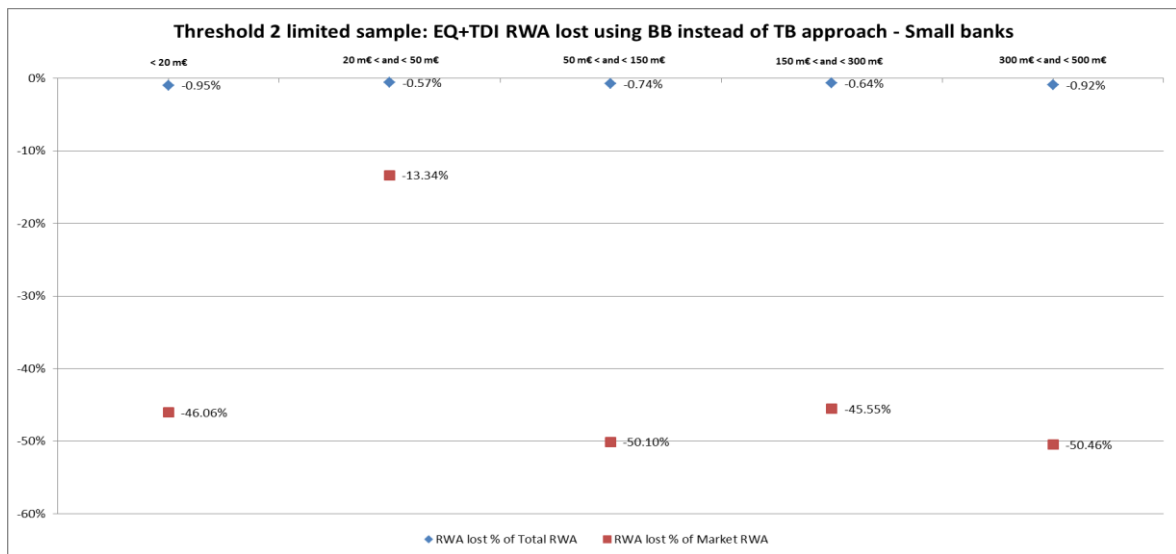
### Cumulative impact relative to market RWAs and total RWAs under relative threshold 1 limited sample of applying the BB approach to EQ and debt positions



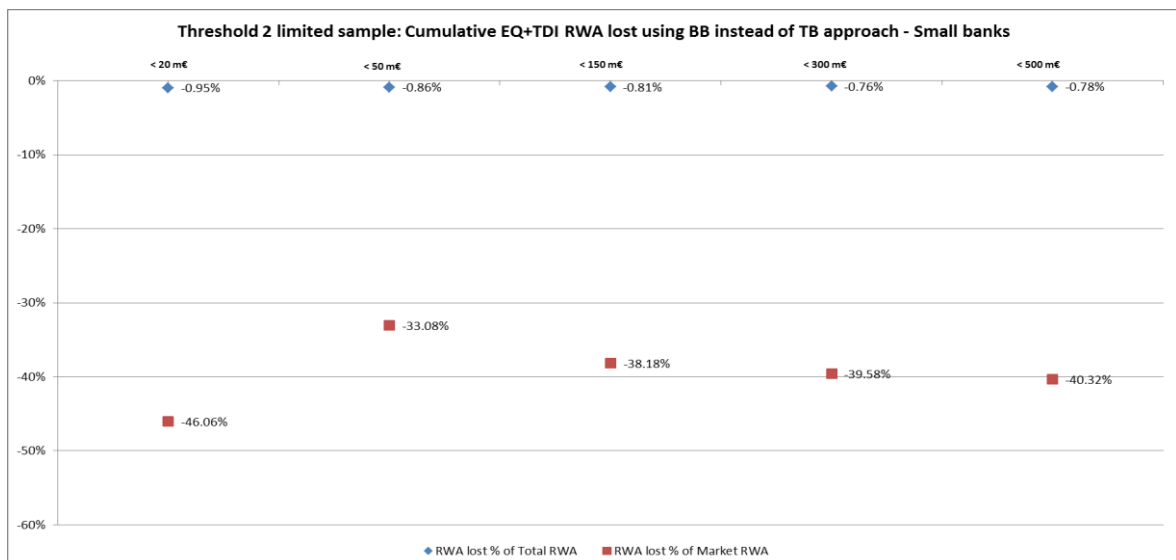
### Threshold 2 limited sample

When looking at the limited sample, the impact of applying the derogation is more material (especially for level 1 and level 3). Cumulatively, the impact is also much higher and around 40%. This also corresponds well with the chart showing the composition of market RWAs for the banks included in the analysis of this threshold.

#### Impact relative to market RWAs and total RWAs under threshold 2 limited sample of applying the BB approach to EQ and debt positions



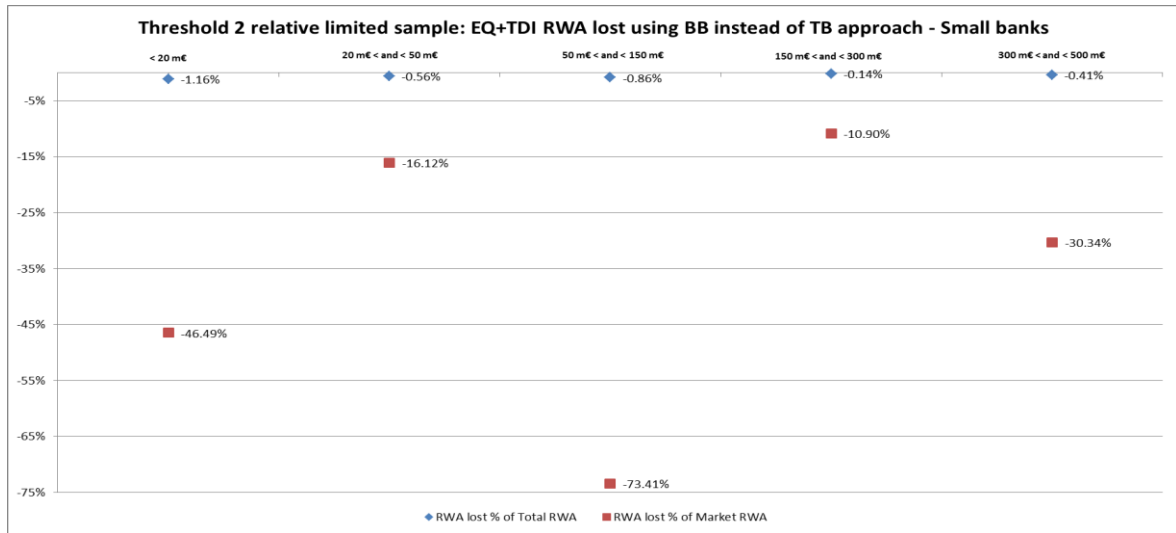
#### Cumulative impact relative to market RWAs and total RWAs under threshold 2 limited sample of applying the BB approach to EQ and debt positions



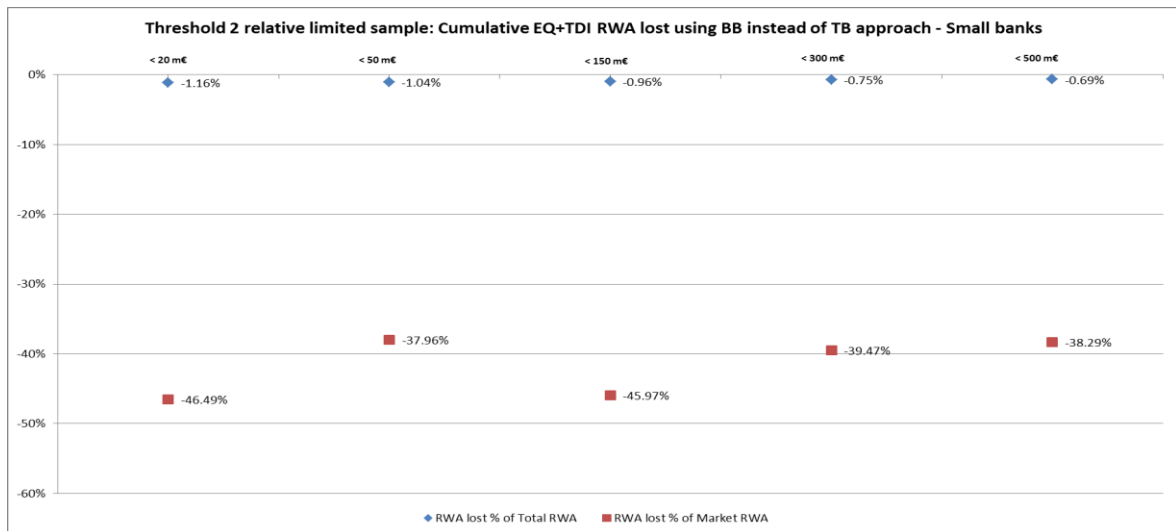
### Threshold 2 relative, limited sample

If we look at the impact of adding an additional relative threshold of 5% on top of threshold 2 for the limited sample, we see that the impact is notable for level 3 (where the figure increases) and for levels 4 and 5 (where the figures decrease) compared to the impact without the relative threshold. There are 20 banks that are above the 5% threshold, meaning that this threshold level would imply that approximately 17.54% of the limited sample of banks would not be able to apply the derogation even if the absolute level was set at its highest (EUR 500 m). Cumulatively, the impact is not significantly different.

### Impact relative to market RWAs and total RWAs under relative threshold 2 limited sample of applying the BB approach to EQ and debt positions



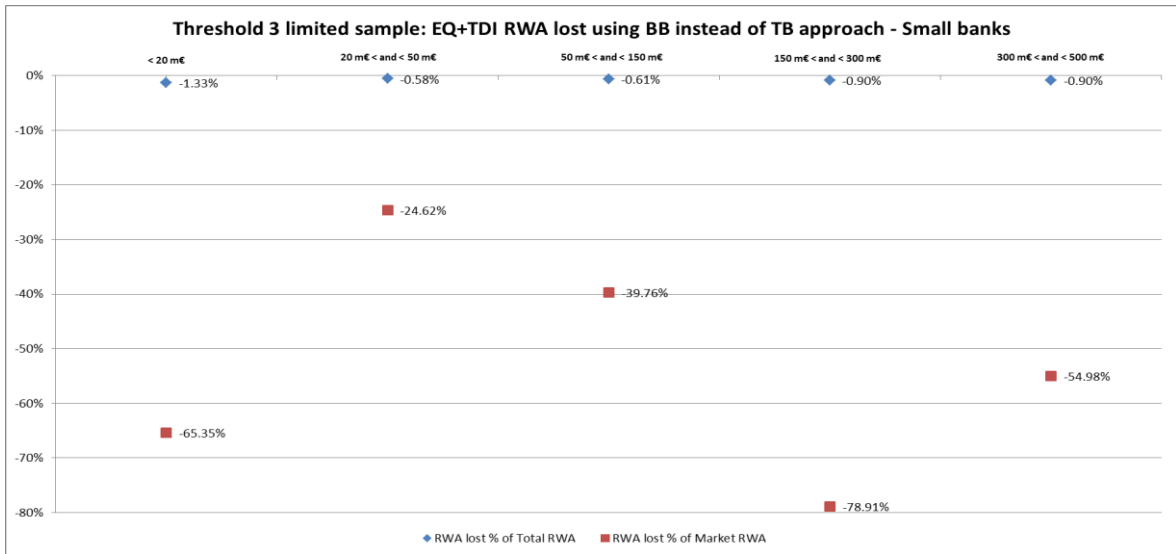
### Cumulative impact relative to market RWAs and total RWAs under relative threshold 2 limited sample of applying the BB approach to EQ and debt positions



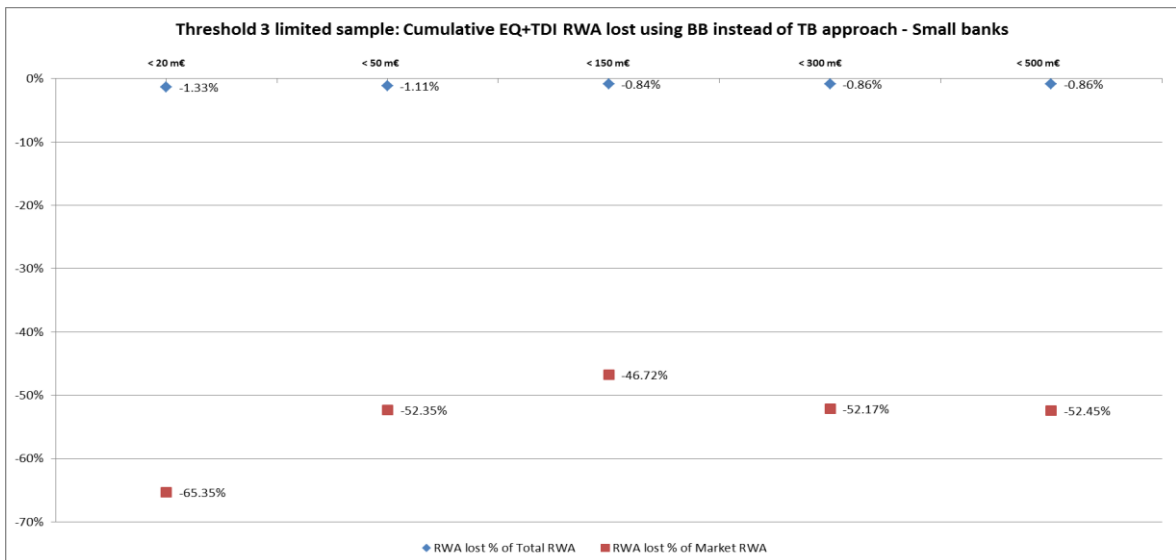
### Threshold 3 limited sample

When looking at the limited sample, the impact of applying the derogation is more material for level 1 and level 3 compared to the full sample of banks. Cumulatively, the impact is also much higher and around 50%.

Impact relative to market RWAs and total RWAs under threshold 3 limited sample of applying the BB approach to EQ and debt positions



Cumulative impact relative to market RWAs and total RWAs under threshold 3 limited sample of applying the BB approach to EQ and debt positions

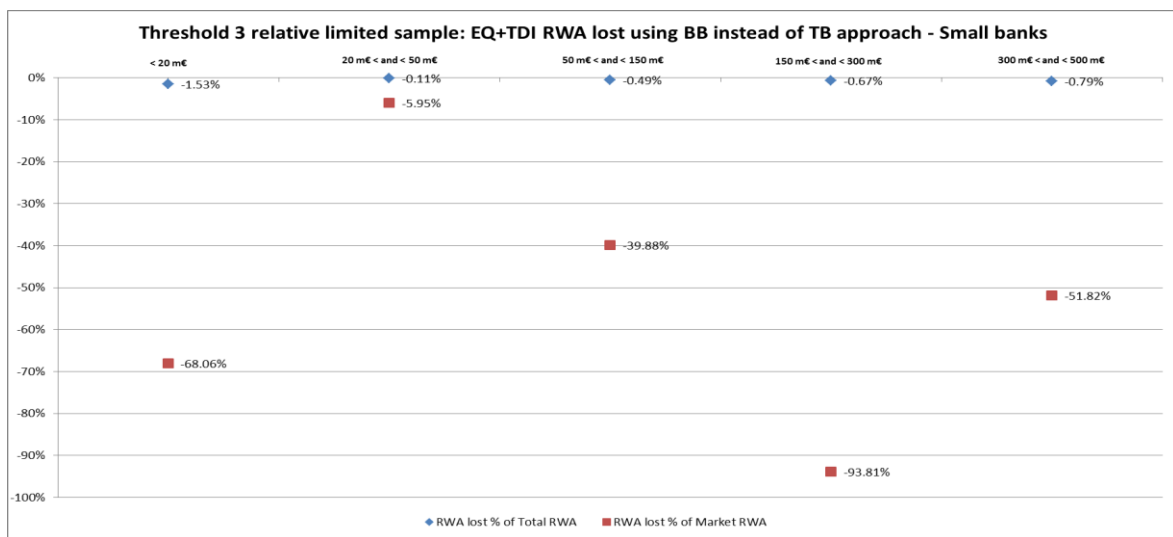




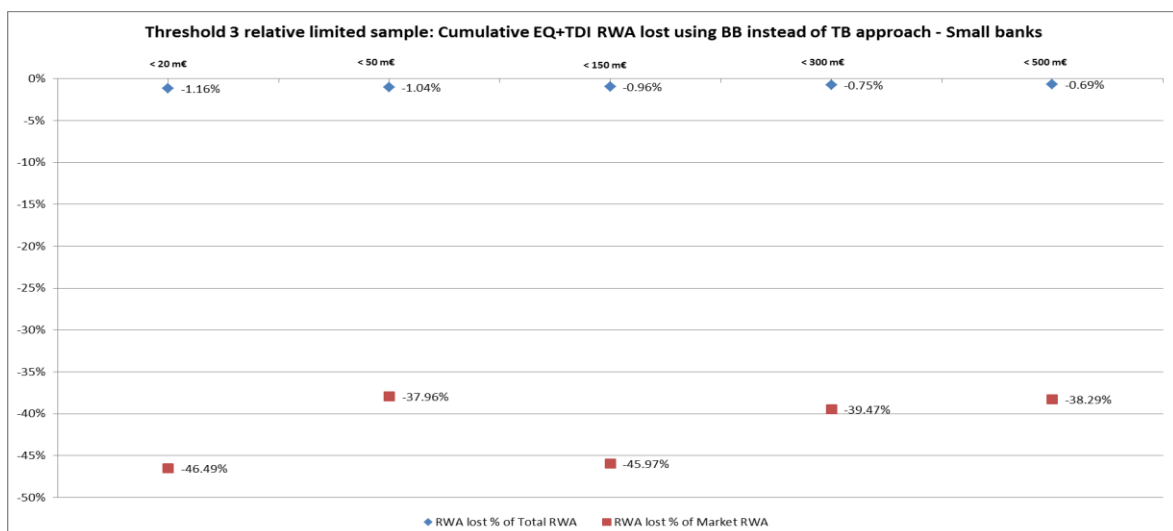
### Threshold 3 relative, limited sample

If we look at the impact of adding an additional relative threshold of 5% on top of threshold 3 for the limited sample, we see that the impact is notable for levels 2 (decreasing) and 4 (increasing) when compared to the impact without the relative threshold. There are 17 banks that are above the 5% threshold, meaning that this threshold level would imply that 21.79% of the limited sample of banks would not be able to apply the derogation even if the absolute level was set at its highest (EUR 500 m). Cumulatively, the impact is not significantly different.

### Impact relative to market RWAs and total RWAs under relative threshold 3 limited sample of applying the BB approach to EQ and debt positions



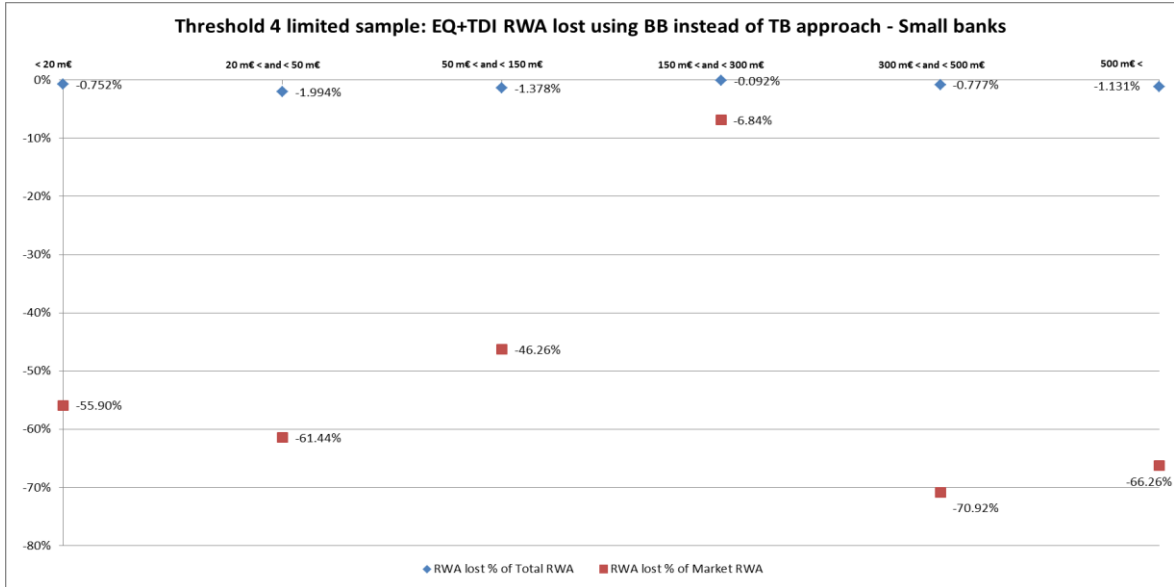
### Cumulative impact relative to market RWAs and total RWAs under relative threshold 3 limited sample of applying the BB approach to EQ and debt positions



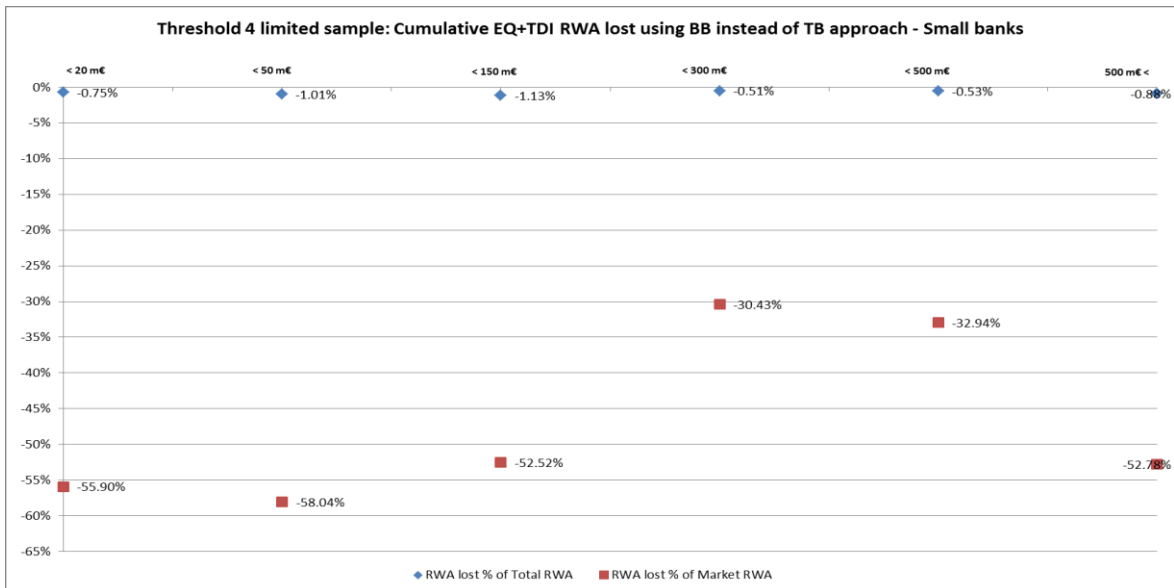
### Threshold 4 limited sample

When looking at the limited sample, the impact of applying the derogation is material for all levels except level 4. Cumulatively, the impact is also material.

Impact relative to market RWAs and total RWAs under threshold 4 limited sample of applying the BB approach to EQ and debt positions



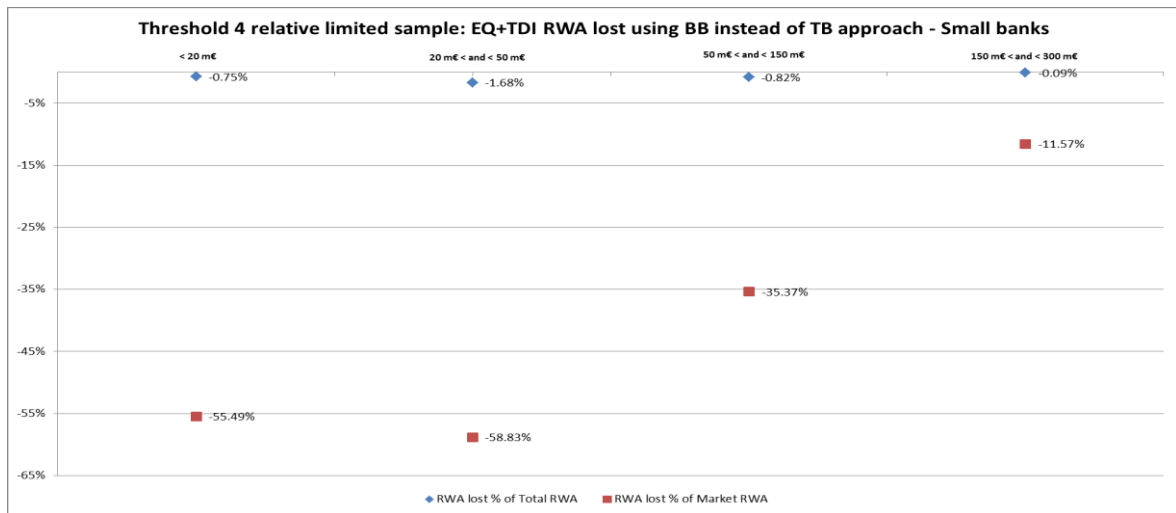
Cumulative impact relative to market RWAs and total RWAs under threshold 4 limited sample of applying the BB approach to EQ and debt positions



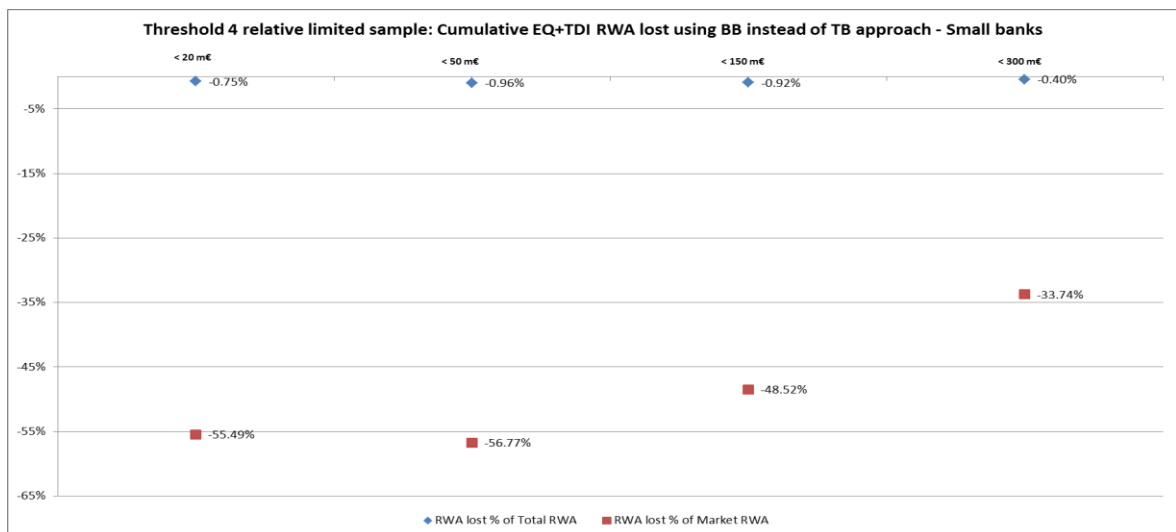
### Threshold 4 relative, limited sample

If we look at the impact of adding an additional relative threshold of 5% on top of threshold 4 for the limited sample, we see that the impact is significant. Once again, only the first four levels are left. There are 43 banks that are above the 5% threshold, meaning that this threshold level would imply that 58.90% of the limited sample of banks would not be able to apply the derogation even if the absolute level was set at its highest (EUR 500 m). This is also the highest proportion of banks for the limited sample when comparing the different thresholds. The impact percentages do not change significantly for the remaining four levels. The same is the case on a cumulative basis.

### Impact relative to market RWAs and total RWAs under relative threshold 4 limited sample of applying the BB approach to EQ and debt positions



### Cumulative impact relative to market RWAs and total RWAs under relative threshold 4 limited sample of applying the BB approach to EQ and debt positions



### Threshold 1 limited sample – Impact of relative thresholds in terms of the number of banks applicable for the derogation

Threshold 1 limited sample	# of banks included under each threshold level	Ratio below 5%	Ratio below 10%
< 20 m€	55	52	54
20 m€ < and < 50 m€	14	9	13
50 m€ < and < 150 m€	27	19	24
150 m€ < and < 300 m€	10	4	7
300 m€ < and < 500 m€	8	4	7

### Threshold 2 limited sample – Impact of relative thresholds in terms of the number of banks applicable for the derogation

Threshold 2 limited sample	# of banks included under each threshold level	Ratio below 5%	Ratio below 10%
< 20 m€	55	53	54
20 m€ < and < 50 m€	14	9	13
50 m€ < and < 150 m€	27	22	25
150 m€ < and < 300 m€	10	6	9
300 m€ < and < 500 m€	8	4	7

### Threshold 3 limited sample – Impact of relative thresholds in terms of the number of banks applicable for the derogation

Threshold 3 limited sample	# of banks included under each threshold level	Ratio below 5%	Ratio below 10%
< 20 m€	35	33	34
20 m€ < and < 50 m€	14	10	13
50 m€ < and < 150 m€	20	15	18
150 m€ < and < 300 m€	6	3	5
300 m€ < and < 500 m€	3	1	2

### Threshold 4 limited sample – Impact of relative thresholds in terms of the number of banks applicable for the derogation

Threshold 4 limited sample	# of banks included under each threshold level	Ratio below 5%	Ratio below 10%
< 20 m€	20	16	19
20 m€ < and < 50 m€	4	3	4
50 m€ < and < 150 m€	12	5	7
150 m€ < and < 300 m€	11	6	8
300 m€ < and < 500 m€	4	0	2
> 500 m€	22	0	0

## Summary

The amount of lost RWAs from applying the derogation generally increases with a higher threshold level. However, even for the lower levels of the thresholds, there is a material loss of market RWAs from applying the derogation. This observation corresponds well with what could be expected from looking at the composition of market RWAs under the different thresholds for the limited sample.

Of course, it is important to highlight that, in the case of the lost RWAs relative to total RWAs, the impact is negligible for all thresholds (in most cases, less than 1%). This is consistent with the assumption that the business model for these small institutions tends to be primarily focused on BB activities. As shown in the analysis of the composition of assets and RWAs, on an aggregated basis, the small banks have very limited position risk in the TB compared to the full RWAs stemming from other types of exposures such as credit and operational risk.

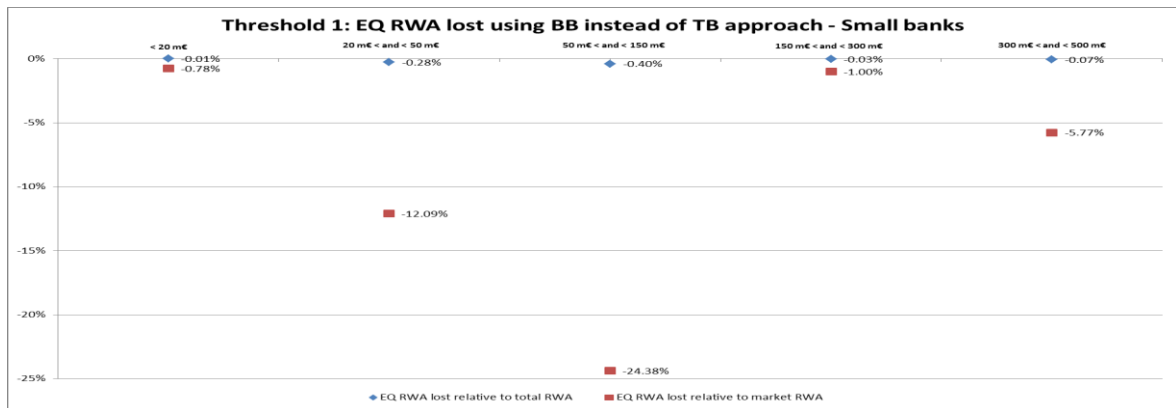
The effect of having a relative threshold of 5% on top of the absolute threshold shows a material impact, excluding between 17.54% and 58.90% from applying the derogation. Applying a threshold of 10% does not significantly change the number of banks applicable for the derogation compared to the 5% threshold.

## 6. Annex 3 – Granular impact analysis

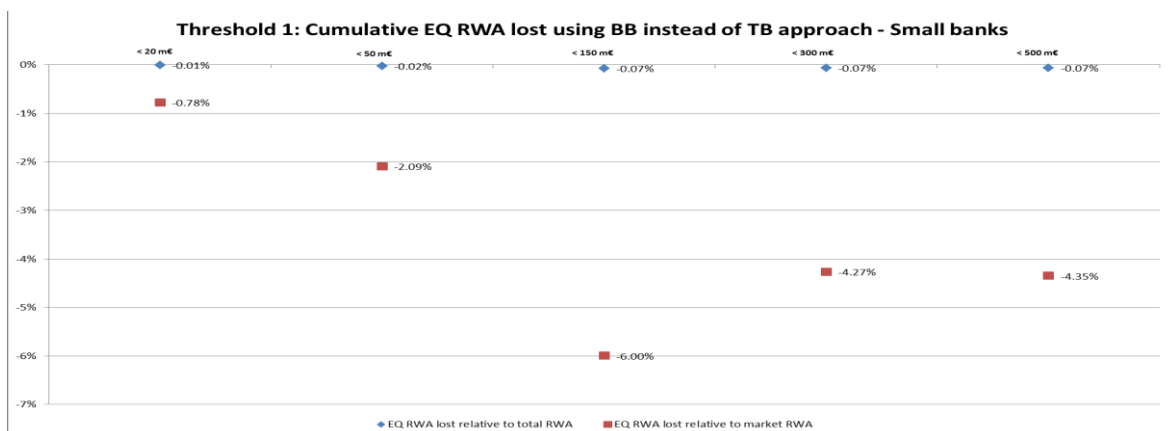
In this annex, a more granular analysis of applying the derogation is presented by estimating the impact for EQ and TDIs separately. While this annex provides an insight into the underlying data used to assess the impact of the derogation, it does not introduce any new information that is not, on an aggregated basis, contained in the report. The analysis is conducted for both the full sample (all banks) and the limited sample (excluding those with zero position risk) of banks, also assessing the effect of adding the relative threshold of 5% on top of the absolute levels of the thresholds.

### Threshold 1 full sample

Impact relative to market RWAs and total RWAs under threshold 1 full sample of applying the BB approach to EQ positions

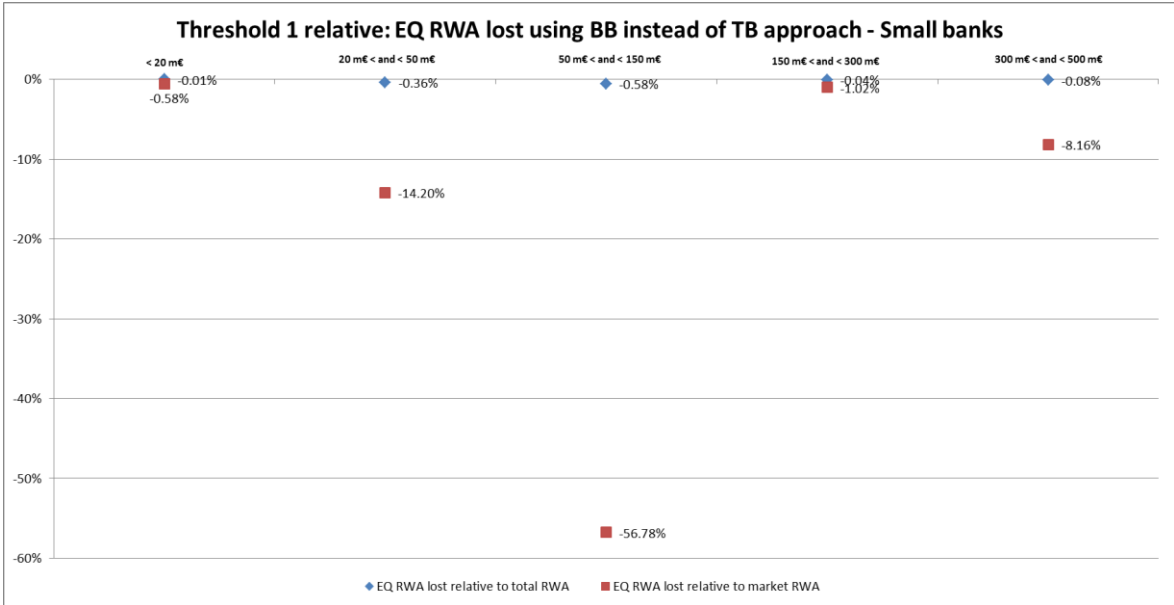


Cumulative impact relative to market RWAs and total RWAs under threshold 1 full sample of applying the BB approach to EQ positions

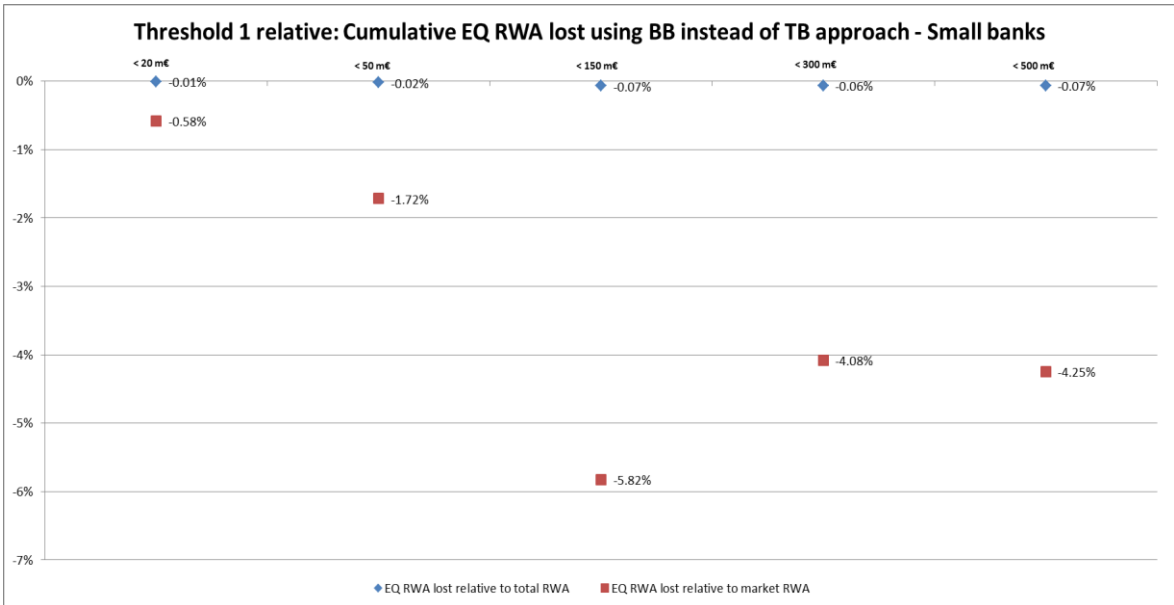


**Threshold 1 relative, full sample**

Impact relative to market RWAs and total RWAs under relative threshold 1 full sample of applying the BB approach to EQ positions

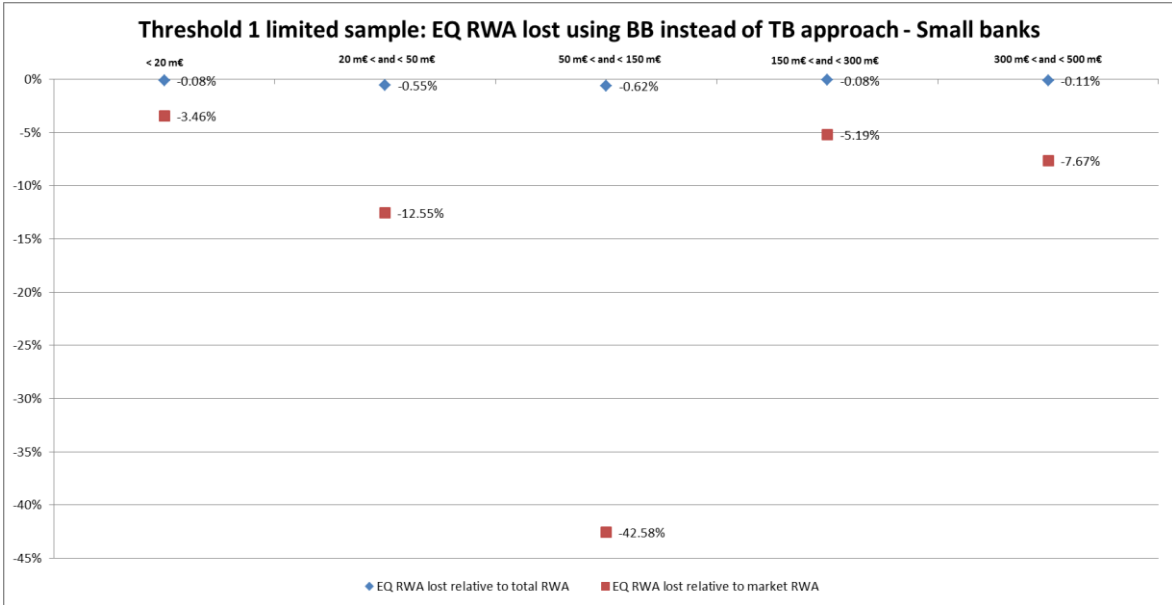


Cumulative impact relative to market RWAs and total RWAs under relative threshold 1 full sample of applying the BB approach to EQ positions

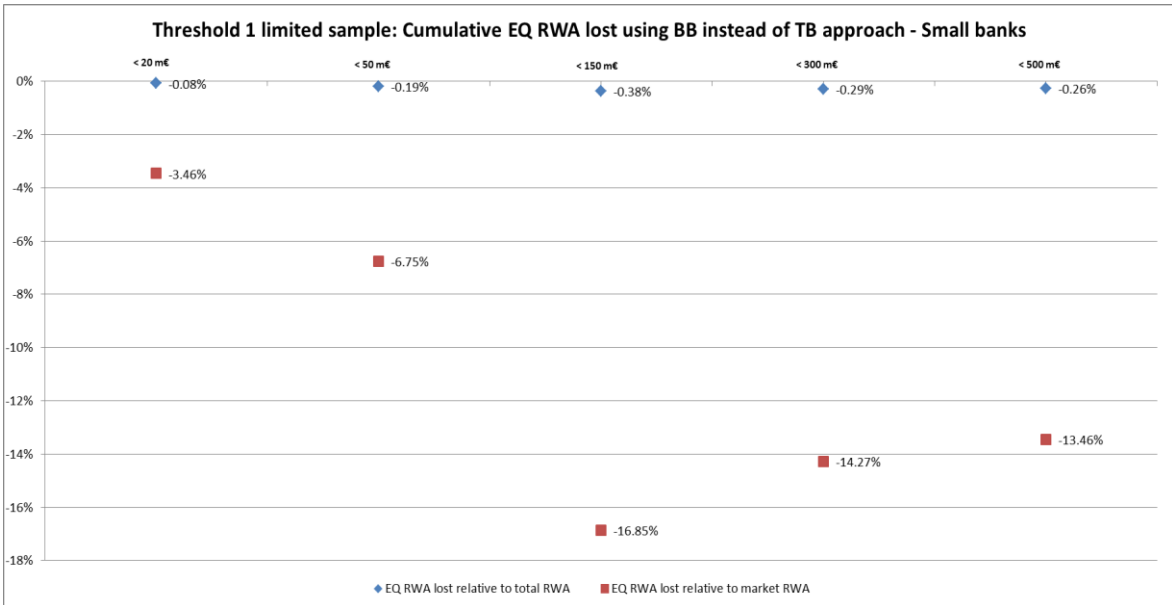


### Threshold 1 limited sample

Impact relative to market RWAs and total RWAs under threshold 1 limited sample of applying the BB approach to EQ positions



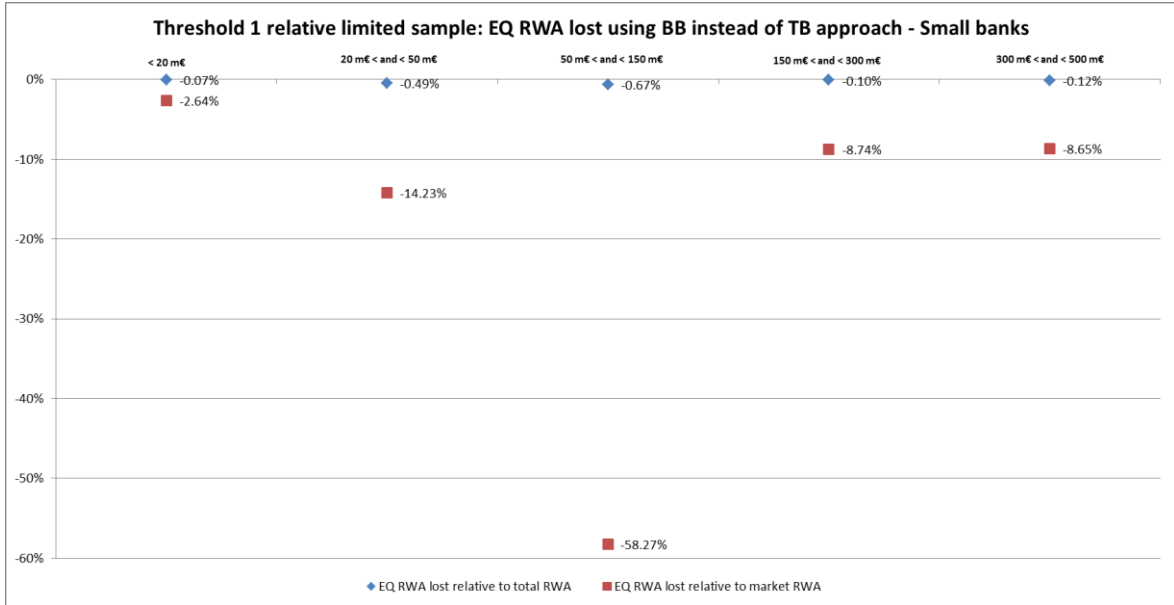
Cumulative impact relative to market RWAs and total RWAs under threshold 1 limited sample of applying the BB approach to EQ positions



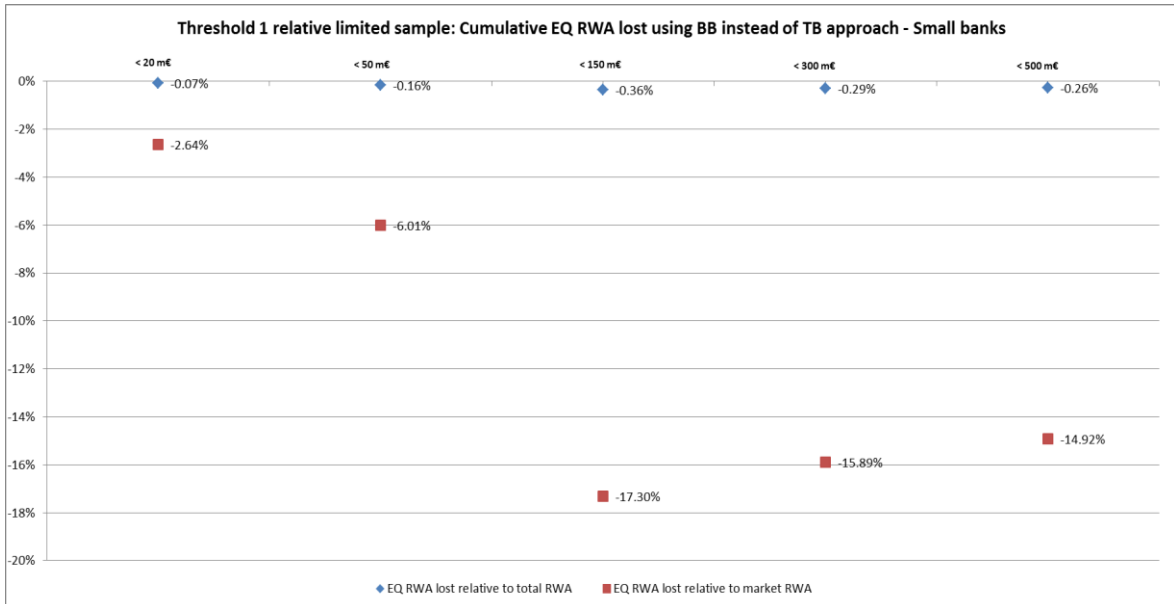


**Threshold 1 relative, limited sample**

Impact relative to market RWAs and total RWAs under relative threshold 1 limited sample of applying the BB approach to EQ positions

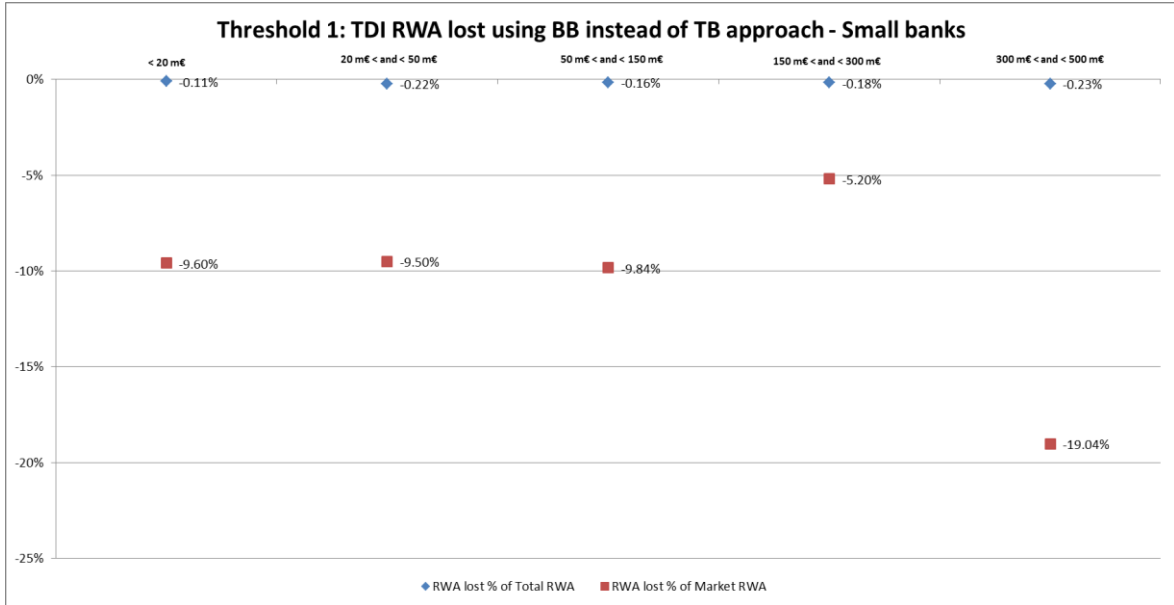


Cumulative impact relative to market RWAs and total RWAs under relative threshold 1 limited sample of applying the BB approach to EQ positions

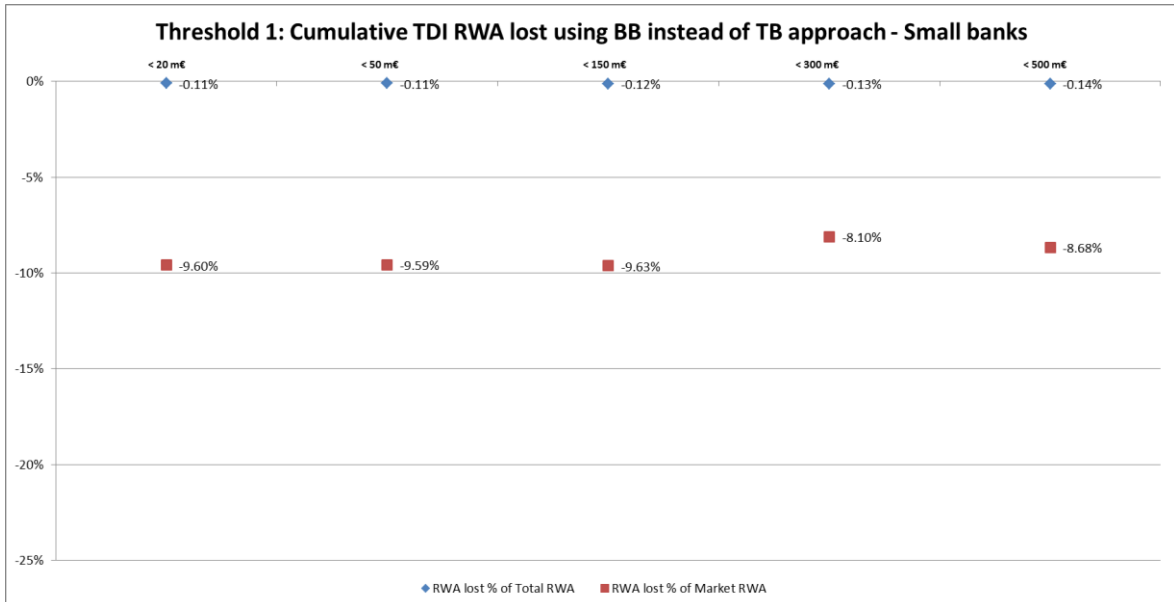


### Threshold 1 full sample

Impact relative to market RWAs and total RWAs under threshold 1 full sample of applying the BB approach to debt positions

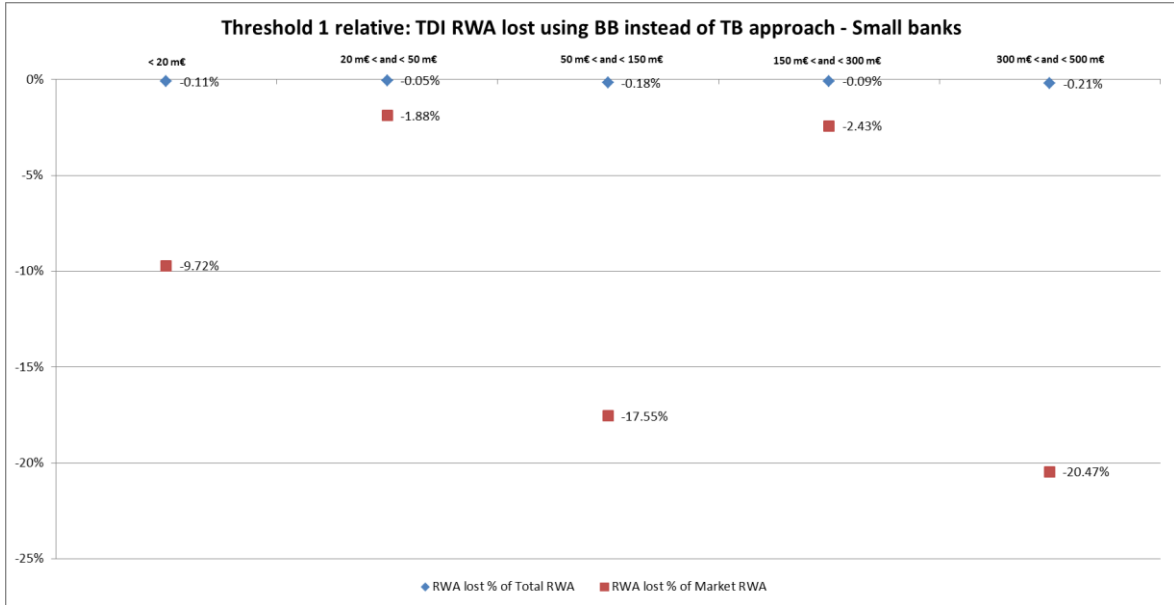


Cumulative impact relative to market RWAs and total RWAs under threshold 1 full sample of applying the BB approach to debt positions

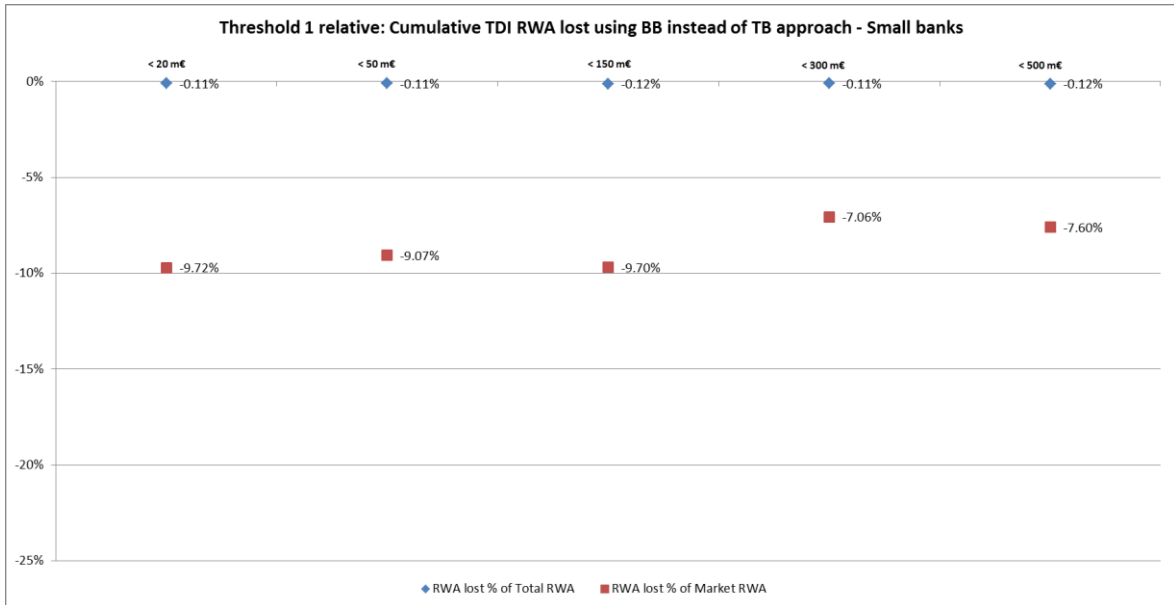


**Threshold 1 relative, full sample**

Impact relative to market RWAs and total RWAs under relative threshold 1 full sample of applying the BB approach to debt positions

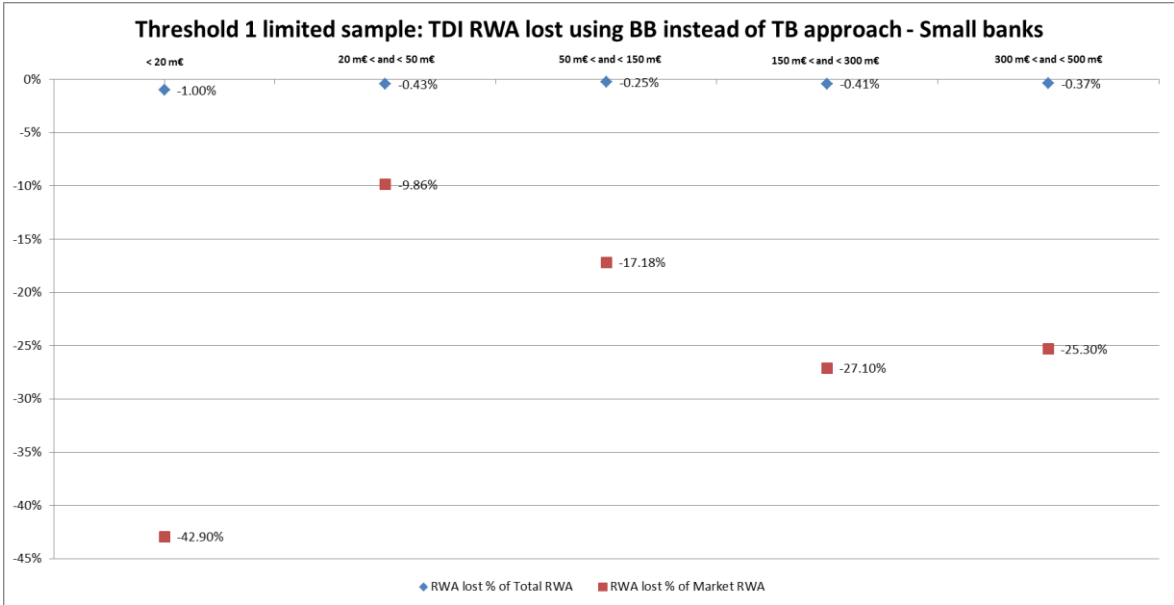


Cumulative impact relative to market RWAs and total RWAs under relative threshold 1 full sample of applying the BB approach to debt positions

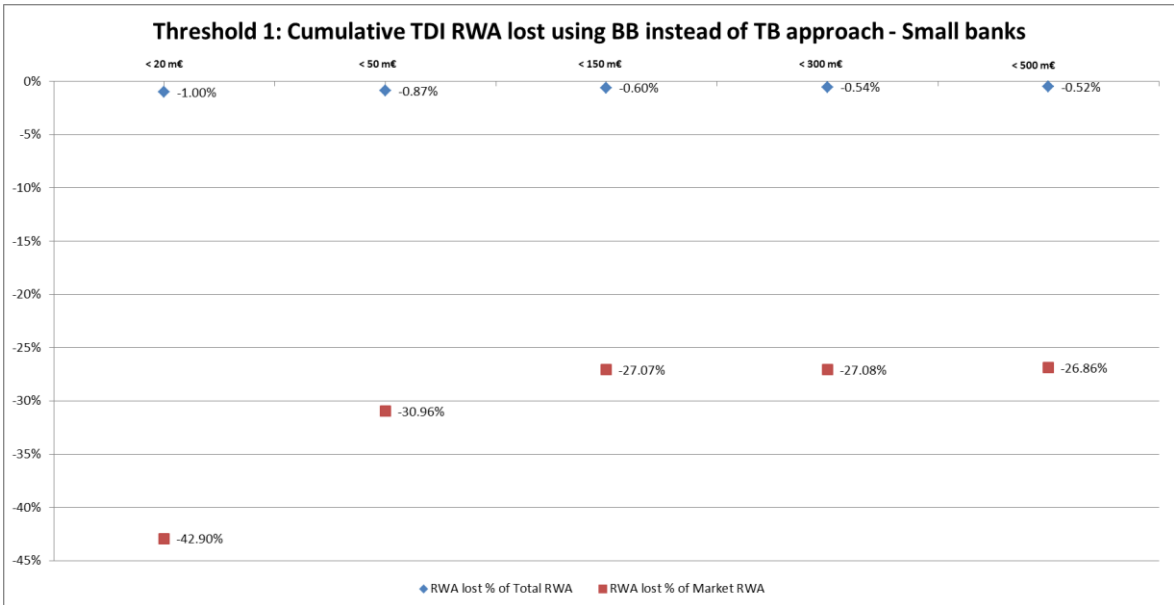


### Threshold 1 limited sample

Impact relative to market RWAs and total RWAs under threshold 1 limited sample of applying the BB approach to debt positions

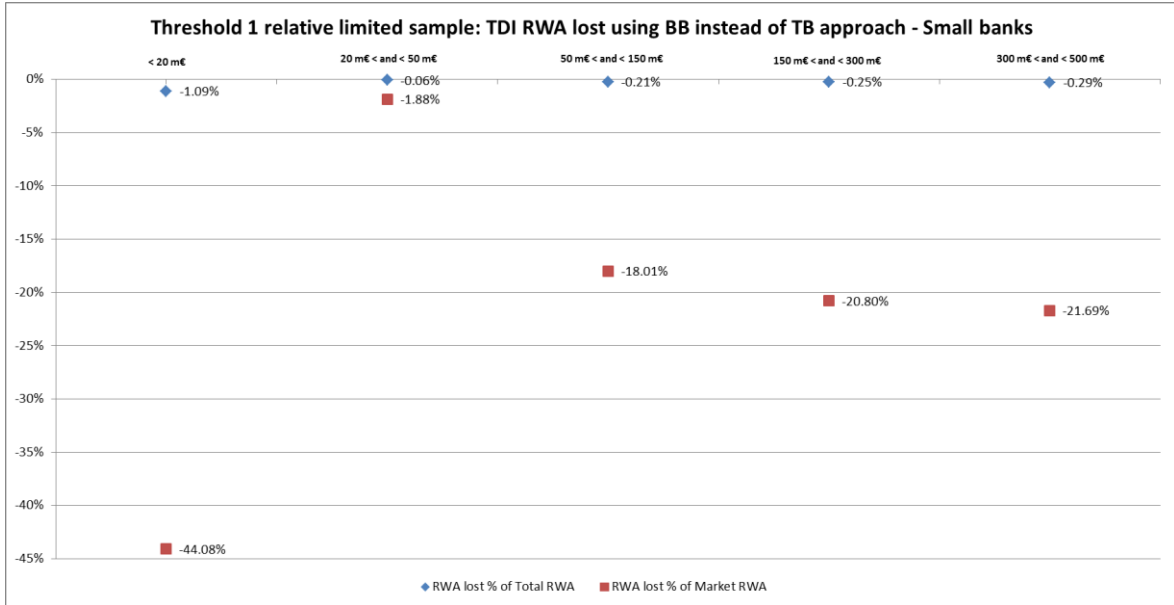


Cumulative impact relative to market RWAs and total RWAs under threshold 1 limited sample of applying the BB approach to debt positions

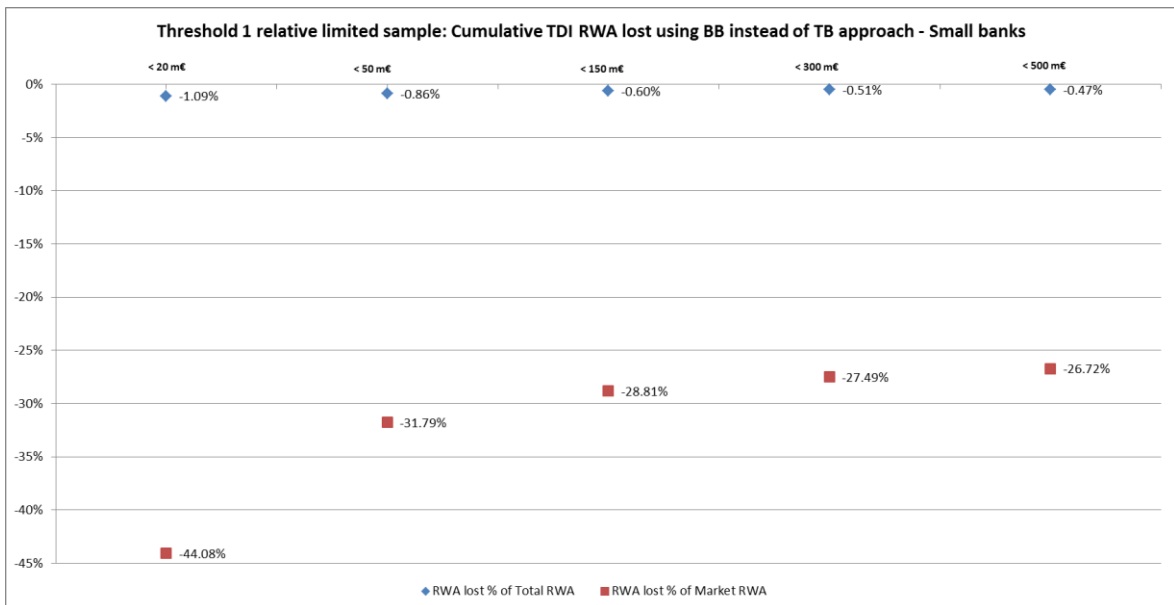


**Threshold 1 relative, limited sample**

Impact relative to market RWAs and total RWAs under relative threshold 1 limited sample of applying the BB approach to debt positions

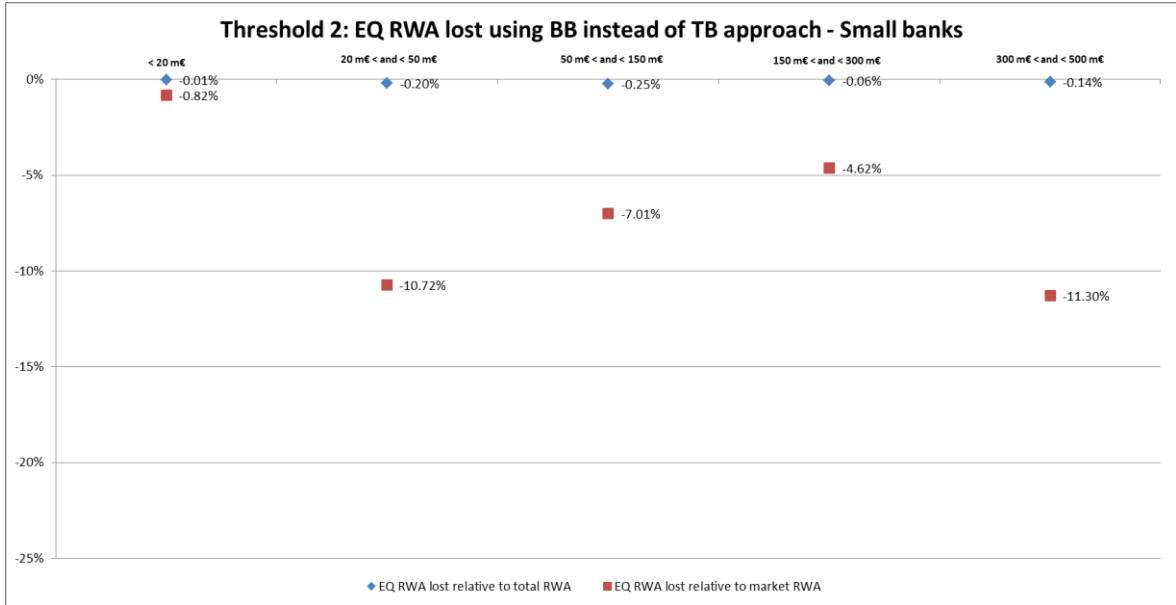


Cumulative impact relative to market RWAs and total RWAs under relative threshold 1 limited sample of applying the BB approach to debt positions

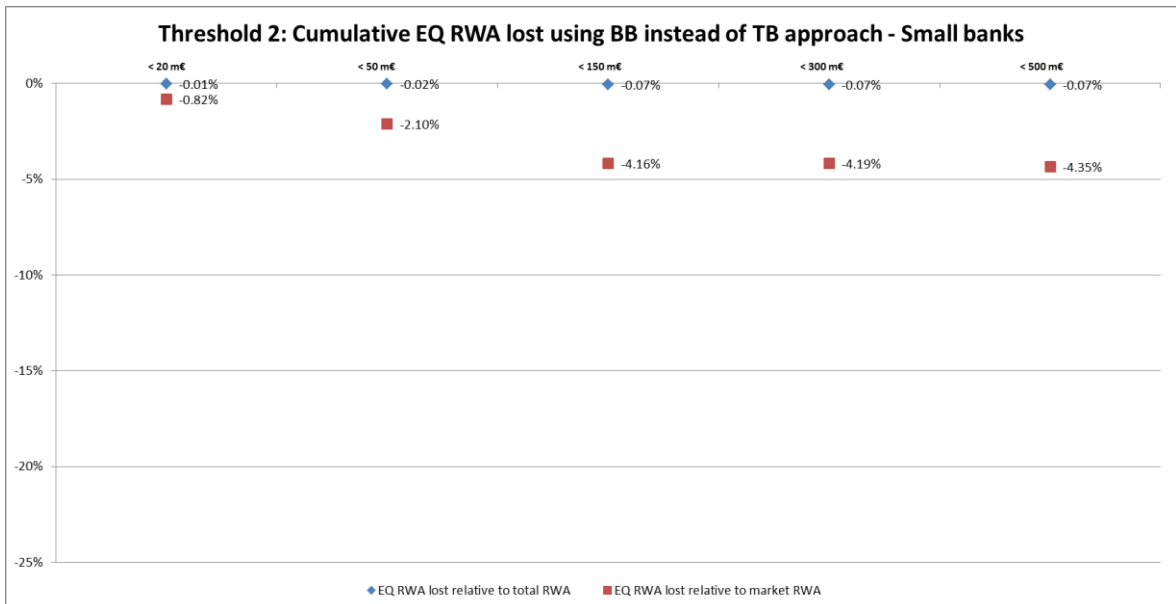


### Threshold 2 full sample

Impact relative to market RWAs and total RWAs under threshold 2 full sample of applying the BB approach to EQ positions

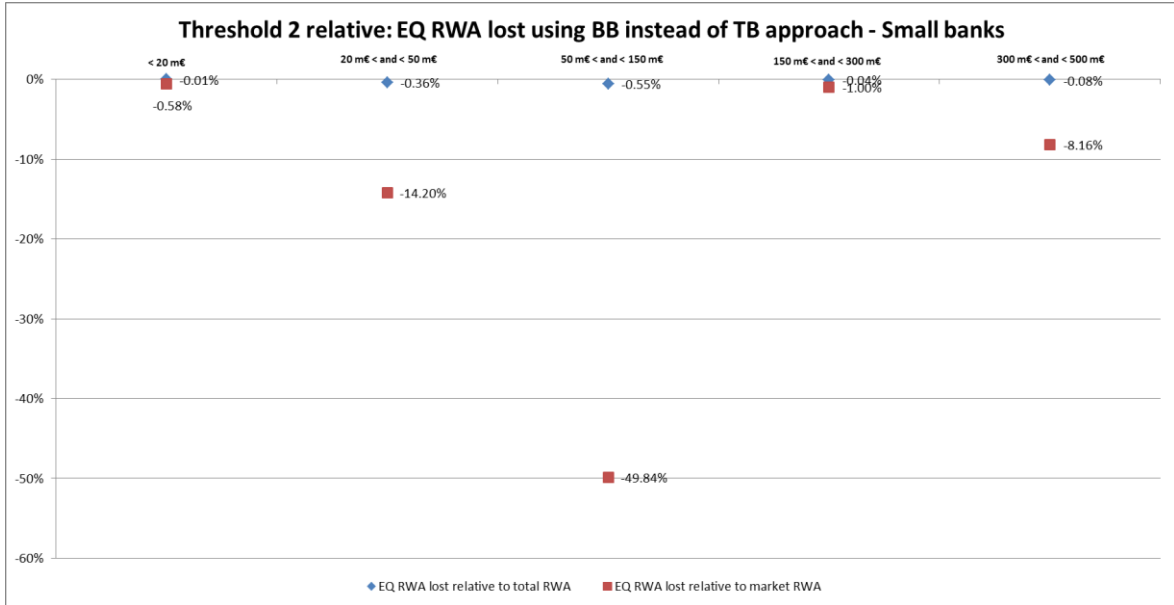


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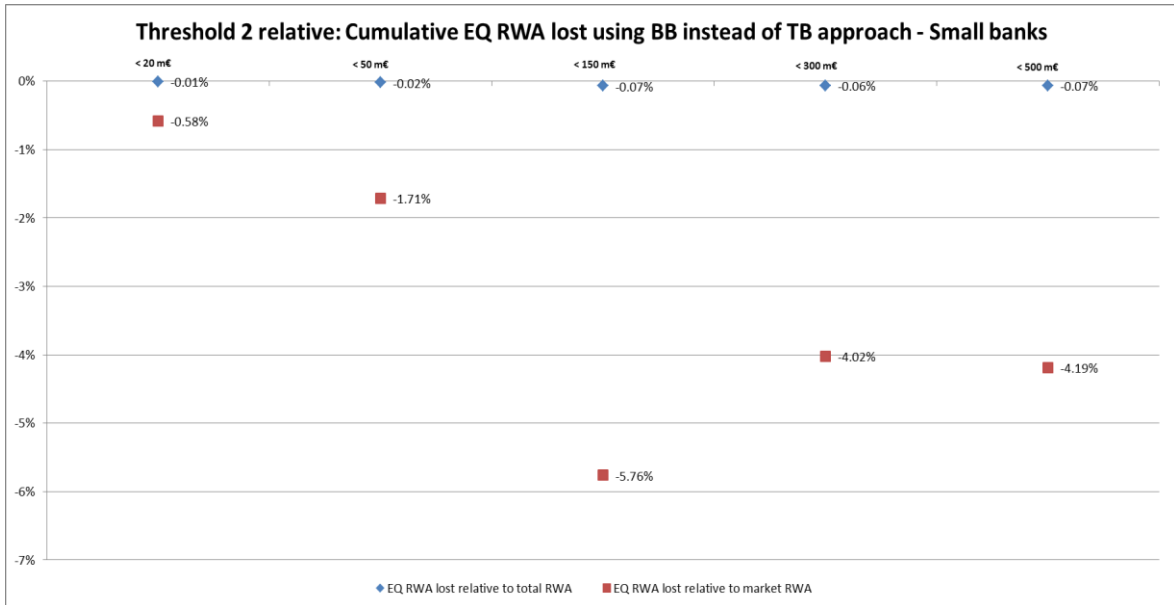


### Threshold 2 relative, full sample

Impact relative to market RWAs and total RWAs under relative threshold 2 full sample of applying the BB approach to EQ positions

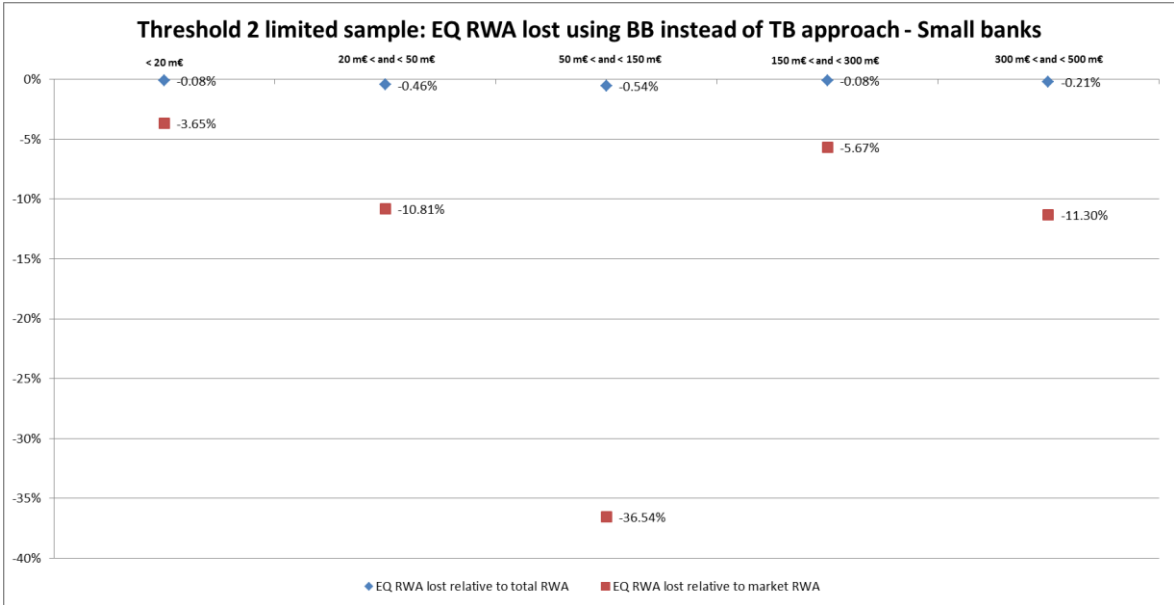


Cumulative impact relative to market RWAs and total RWAs under relative threshold 2 full sample of applying the BB approach to EQ positions

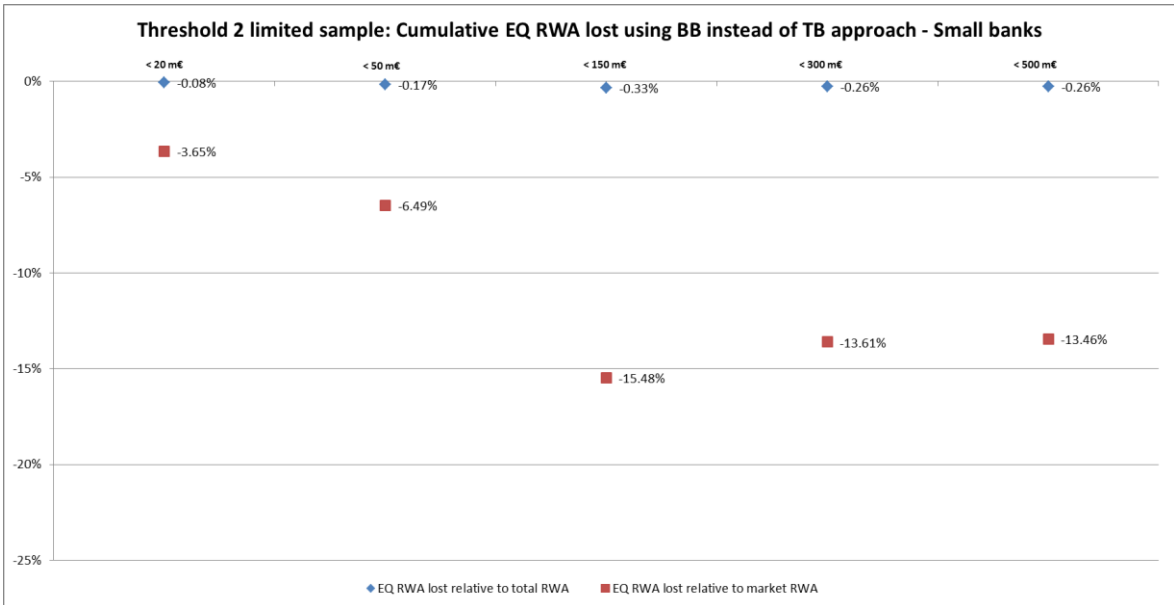


### Threshold 2 limited sample

Impact relative to market RWAs and total RWAs under threshold 2 limited sample of applying the BB approach to EQ positions



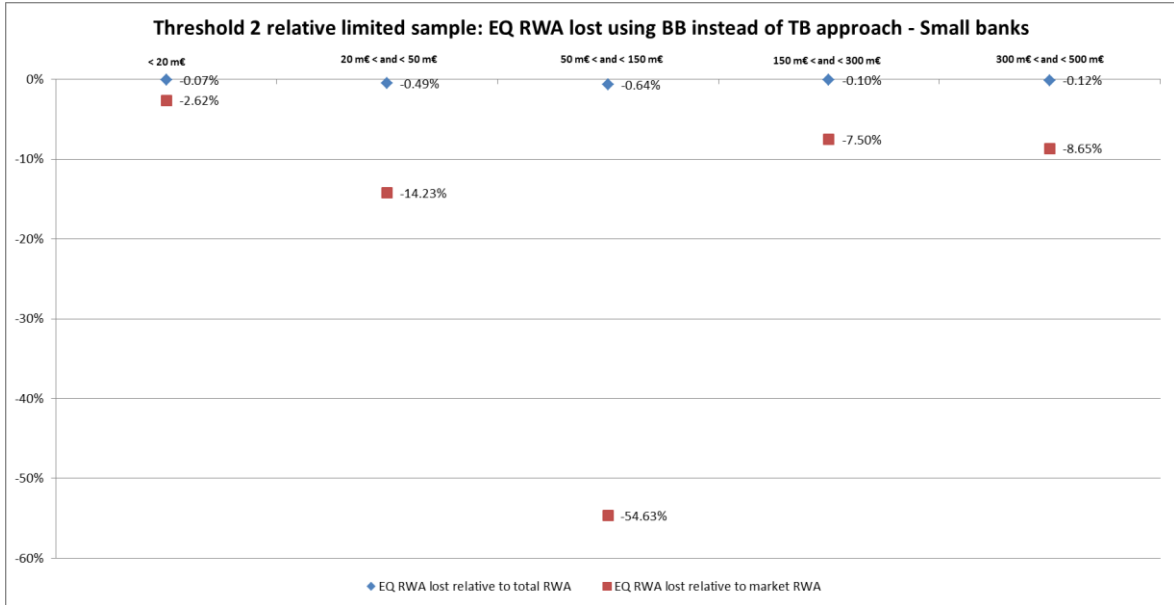
Cumulative impact relative to market RWAs and total RWAs under threshold 2 limited sample of applying the BB approach to EQ positions



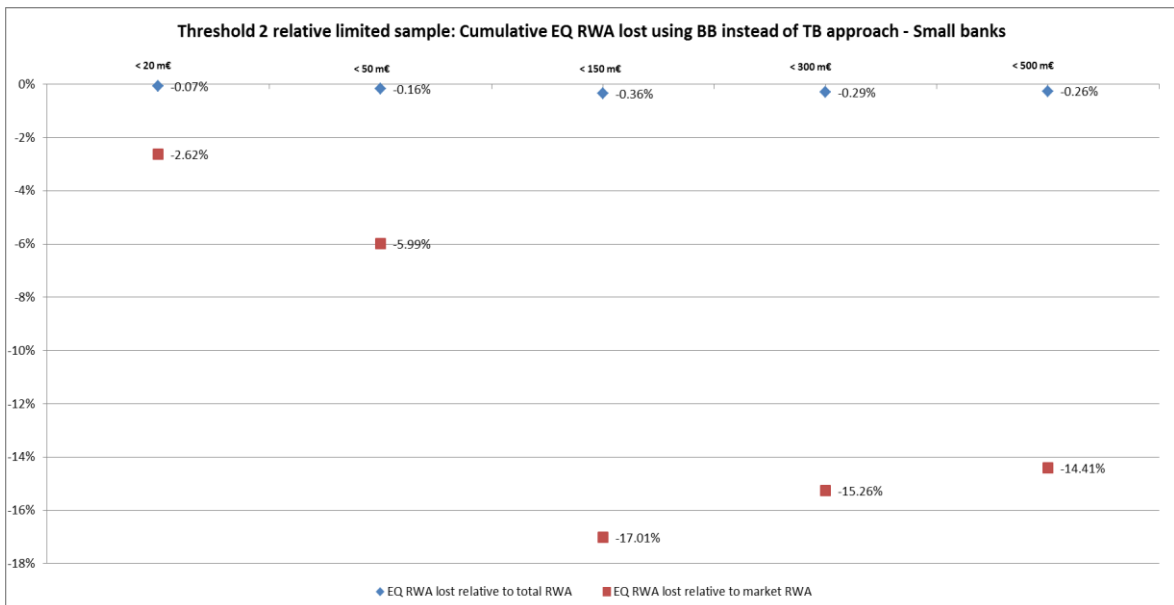


### Threshold 2 relative, limited sample

Impact relative to market RWAs and total RWAs under relative threshold 2 limited sample of applying the BB approach to EQ positions

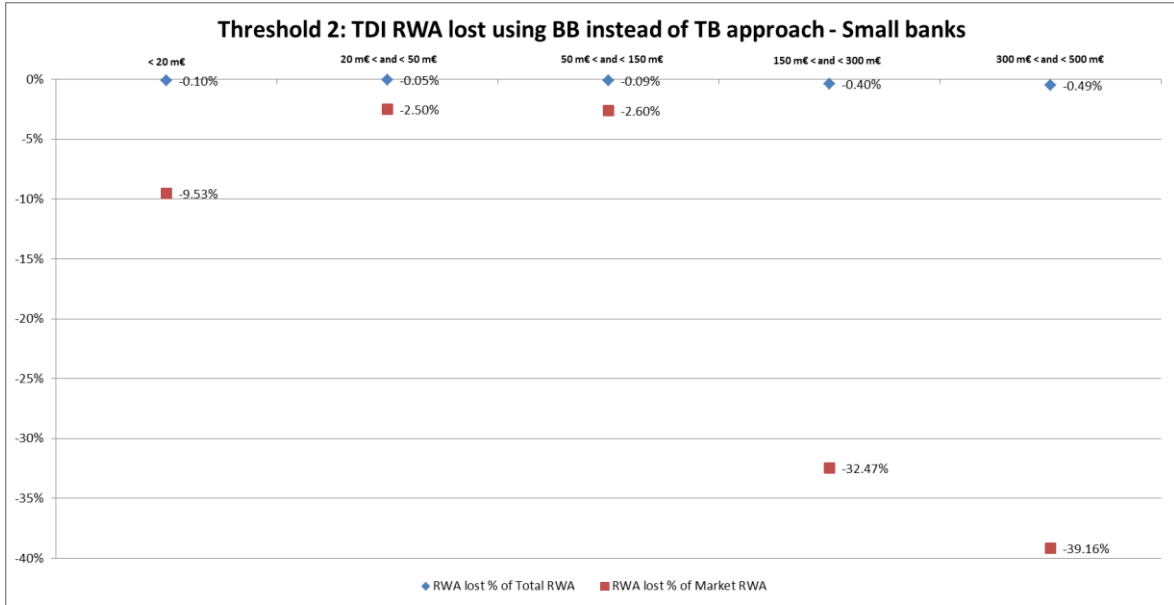


Cumulative impact relative to market RWAs and total RWAs under relative threshold 2 limited sample of applying the BB approach to EQ positions

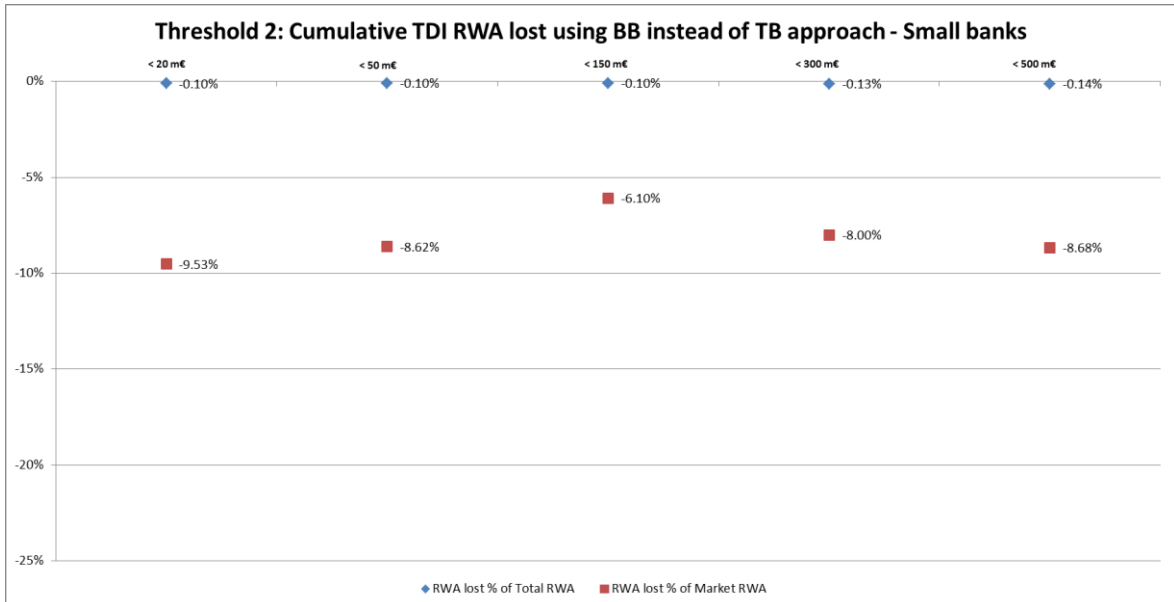


### Threshold 2 full sample

Impact relative to market RWAs and total RWAs under threshold 2 full sample of applying the BB approach to debt positions

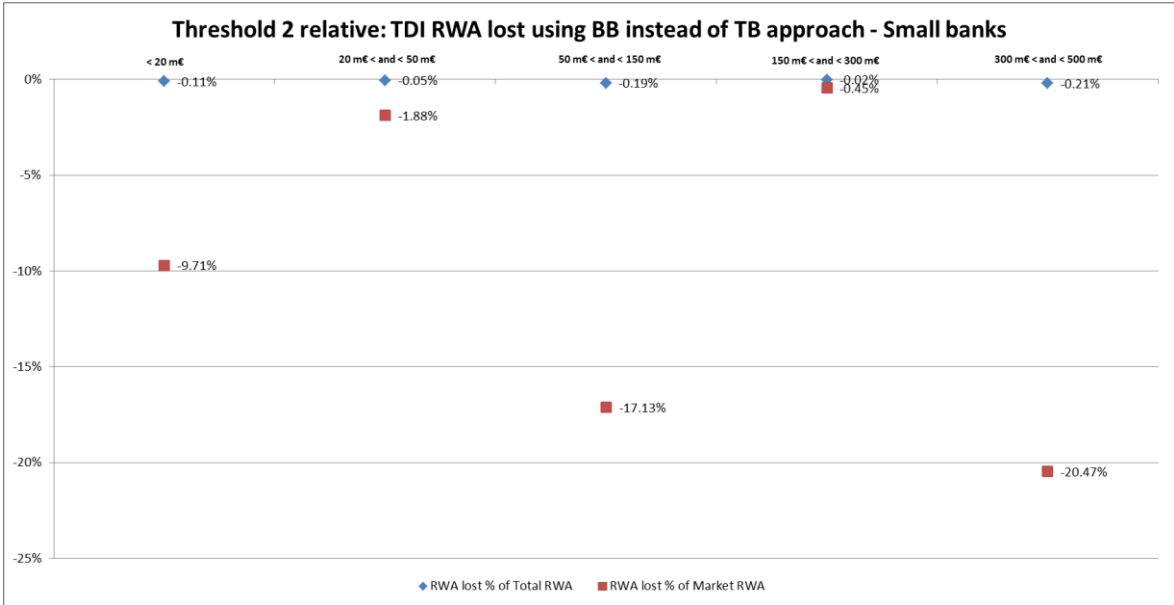


Cumulative impact relative to market RWAs and total RWAs under threshold 2 full sample of applying the BB approach to debt positions

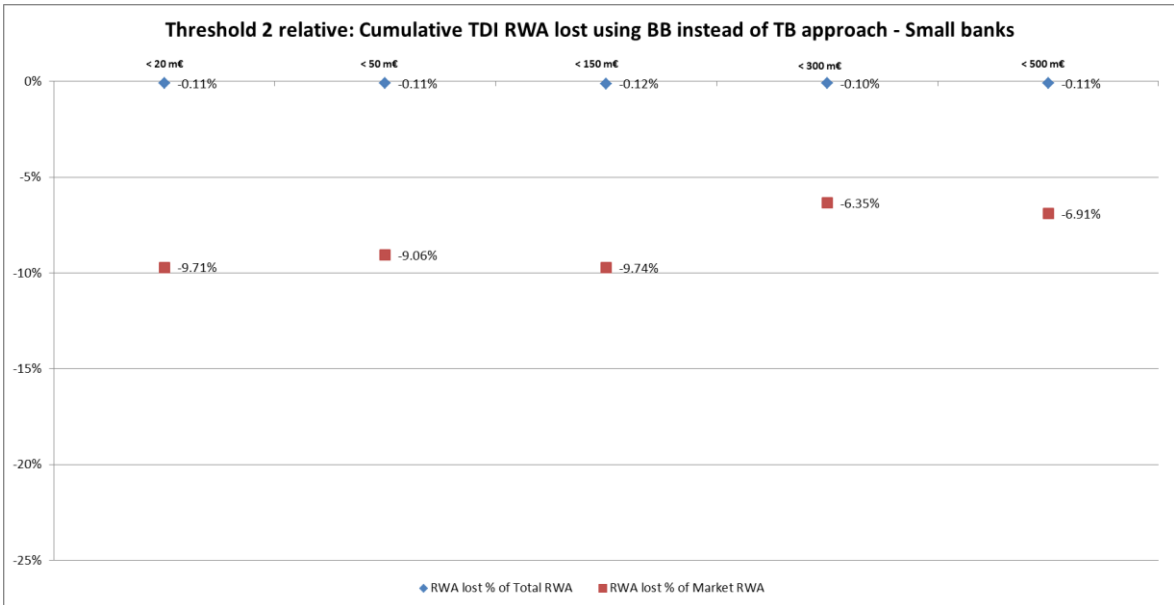


### Threshold 2 relative, full sample

Impact relative to market RWAs and total RWAs under relative threshold 2 full sample of applying the BB approach to debt positions

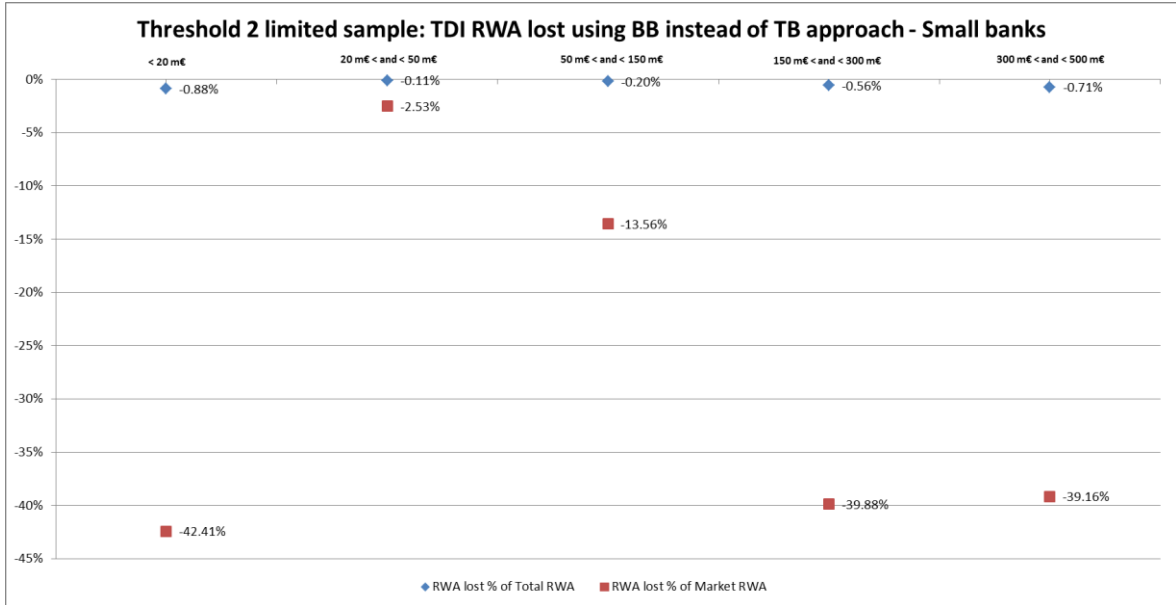


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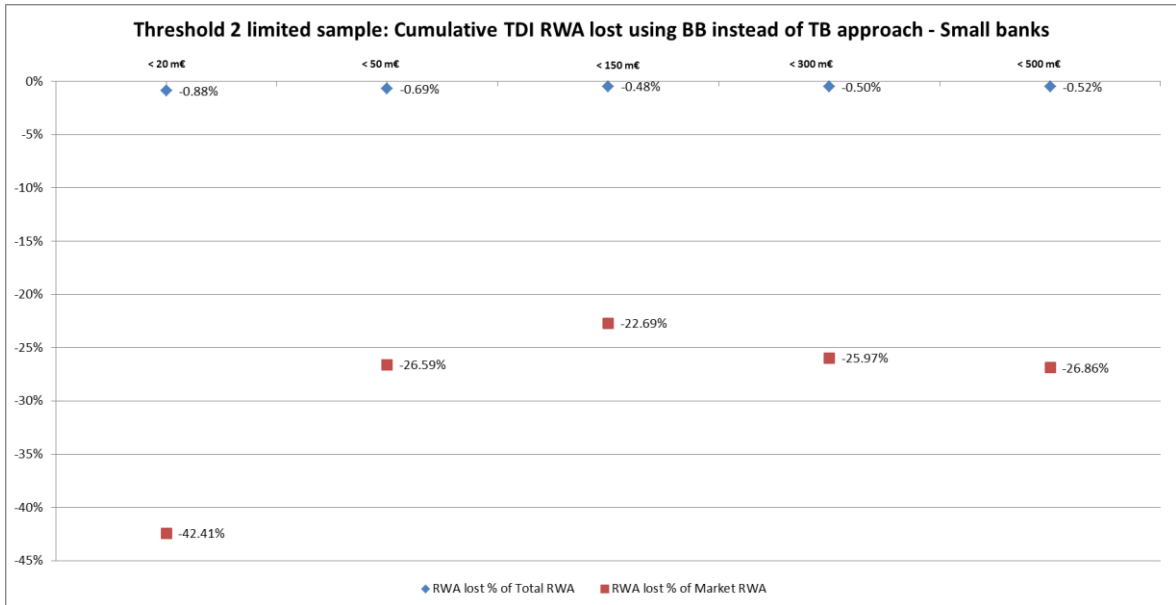


### Threshold 2 limited sample

Impact relative to market RWAs and total RWAs under threshold 2 limited sample of applying the BB approach to debt positions

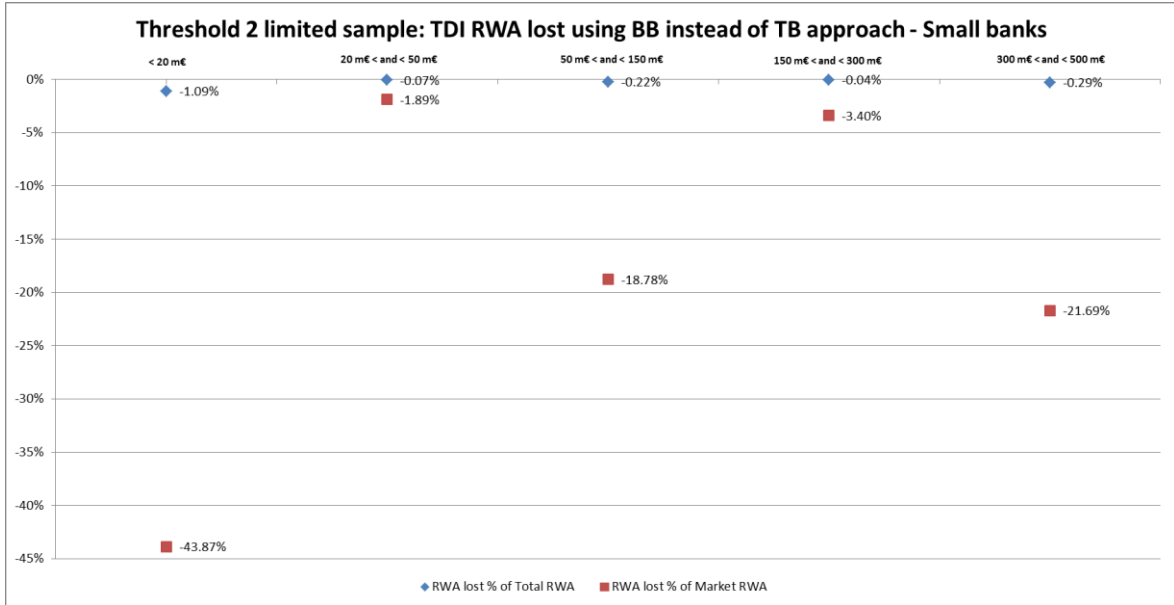


Cumulative impact relative to market RWAs and total RWAs under threshold 2 limited sample of applying the BB approach to debt positions

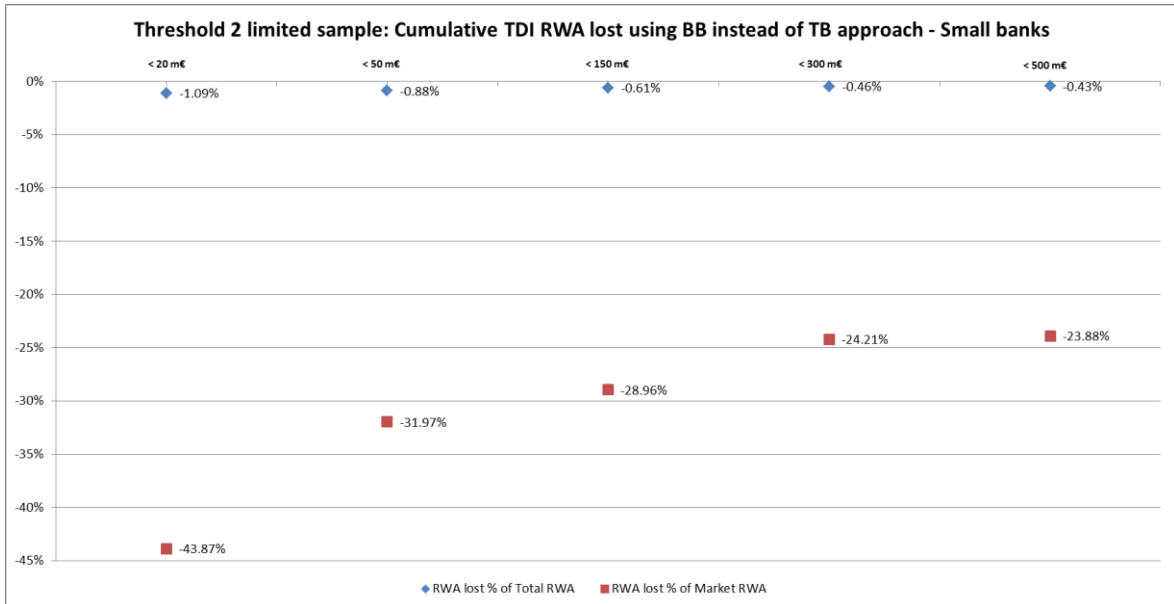


**Threshold 2 relative, limited sample**

Impact relative to market RWAs and total RWAs under relative threshold 2 limited sample of applying the BB approach to debt positions

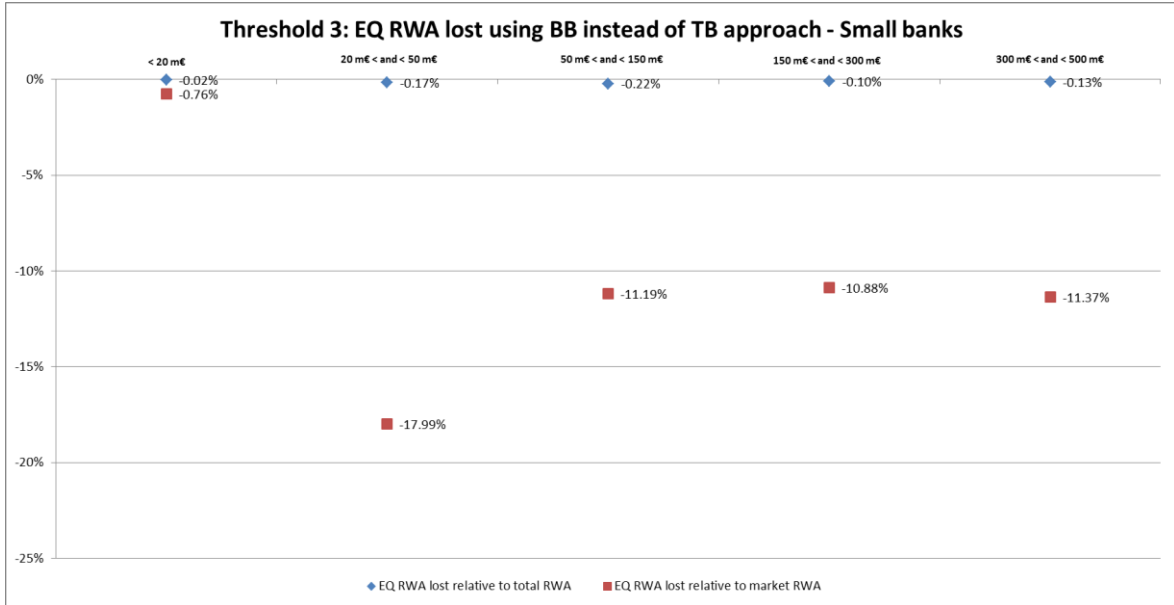


Cumulative impact relative to market RWAs and total RWAs under relative threshold 2 limited sample of applying the BB approach to debt positions

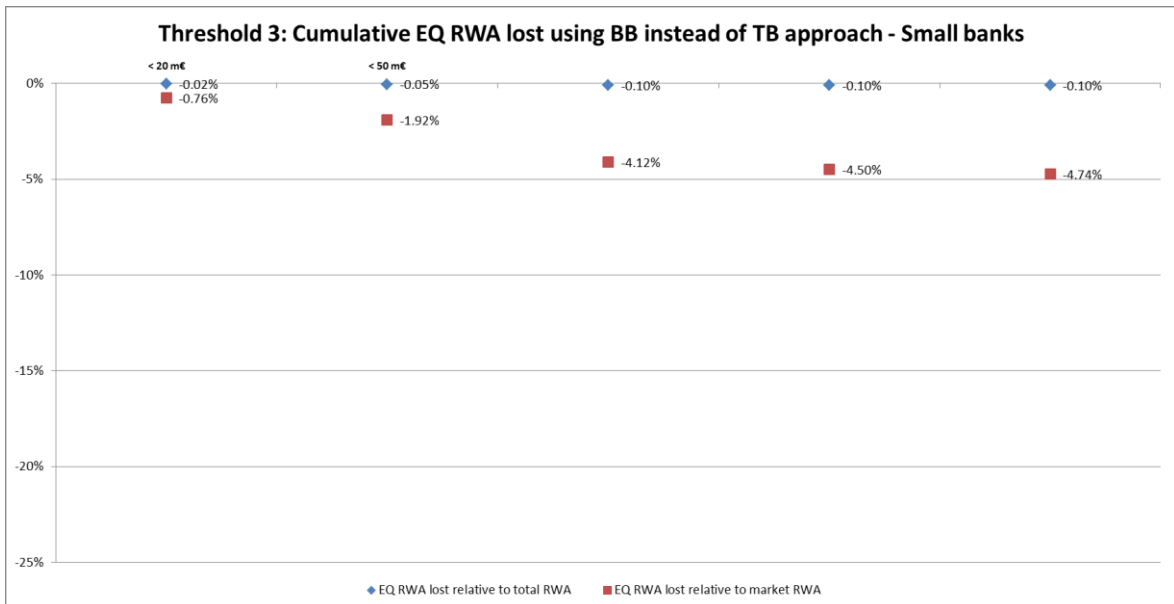


### Threshold 3 full sample

Impact relative to market RWAs and total RWAs under threshold 3 full sample of applying the BB approach to EQ positions

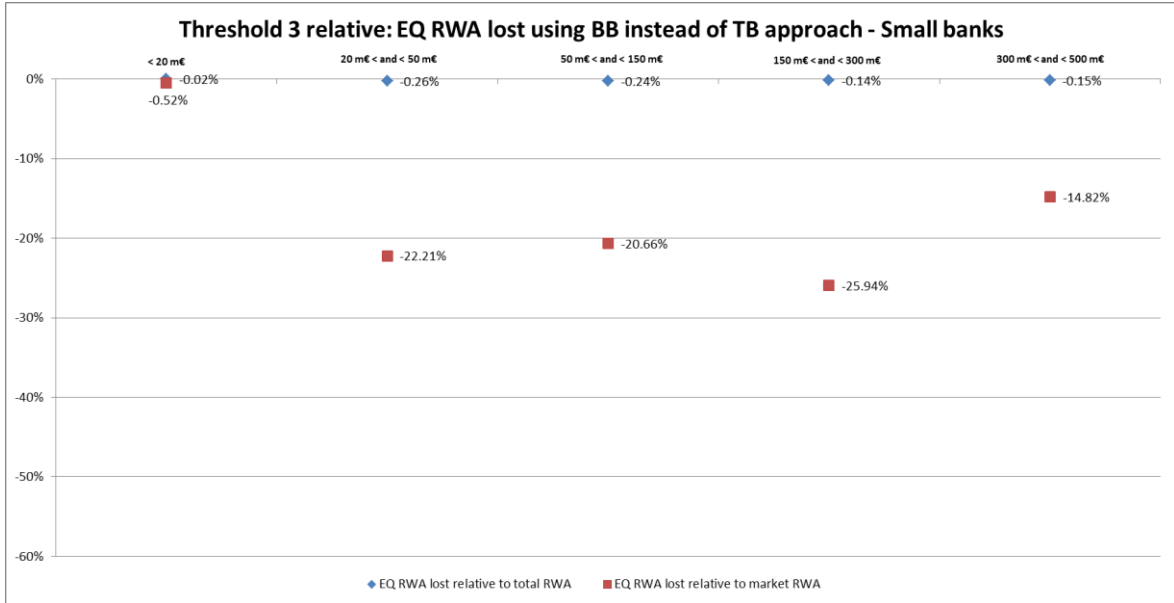


Cumulative impact relative to market RWAs and total RWAs under threshold 3 full sample of applying the BB approach to EQ positions

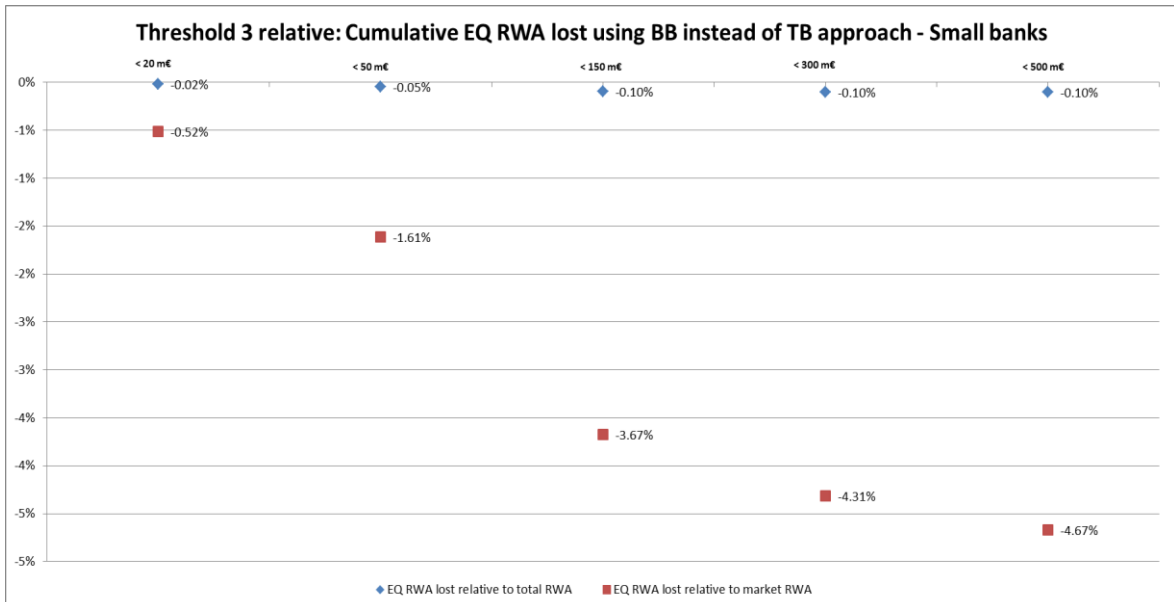


### Threshold 3 relative, full sample

Impact relative to market RWAs and total RWAs under relative threshold 3 full sample of applying the BB approach to EQ positions

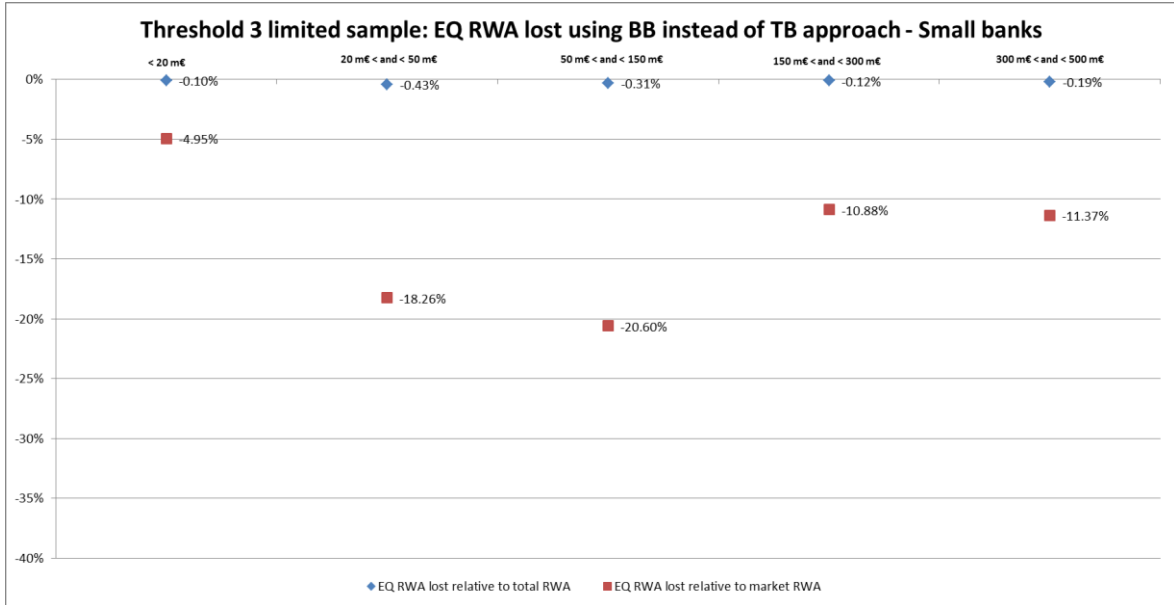


Cumulative impact relative to market RWAs and total RWAs under relative threshold 3 full sample of applying the BB approach to EQ positions

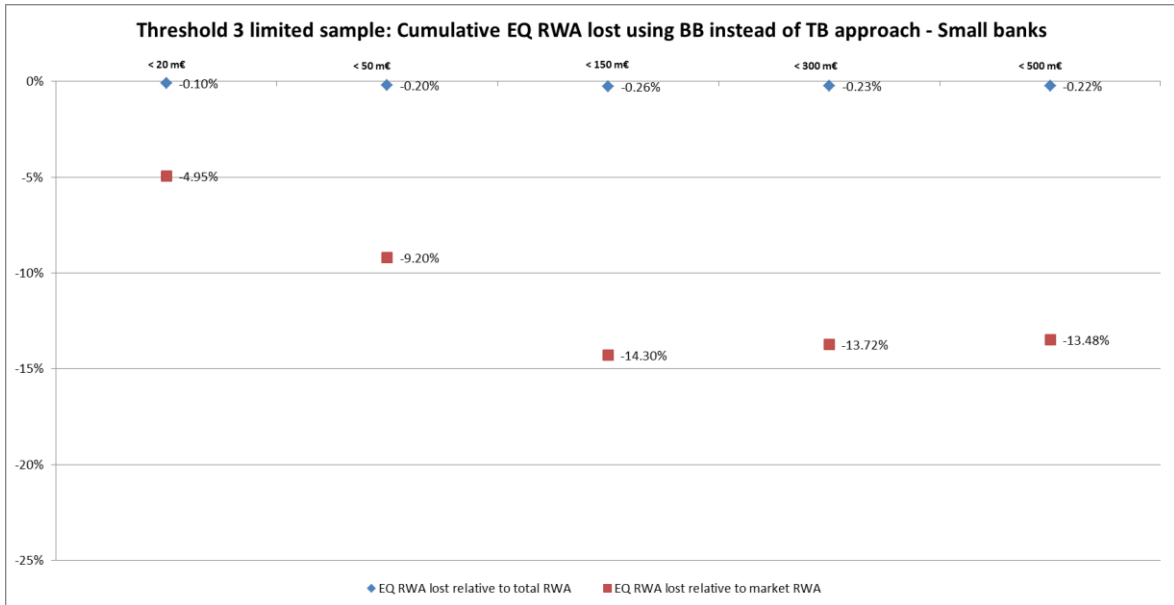


### Threshold 3 limited sample

Impact relative to market RWAs and total RWAs under threshold 3 limited sample of applying the BB approach to EQ positions



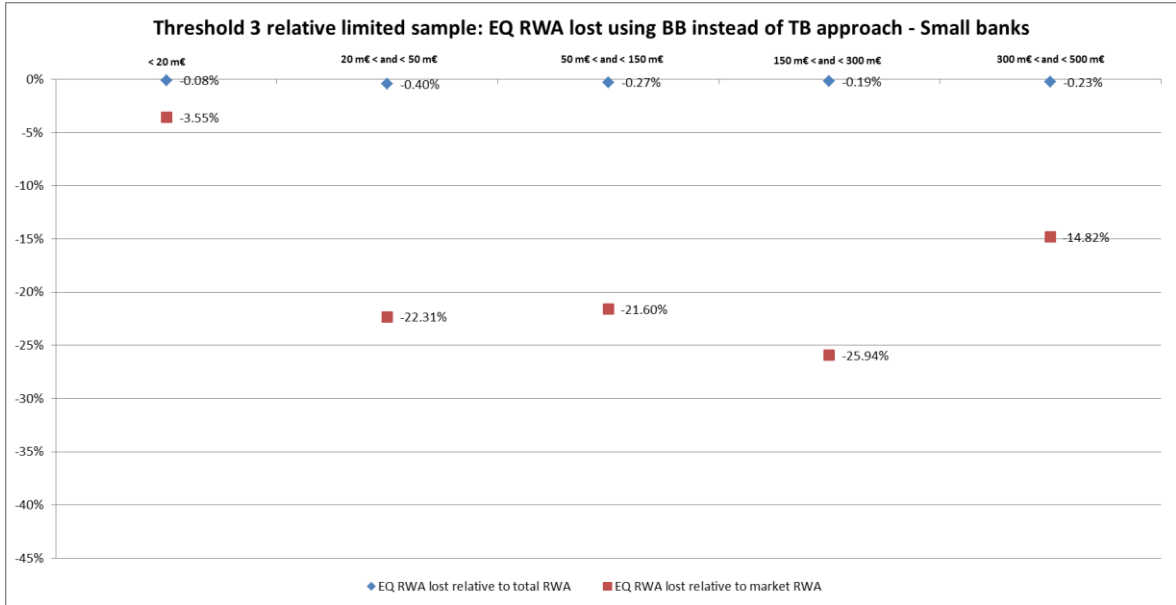
Cumulative impact relative to market RWAs and total RWAs under threshold 3 limited sample of applying the BB approach to EQ positions



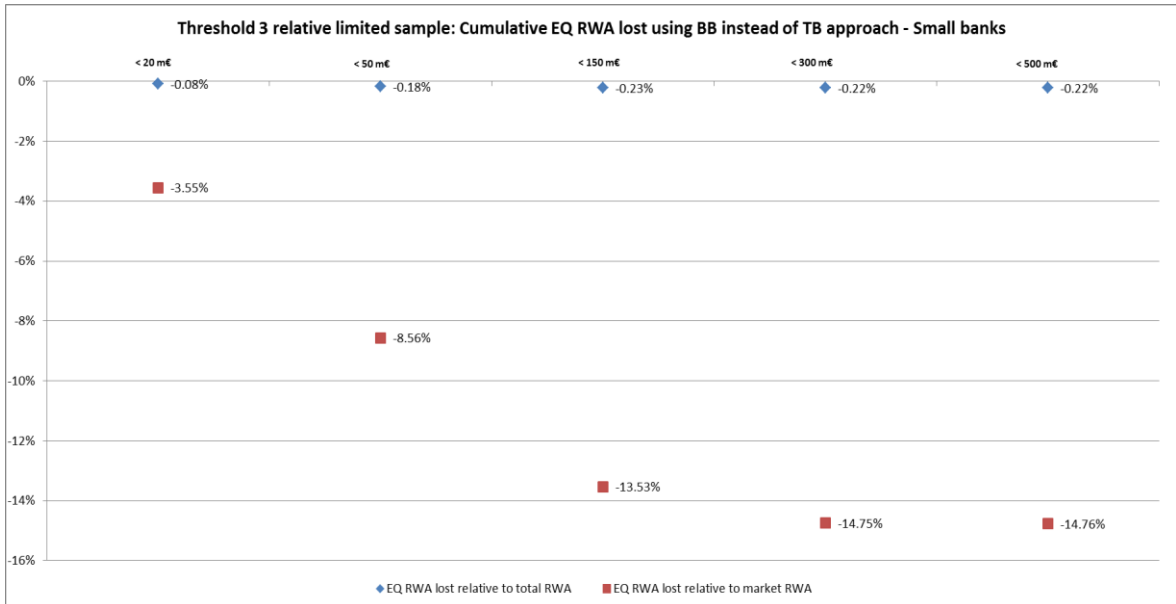


### Threshold 3 relative, limited sample

Impact relative to market RWAs and total RWAs under relative threshold 3 limited sample of applying the BB approach to EQ positions

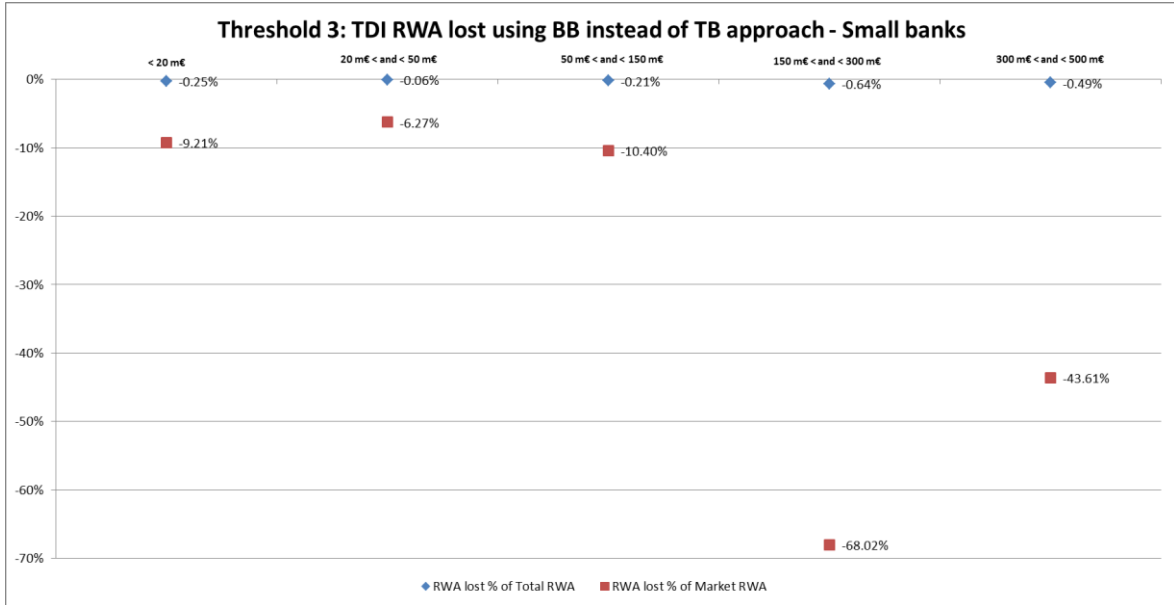


Cumulative impact relative to market RWAs and total RWAs under relative threshold 3 limited sample of applying the BB approach to EQ positions

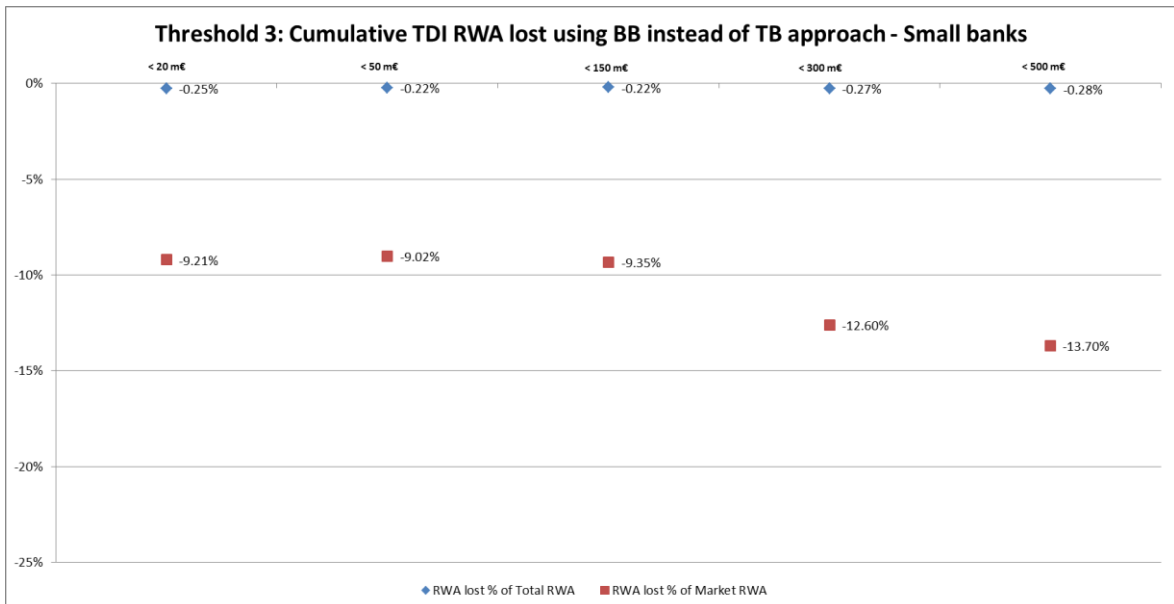


### Threshold 3 full sample

Impact relative to market RWAs and total RWAs under threshold 3 full sample of applying the BB approach to debt positions

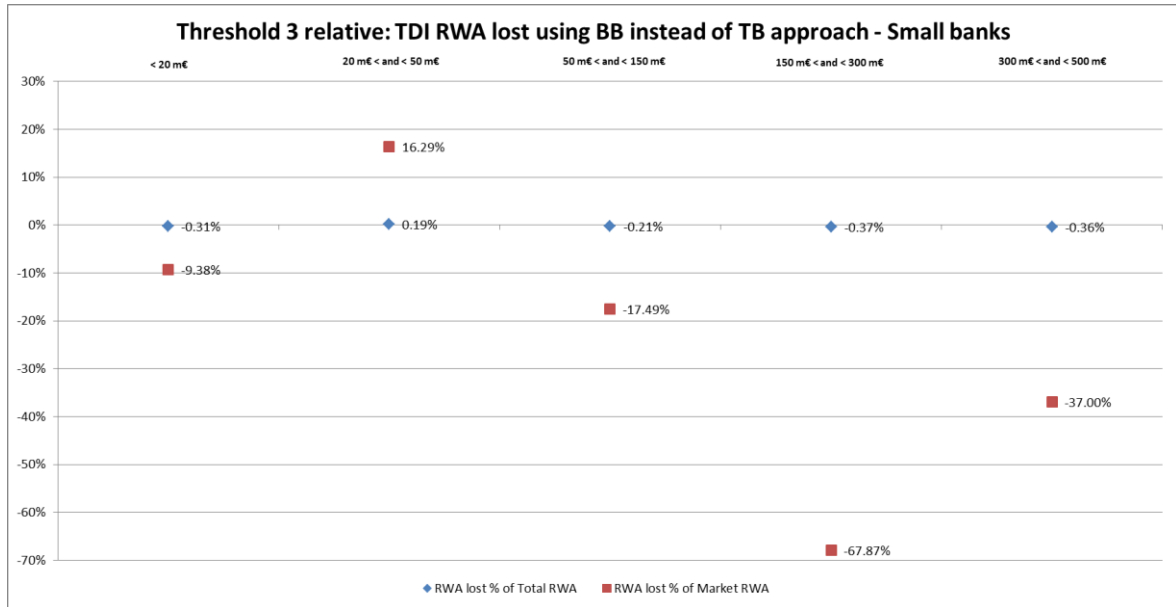


Cumulative impact relative to market RWAs and total RWAs under threshold 3 full sample of applying the BB approach to debt positions

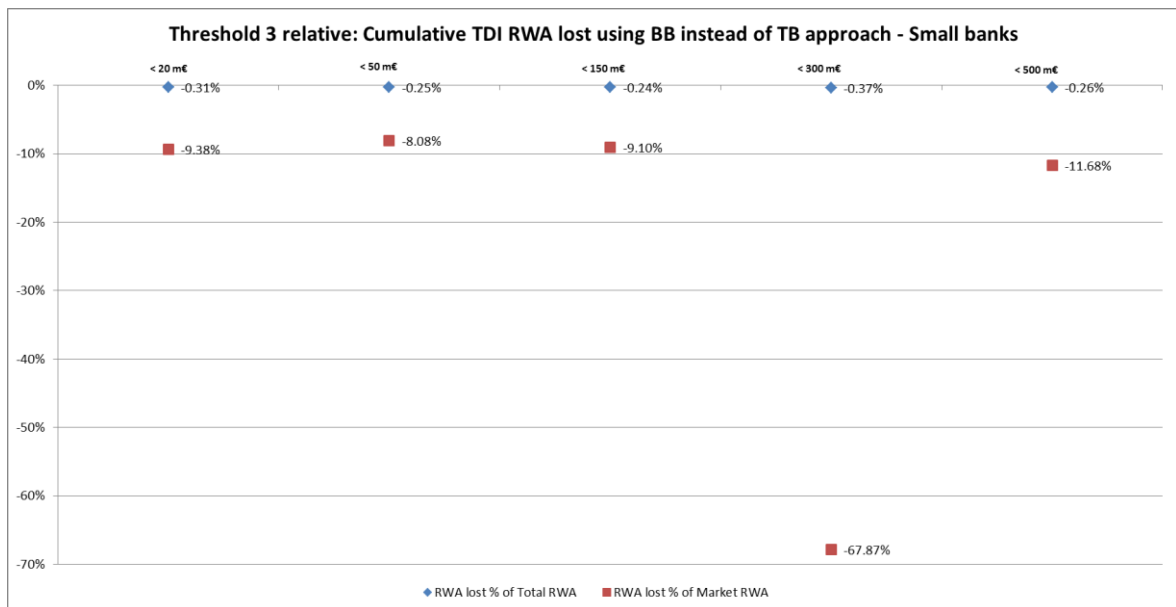


### Threshold 3 relative, full sample

Impact relative to market RWAs and total RWAs under relative threshold 3 full sample of applying the BB approach to debt positions

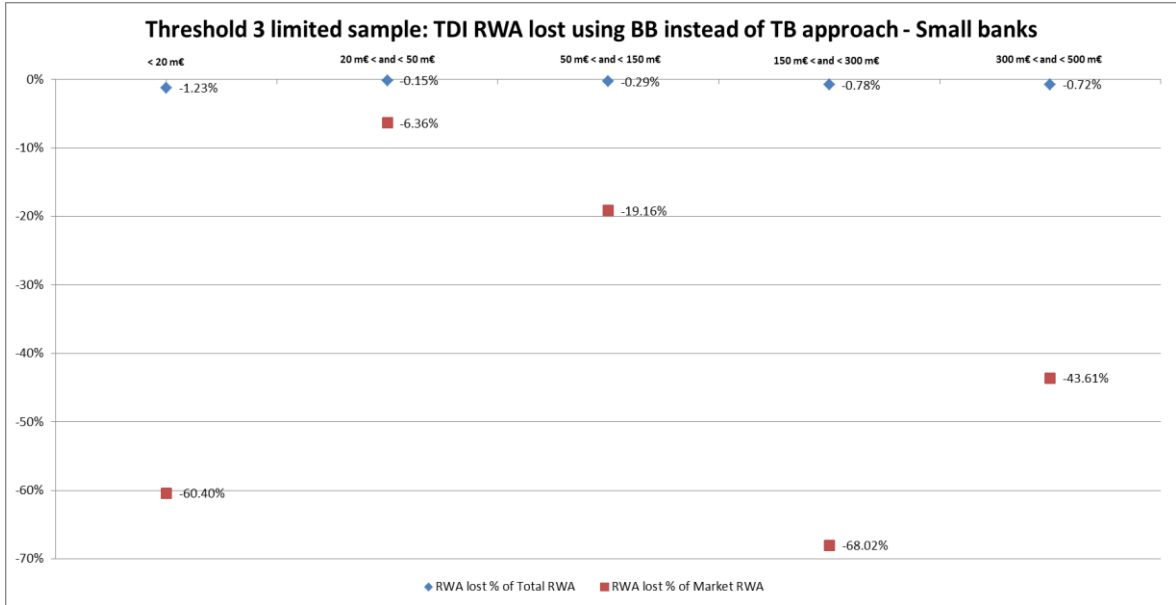


Cumulative impact relative to market RWAs and total RWAs under relative threshold 3 full sample of applying the BB approach to debt positions

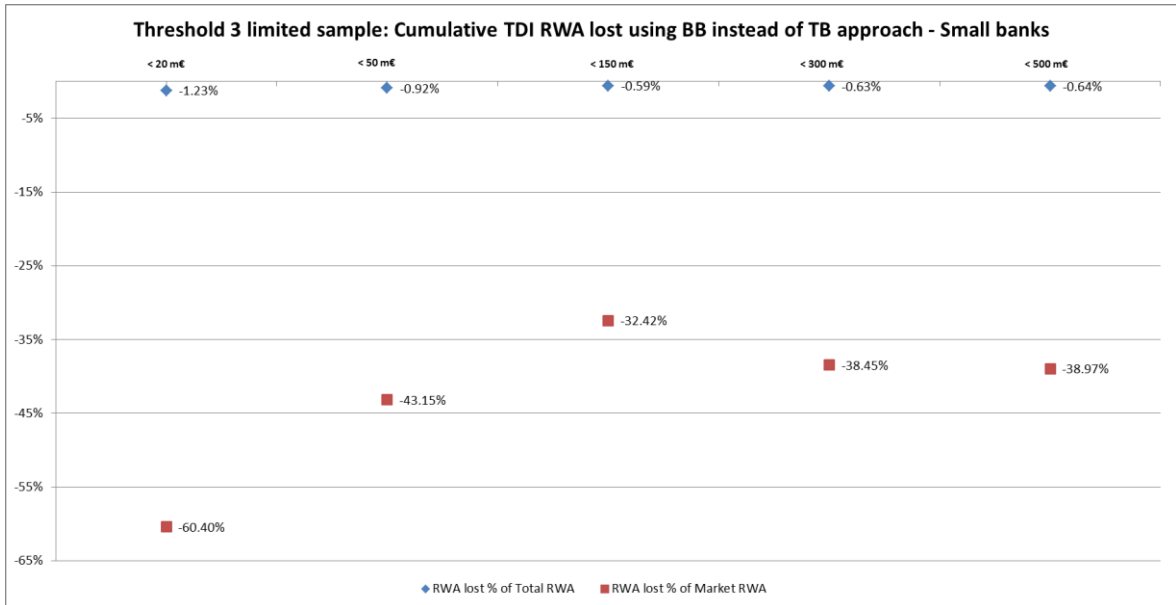


### Threshold 3 limited sample

Impact relative to market RWAs and total RWAs under threshold 3 limited sample of applying the BB approach to debt positions

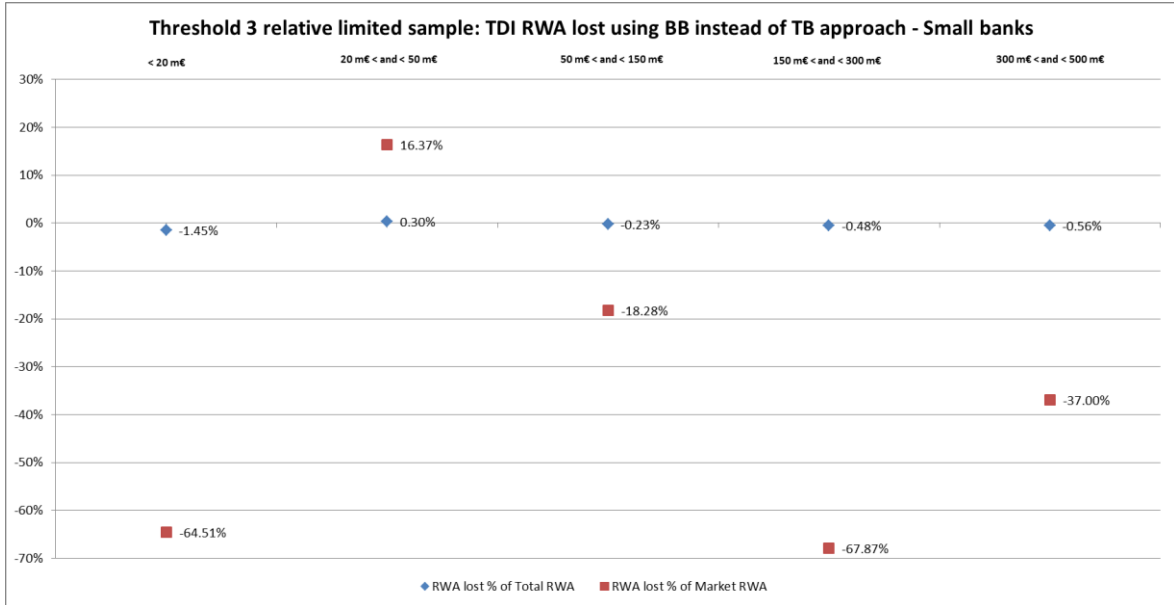


Cumulative impact relative to market RWAs and total RWAs under threshold 3 limited sample of applying the BB approach to debt positions

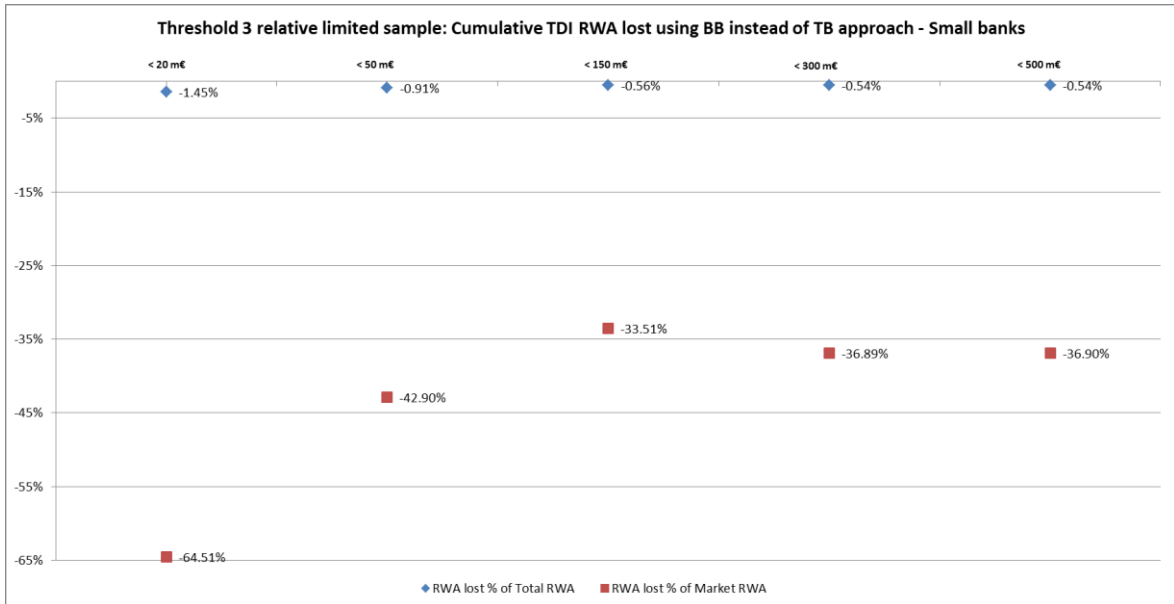


**Threshold 3 relative, limited sample**

Impact relative to market RWAs and total RWAs under relative threshold 3 limited sample of applying the BB approach to debt positions

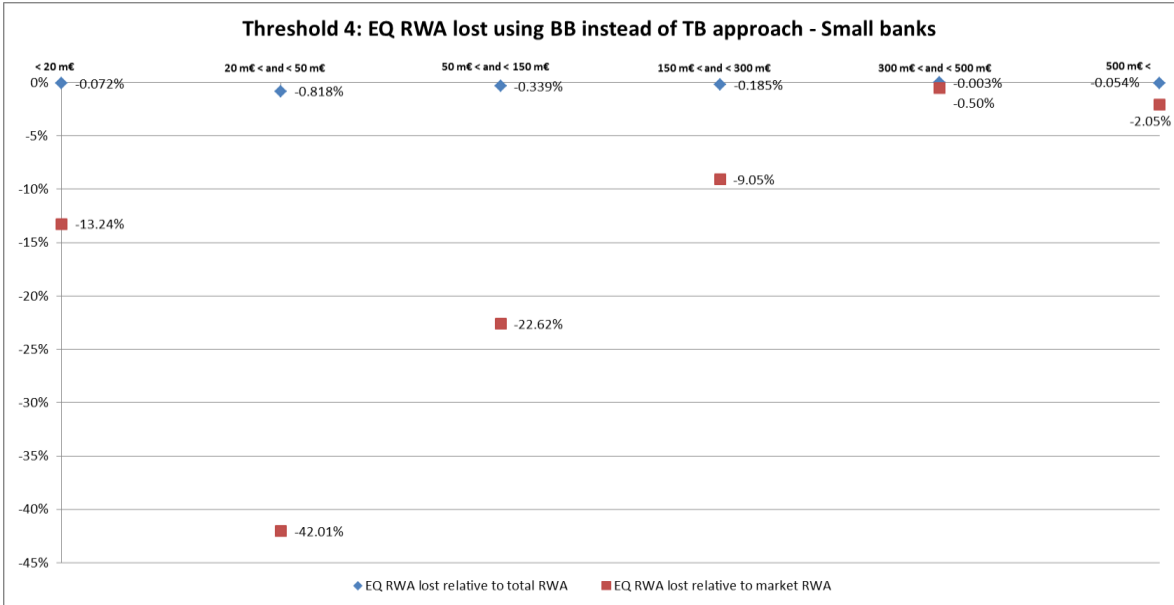


Cumulative impact relative to market RWAs and total RWAs under relative threshold 3 limited sample of applying the BB approach to debt positions

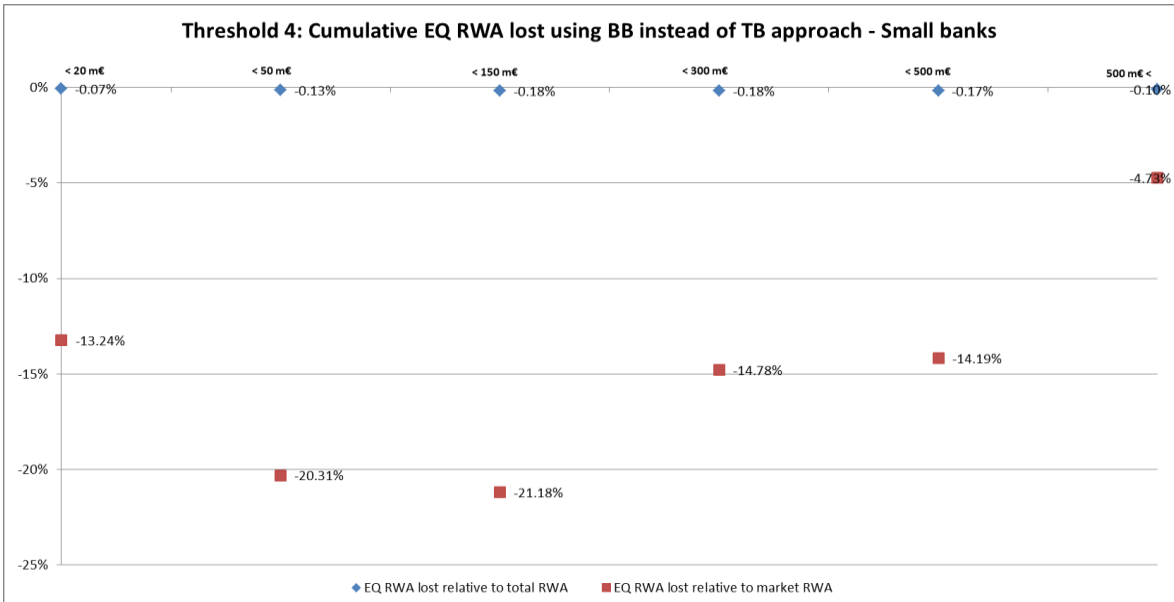


### Threshold 4 full sample

Impact relative to market RWAs and total RWAs under threshold 4 full sample of applying the BB approach to EQ positions

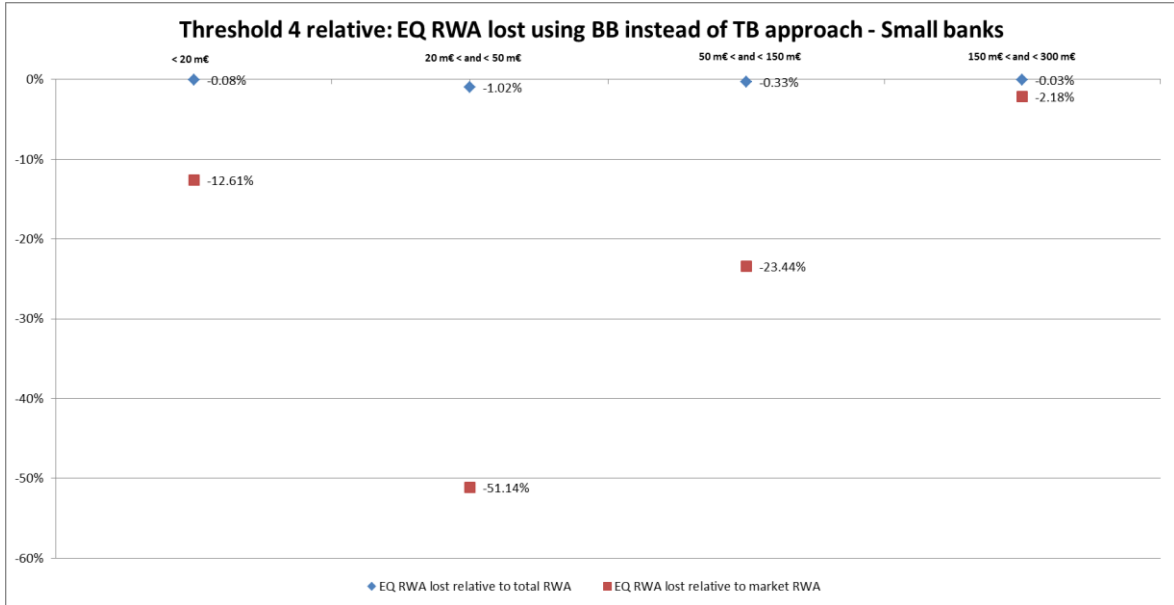


Cumulative impact relative to market RWAs and total RWAs under threshold 4 full sample of applying the BB approach to EQ positions

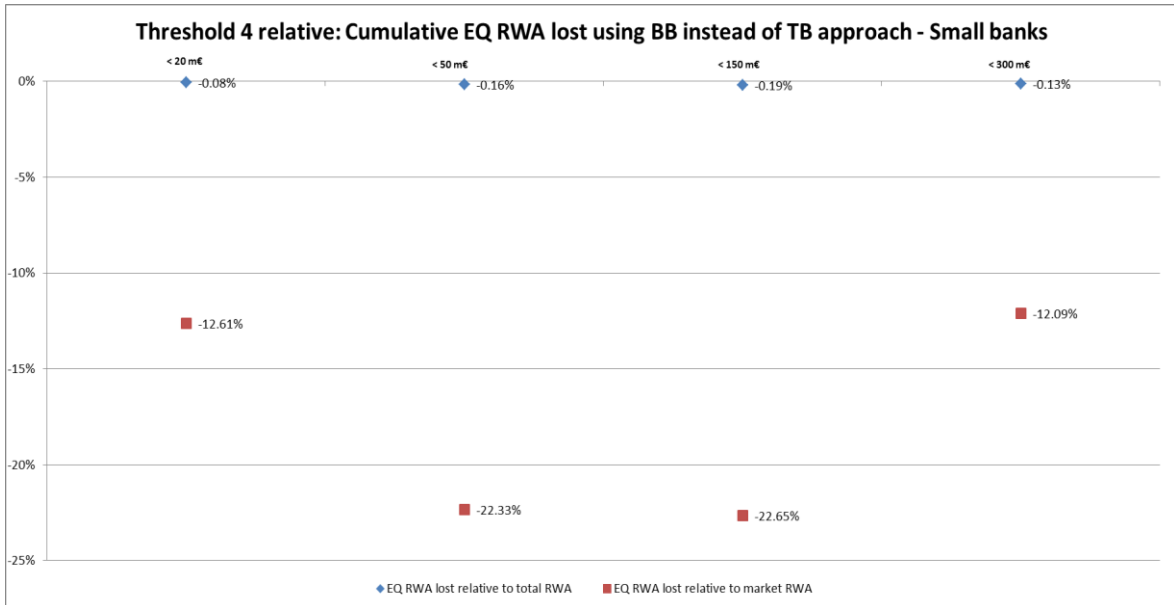


### Threshold 4 relative, full sample

Impact relative to market RWAs and total RWAs under relative threshold 4 full sample of applying the BB approach to EQ positions

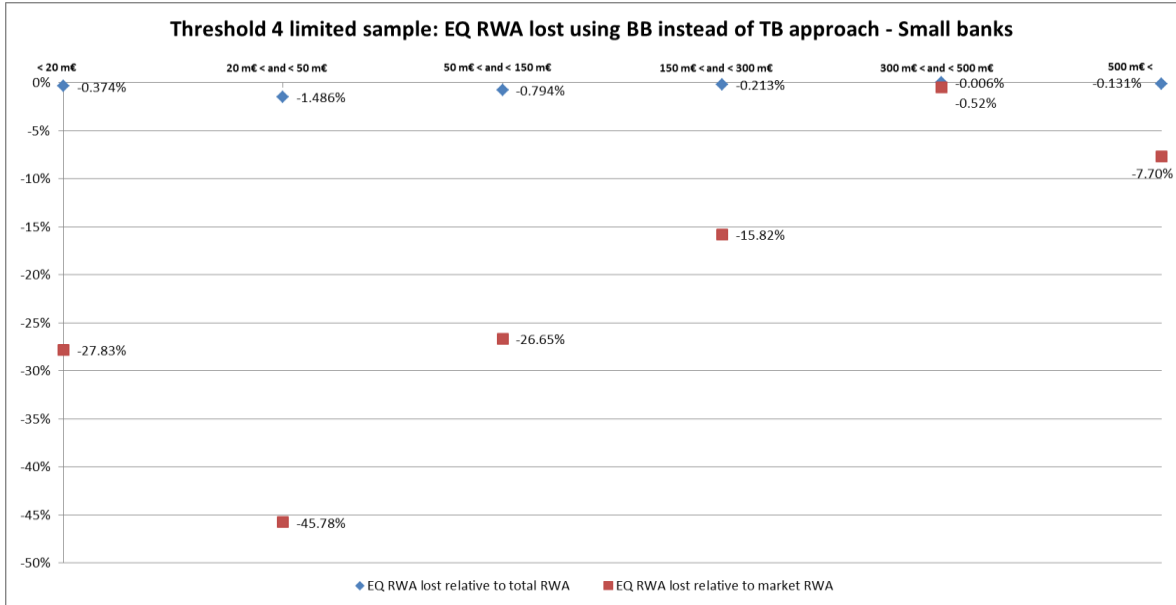


Cumulative impact relative to market RWAs and total RWAs under relative threshold 4 full sample of applying the BB approach to EQ positions

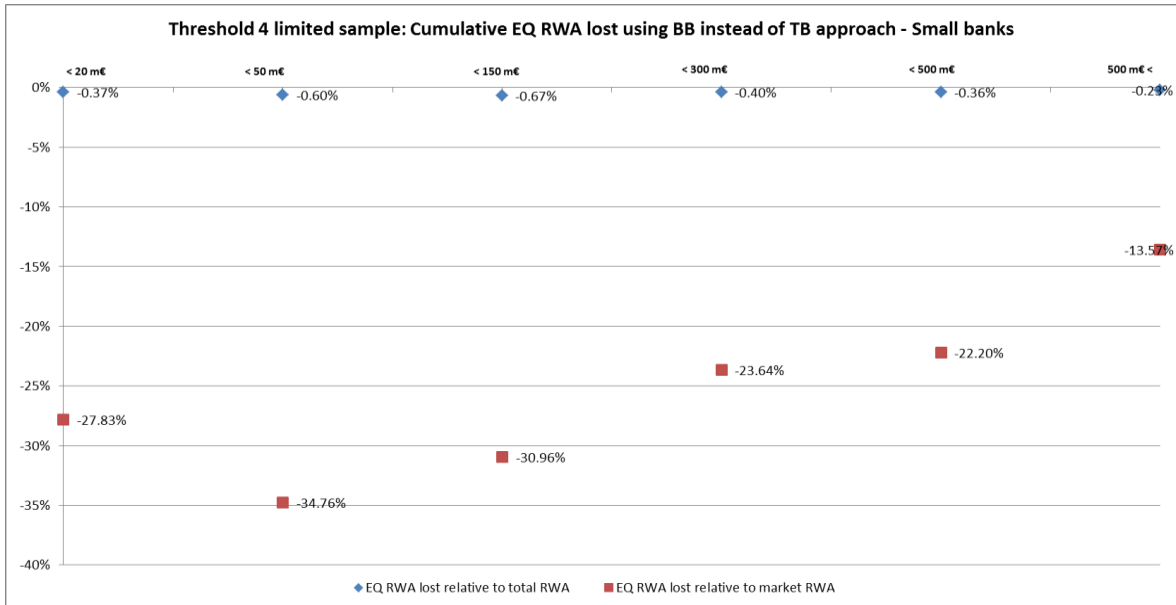


### Threshold 4 limited sample

Impact relative to market RWAs and total RWAs under threshold 4 limited sample of applying the BB approach to EQ positions



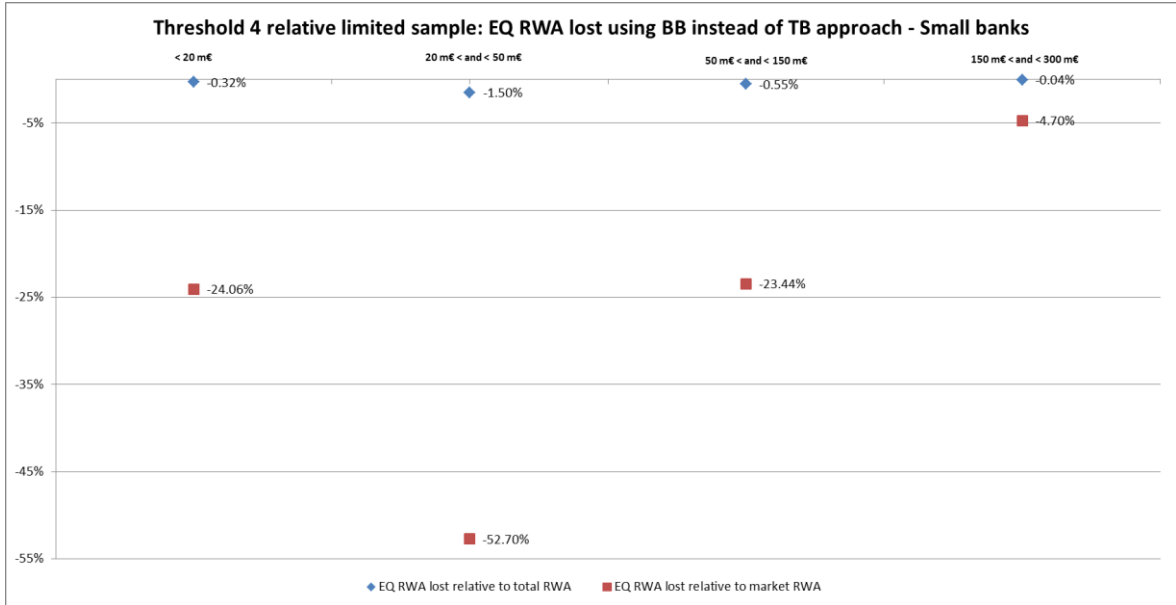
Cumulative impact relative to market RWAs and total RWAs under threshold 4 limited sample of applying the BB approach to EQ positions



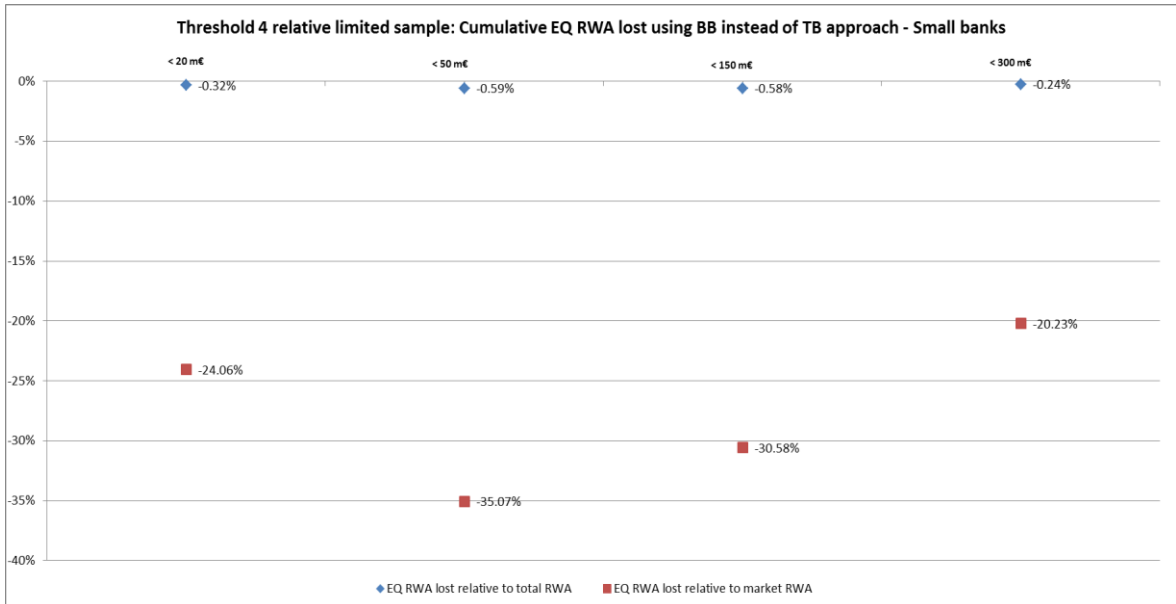


**Threshold 4 relative, limited sample**

Impact relative to market RWAs and total RWAs under relative threshold 4 limited sample of applying the BB approach to EQ positions

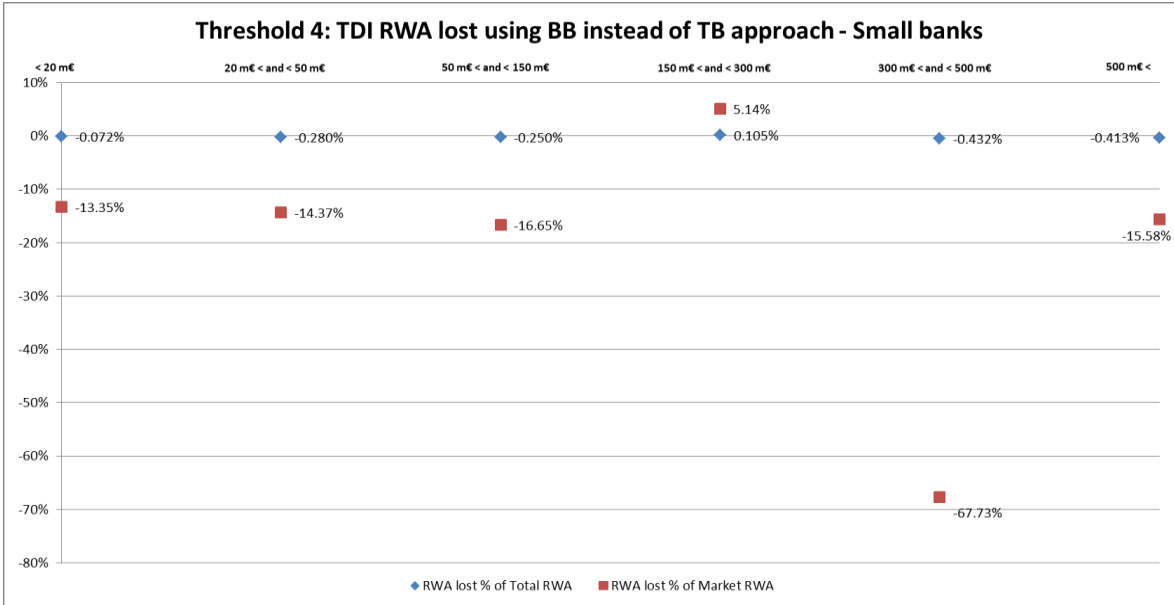


Cumulative impact relative to market RWAs and total RWAs under relative threshold 4 limited sample of applying the BB approach to EQ positions

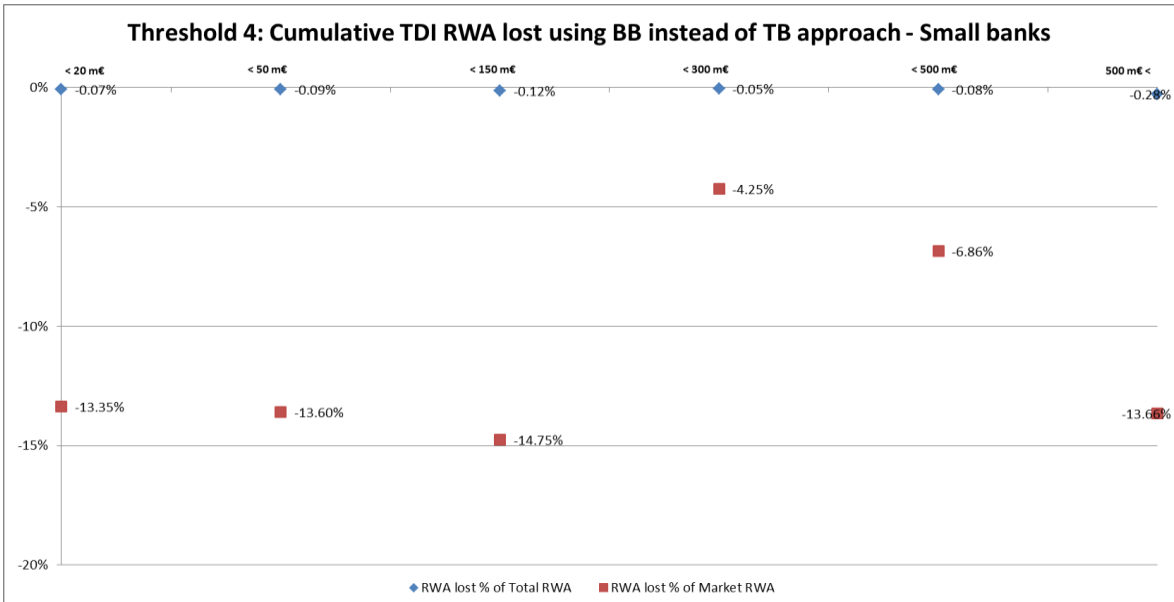


### Threshold 4 full sample

Impact relative to market RWAs and total RWAs under threshold 4 full sample of applying the BB approach to debt positions

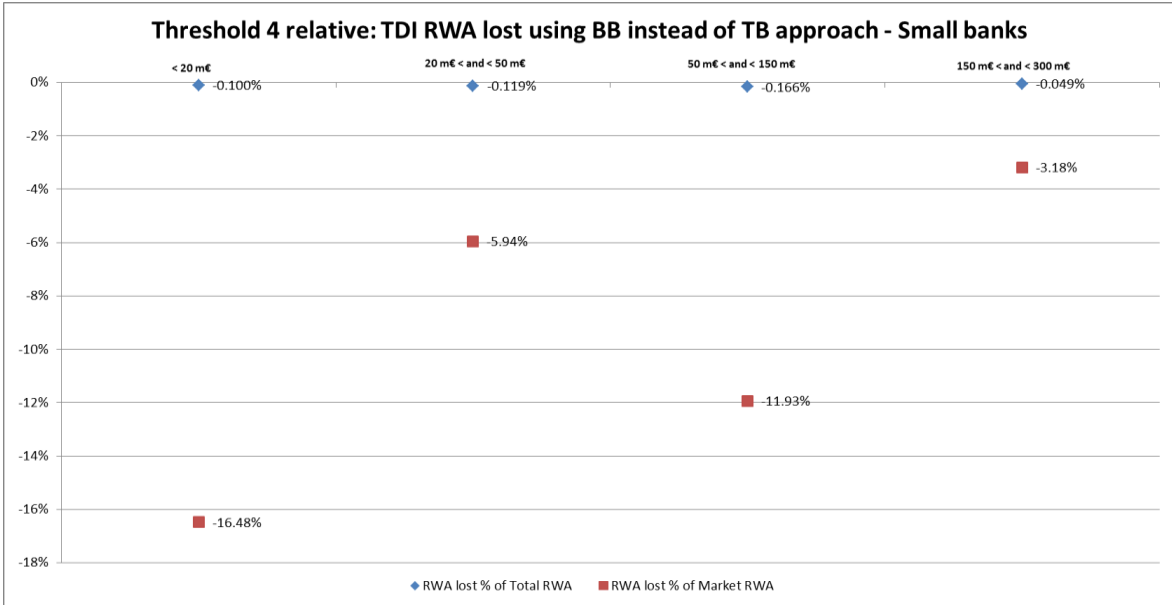


Cumulative impact relative to market RWAs and total RWAs under threshold 4 full sample of applying the BB approach to debt positions

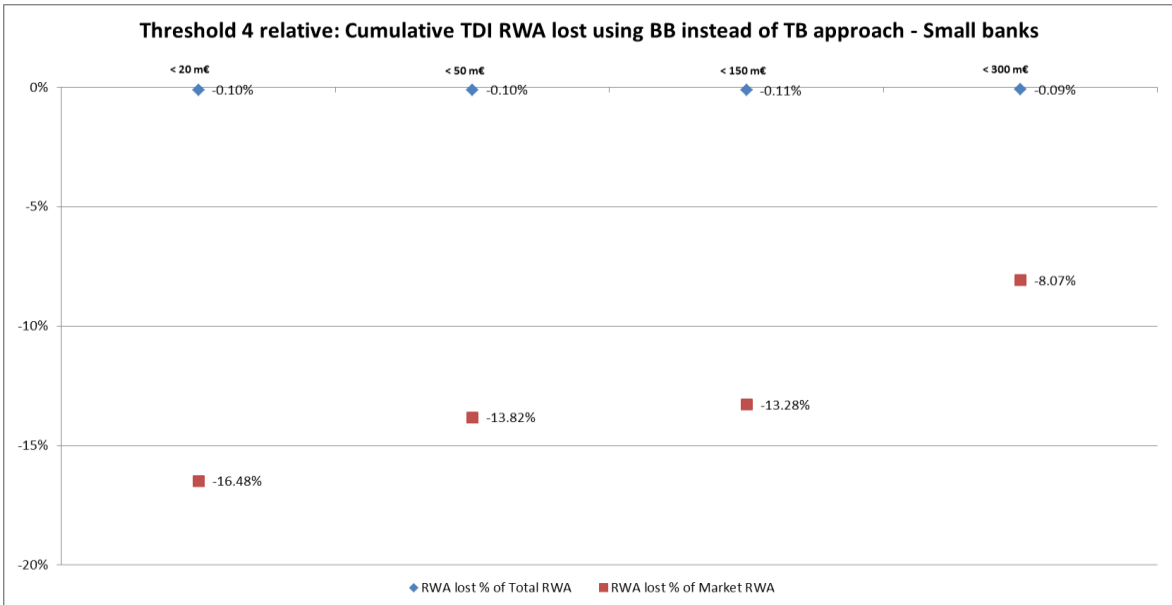


**Threshold 4 relative, full sample**

Impact relative to market RWAs and total RWAs under relative threshold 4 full sample of applying the BB approach to debt positions

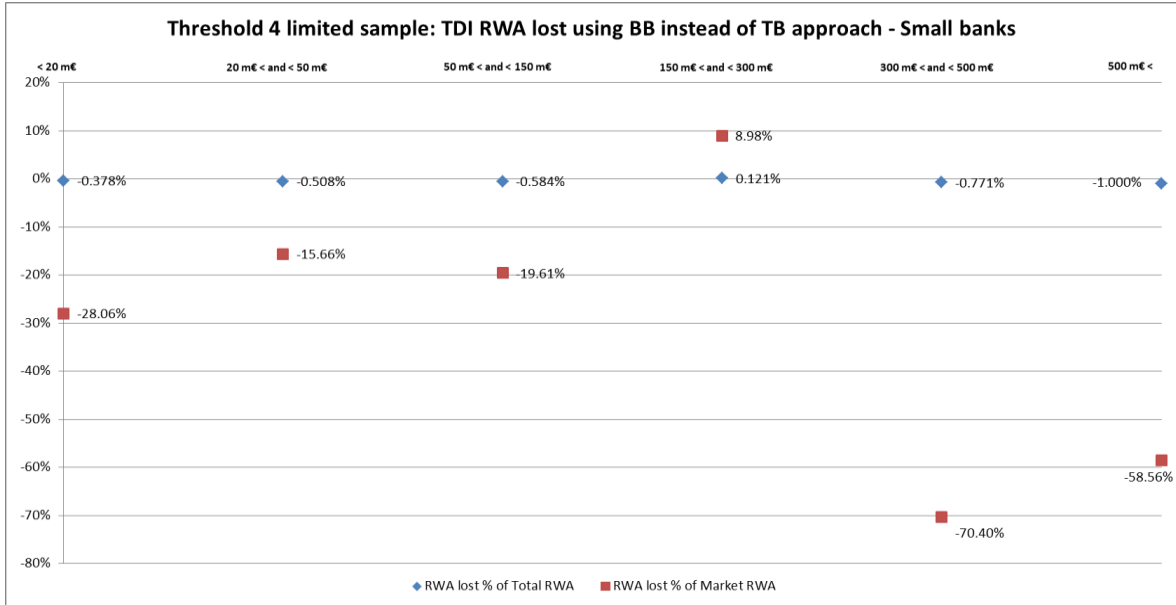


Cumulative impact relative to market RWAs and total RWAs under relative threshold 4 full sample of applying the BB approach to debt positions

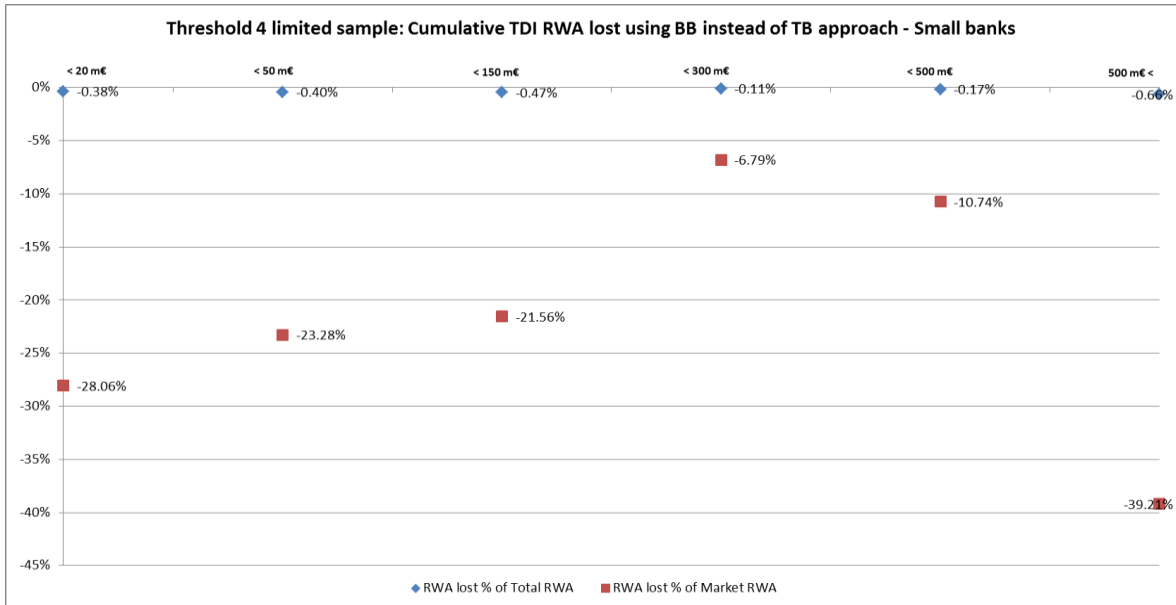


### Threshold 4 limited sample

Impact relative to market RWAs and total RWAs under threshold 4 limited sample of applying the BB approach to debt positions

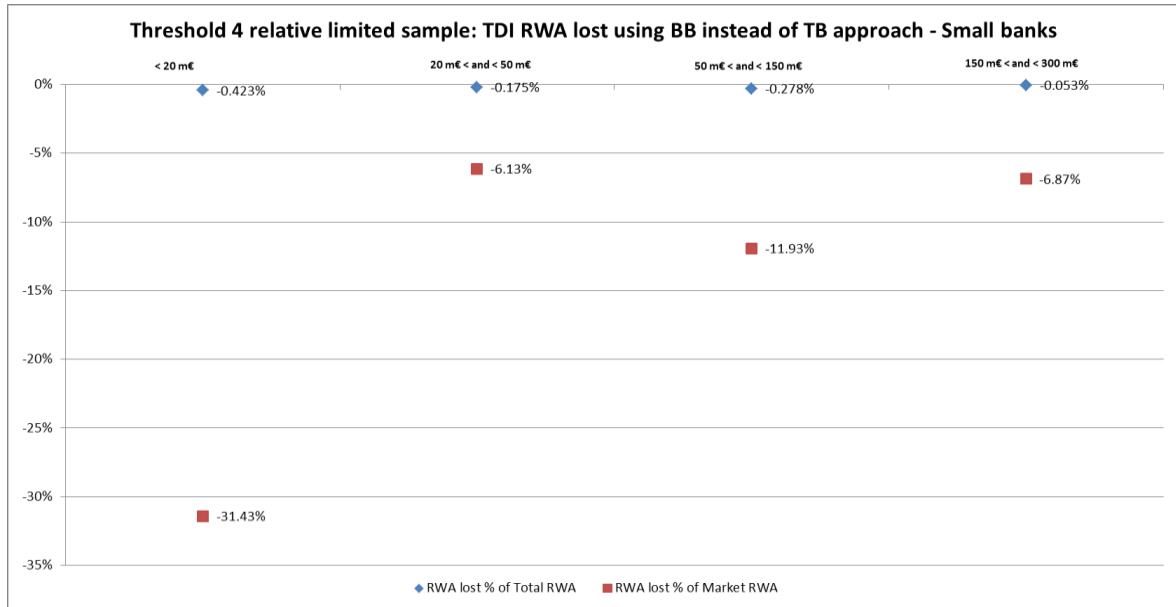


Cumulative impact relative to market RWAs and total RWAs under threshold 4 limited sample of applying the BB approach to debt positions



### Threshold 4 relative, limited sample

Impact relative to market RWAs and total RWAs under relative threshold 4 limited sample of applying the BB approach to debt positions



Cumulative impact relative to market RWAs and total RWAs under relative threshold 4 limited sample of applying the BB approach to debt positions

