

***Commissione Rischi di Mercato – Prudent Valuation
Overview e stato avanzamento lavori***

**X Convention AIFIRM
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Summary

1. Prudent valuation

- Prudent valuation timeline
- Overview
- Hot topics
- EBA QIS
- AVA calculation: simplified vs core approach
- Price distribution and AVA overlapping
- Prudent valuation framework

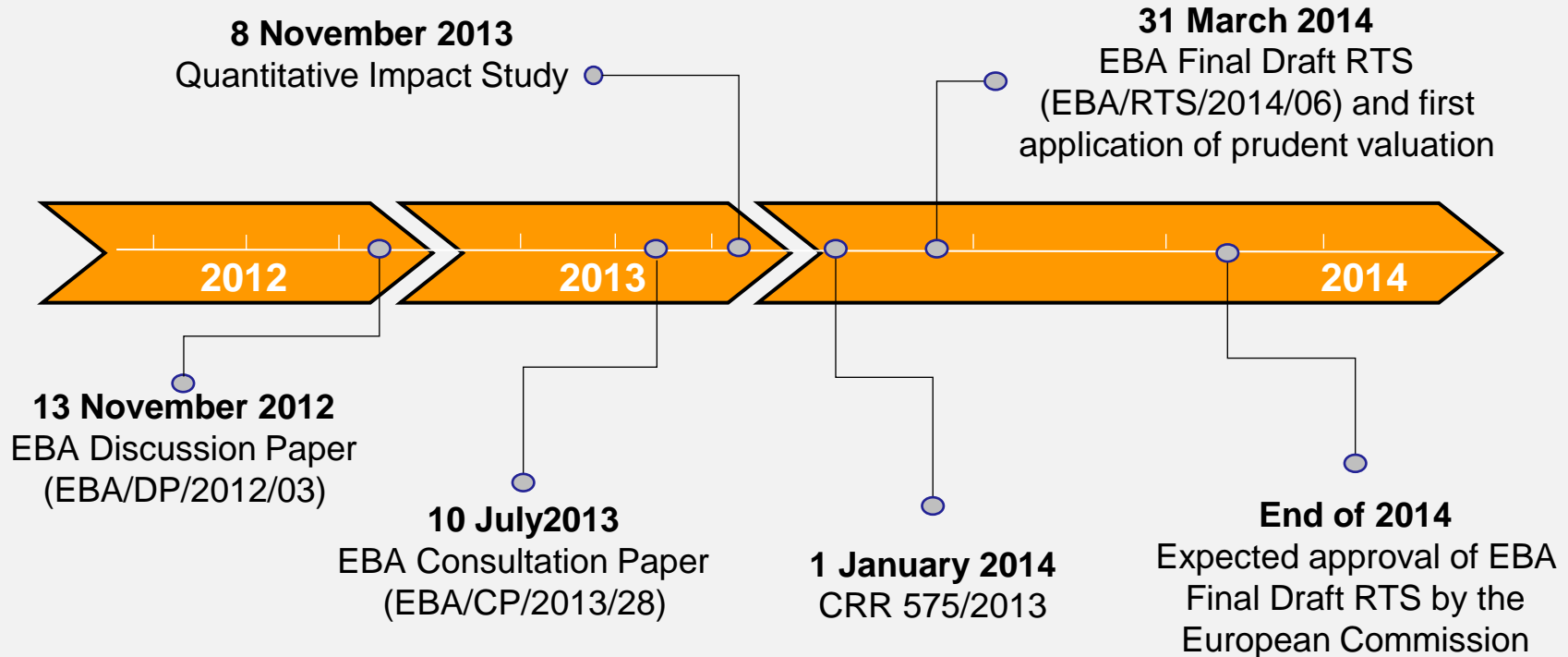
2. Commissione rischi di mercato

- Stato avanzamento lavori

1: Prudent valuation

Prudent valuation timeline

PRUDENT VALUATION - ROADMAP



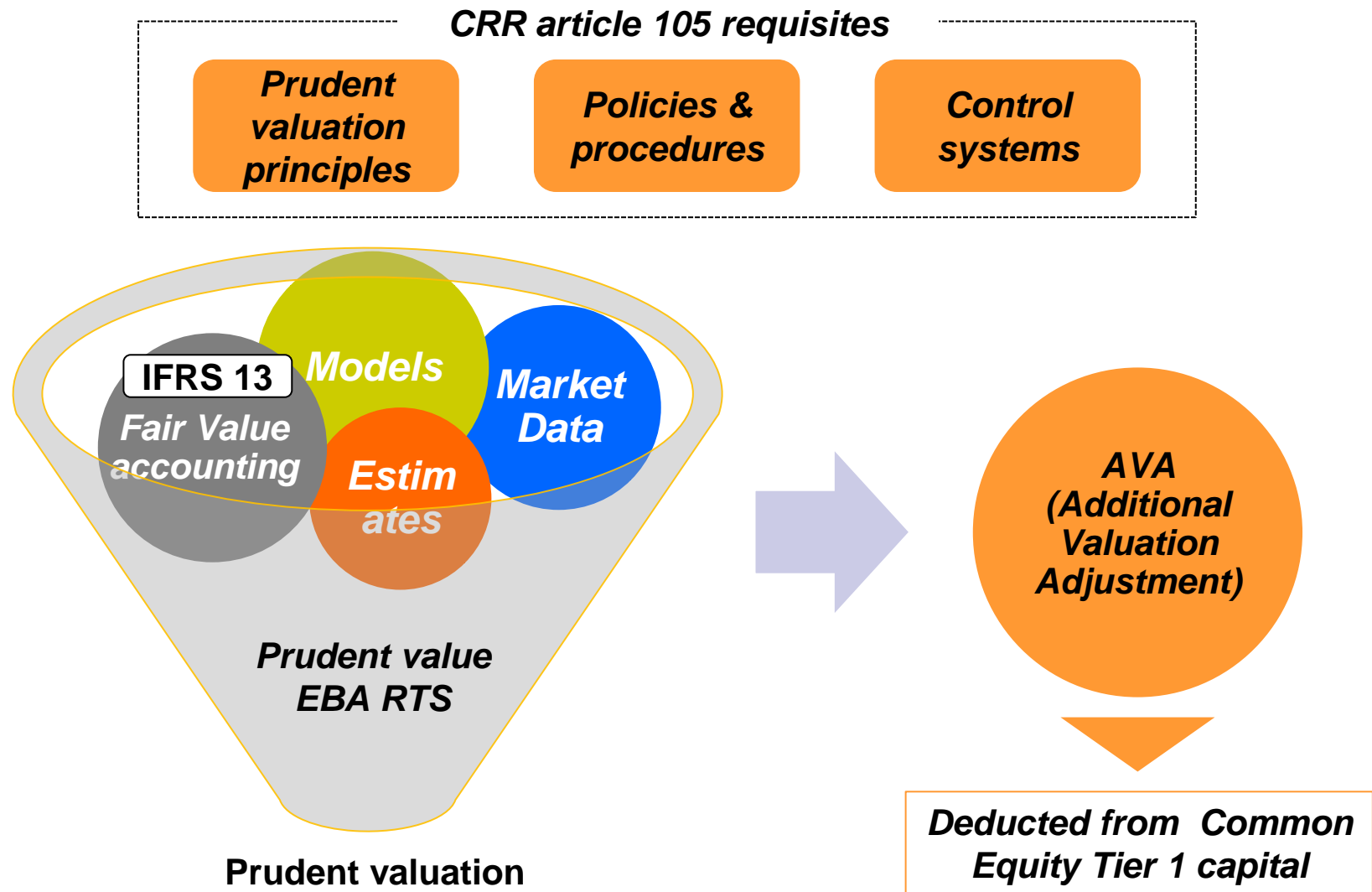
1: Prudent valuation

Overview

- Articles 34 and 105 of **Capital Requirements Regulation** (CRR, n. 575/2013), in force since 1 January 2014, require financial institutions to apply **prudent valuation to all fair value positions** (included positions outside the trading book), setting a new **prudential requisite for regulatory capital including valuation uncertainty**.
- The difference between the prudent value and the fair value, accounted in the institution's balance sheet, is called "**Additional Valuation Adjustment**" (AVA), and is directly deducted from the Core Equity Tier 1 (CET1) capital.
- Following the CRR, the **EBA** published a Discussion Paper (EBA/DP/2012/03), a Consultation Paper (EBA/CP/2013/28), and a **Final Draft** (EBA/RTS/2014/06), to be approved by the EU Commission, setting the Regulatory Technical Standards (RTS) for prudent valuation.
- The EBA Final Draft defines the AVA calculation methodology using two alternative approaches, named **Simplified Approach** and **Core Approach**. The Final Draft sets also the requirements on systems, controls and documentation that should support the prudent valuation process.

1: Prudent valuation

Overview



1: Prudent valuation

Hot topics

- The CRR is in place since 1st Jan. 2014, so prudent valuation is mandatory, but EBA RTS are still waiting final approval by EU Commission, thus there is some **regulatory uncertainty**.
- The **potential impact** of prudent valuation on the capital reserves may be **huge** (see QIS results)
- AVA calculation for all fair value positions **under the core approach** is **resource intensive**
- Achieving the required 90% level of certainty in the prudent value is **hard to do in practice**
- AVA Investing & Funding cost is **FVA**, so **banks still not accounting FVA in their balance sheets must account the full FVA in the prudent valuation**, with the benefit of the diversification factor 0.5. Banks already accounting FVA must calculate a prudent FVA, e.g. stressing the funding curve.
- **Backtesting** AVA market price uncertainty and close out costs is rather difficult

1: Prudent valuation

EBA Quantitative Impact Exercise Nov. 2013

- The EBA conducted a QIS to estimate the total impact of the requirements of the RTS including 59 banks across 15 jurisdictions, with the following results.

	Number of Institutions
UK	16
France	4
Sweden	5
Austria	4
Belgium	2
Germany	2
Spain	2
Greece	4
Croatia	3
Italy	2
Norway	4
Lithuania	3
Latvia	1
Netherlands	4
Portugal	3
TOTAL	59

All amounts in €m	AVA €m	% of CET1	% of Fair Value Balance Sheet
Small	53	0.18%	0.10%
Medium	634	0.83%	0.10%
Large	12,743	1.57%	0.07%
Total	13,431	1.46%	0.07%

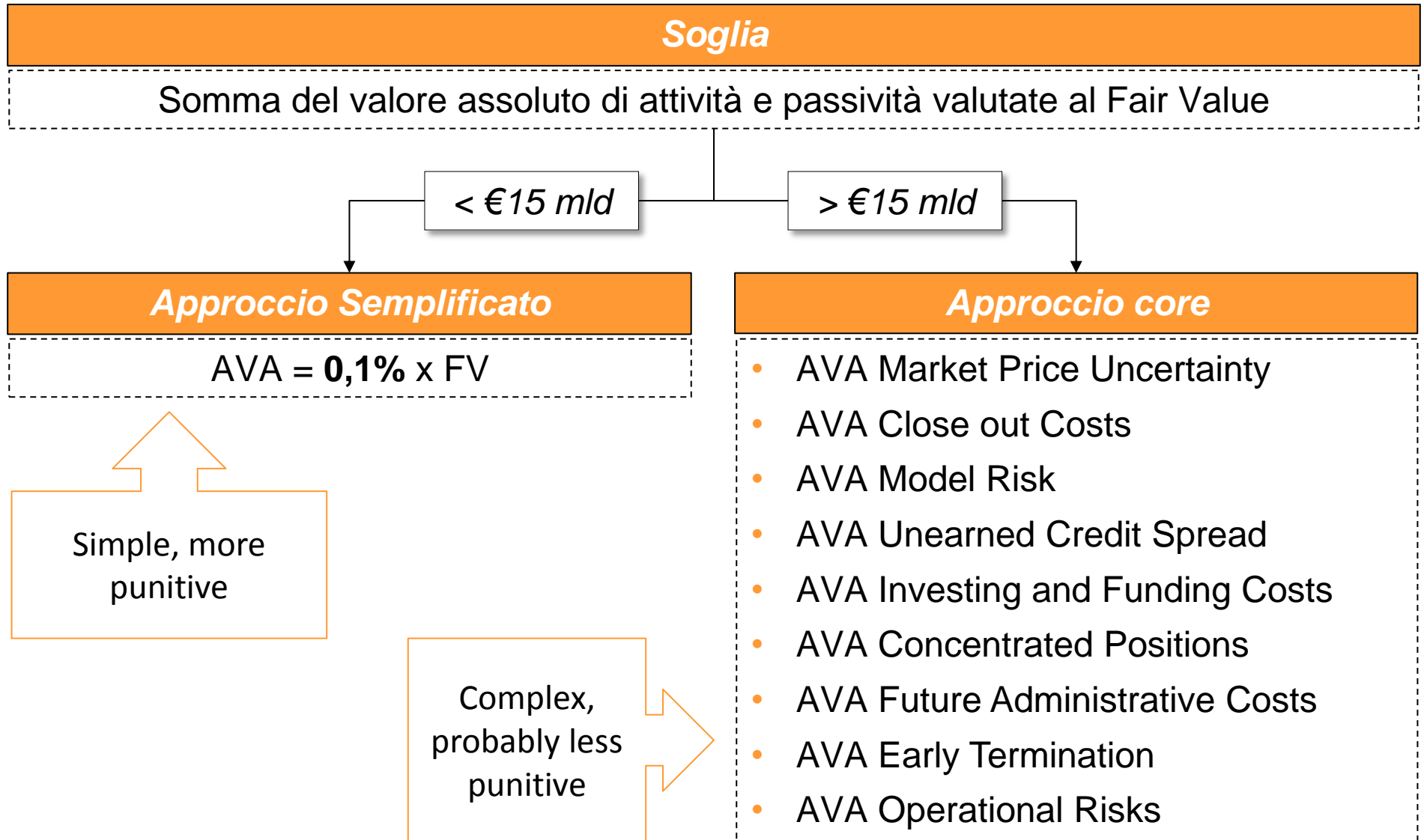


Average
227 €mln
per bank

- Small banks: < EUR 15 billion
- Medium banks: between EUR 15 bln and EUR 100 bln
- Large banks: > EUR 100 billion

1: Prudent valuation

Approaches: simplified vs core



1: Prudent valuation

Price distribution [1/3]

- **CRR Article 105**

requires to determine a prudent value that achieves an “... *an appropriate degree of certainty* having regard to the dynamic nature of trading book positions, the demands of prudential soundness and the mode of operation and purpose of capital requirements in respect of trading book positions”.

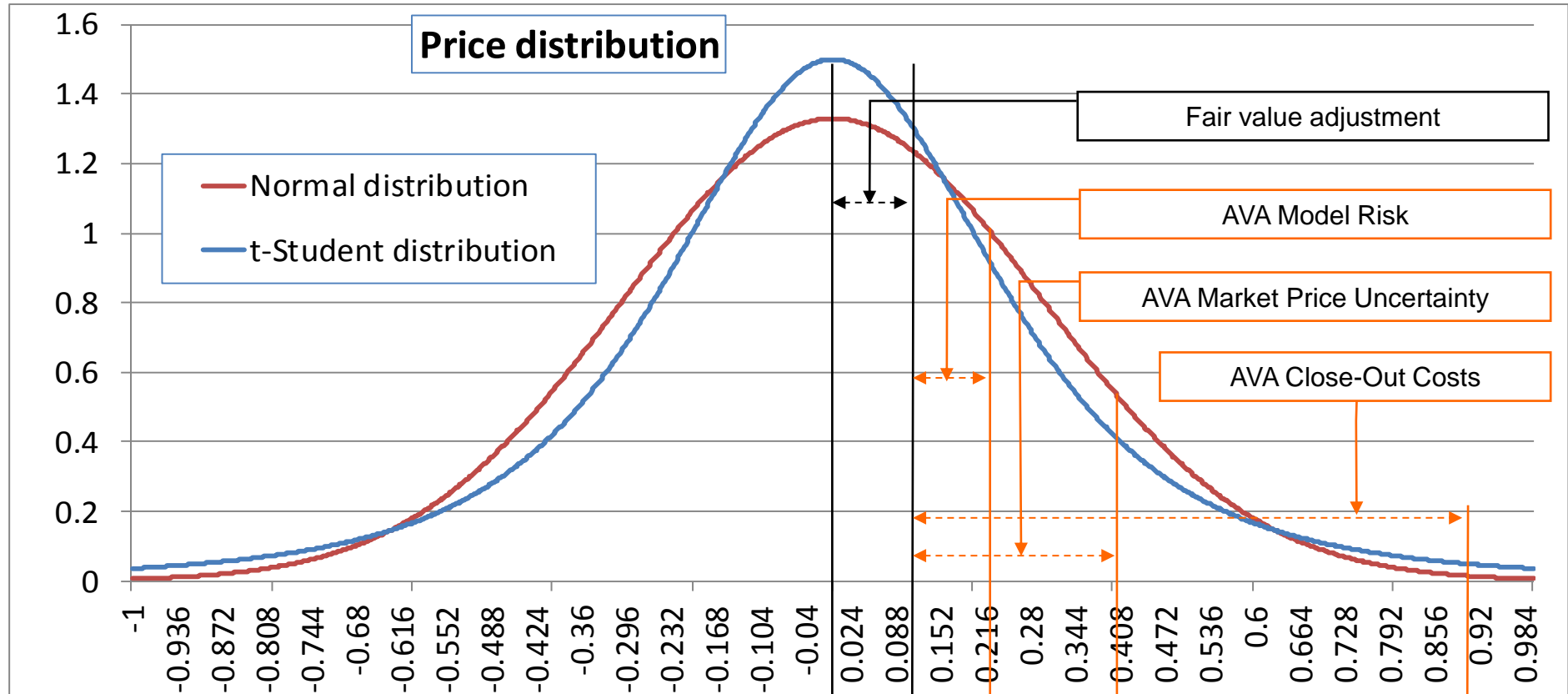
- **EBA Regulatory Technical Standards**

- “Where possible, the prudent value of a position is linked to a range of plausible values and a specified target level of certainty (90%)”;
- “In all other cases, an *expert-based approach* is specified, together with the key factors that should be included in that approach. In these cases, *the same target level of certainty as above (90%)* is set for the calibration of the AVAs.”

1: Prudent valuation

Price distribution [2/3]

Relationships between fair value, fair value adjustment, prudent value, AVA market price uncertainty, AVA close out cost, AVA model risk,



$$\text{AVA} = (\text{MPU} + \text{CoC} + \text{MR}) / 2$$

$$\text{Prudent Value} = \text{Fair Value Adjusted} + \text{AVA}$$

1: Prudent valuation

Price distribution [3/3]

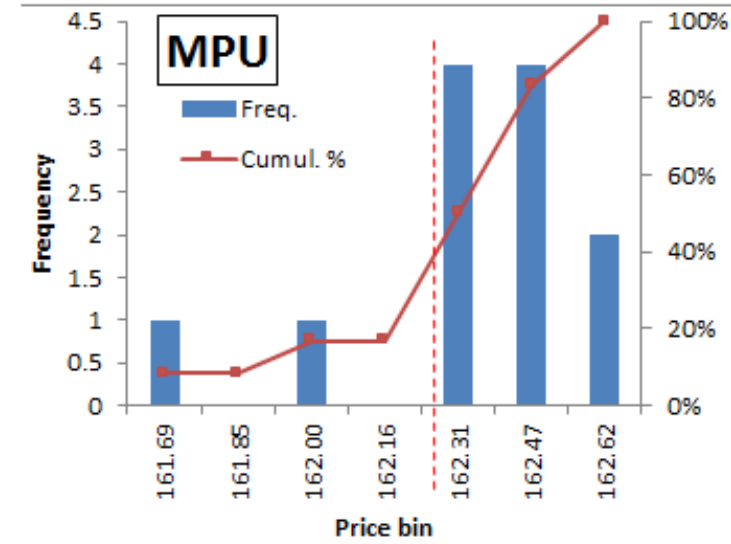
Bond price distribution

Valuation date	ISIN	Source	Bid	Ask	Mid	Bid-Ask	Mid-Bid	Ask-Mid
30/Jun/2014	XXX	Contr. 1	161.61	162.34	161.97	0.73	0.37	0.37
30/Jun/2014	XXX	Contr. 2	162.16	163.08	162.62	0.92	0.46	0.46
30/Jun/2014	XXX	Contr. 3	161.84	162.60	162.22	0.75	0.38	0.38
30/Jun/2014	XXX	Contr. 4	161.66	163.05	162.36	1.39	0.70	0.70
30/Jun/2014	XXX	Contr. 5	161.74	162.98	162.36	1.24	0.62	0.62
30/Jun/2014	XXX	Contr. 6	162.02	162.48	162.25	0.46	0.23	0.23
30/Jun/2014	XXX	Contr. 7	160.91	162.48	161.69	1.57	0.79	0.79
30/Jun/2014	XXX	Contr. 8	160.86	163.85	162.35	2.98	1.49	1.49
30/Jun/2014	XXX	Contr. 9	162.18	162.79	162.49	0.60	0.30	0.30
30/Jun/2014	XXX	Contr. 10	161.68	163.00	162.34	1.32	0.66	0.66
30/Jun/2014	XXX	Contr. 11	160.73	163.59	162.16	2.85	1.43	1.43
30/Jun/2014	XXX	Contr. 12	161.85	162.60	162.23	0.75	0.38	0.38
30/Jun/2014	XXX	Average	161.60	162.90	162.25	1.30	0.65	0.65

Market price uncertainty

Point	Mid	Rank	Percent	Bin	Freq.	Cumul. %
2	162.62	1	100.00%	161.69	1	8.33%
9	162.49	2	90.90%	161.85	0	8.33%
5	162.36	3	81.80%	162.00	1	16.67%
4	162.36	4	72.70%	162.16	0	16.67%
8	162.35	5	63.60%	162.31	4	50.00%
10	162.34	6	54.50%	162.47	4	83.33%
6	162.25	7	45.40%	162.62	2	100.00%
12	162.23	8	36.30%			
3	162.22	9	27.20%			
11	162.16	10	18.10%			
1	161.97	11	9.00%			
7	161.69	12	0.00%			

Long:	PV	161.97	Short:	PV	-162.49
	AVA	0.14		AVA	0.12

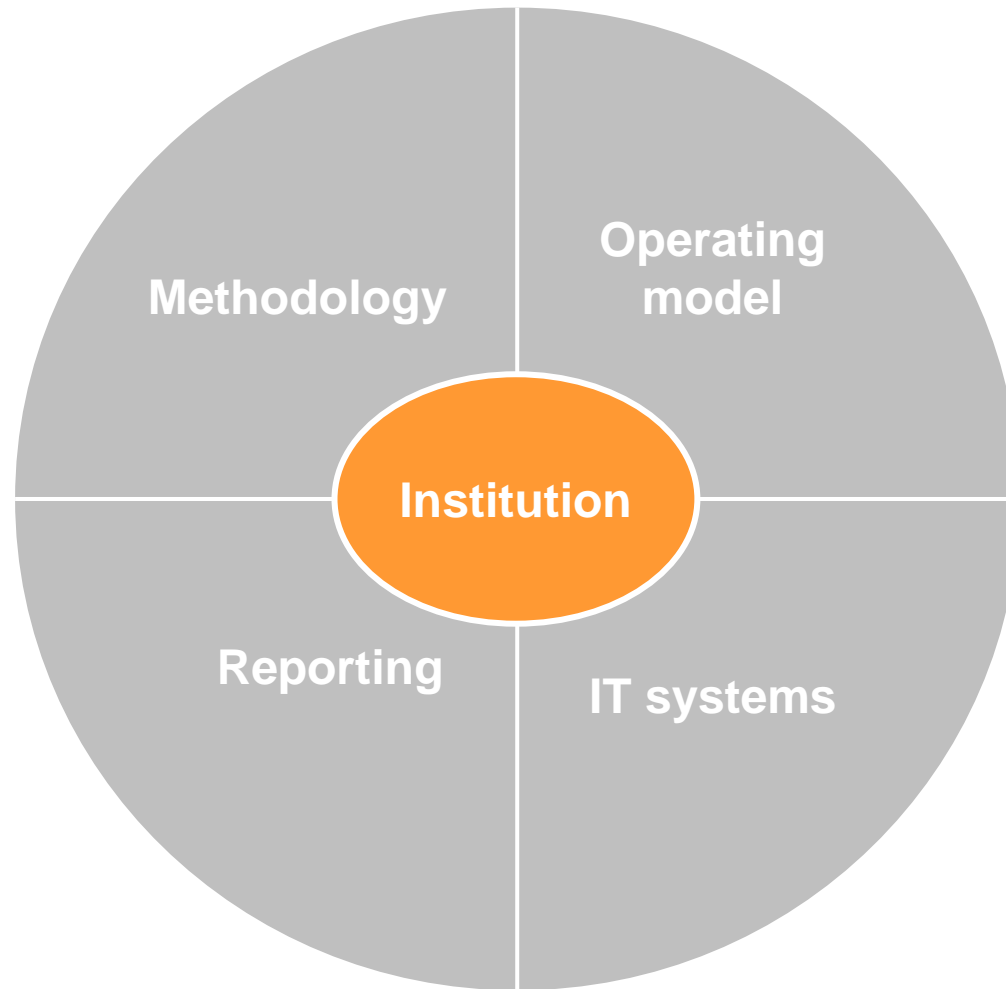


Example of **AVA MPU** calculation for a security.

- Top left: market bid and ask prices. FV is computed as average mid price = 162.90.
- Bottom left: ranking and percentiles of mid prices, AVA MPU for long and short positions, equal to 0.14 and 0.12, respectively.
- Top right: distribution chart.

1: Prudent valuation

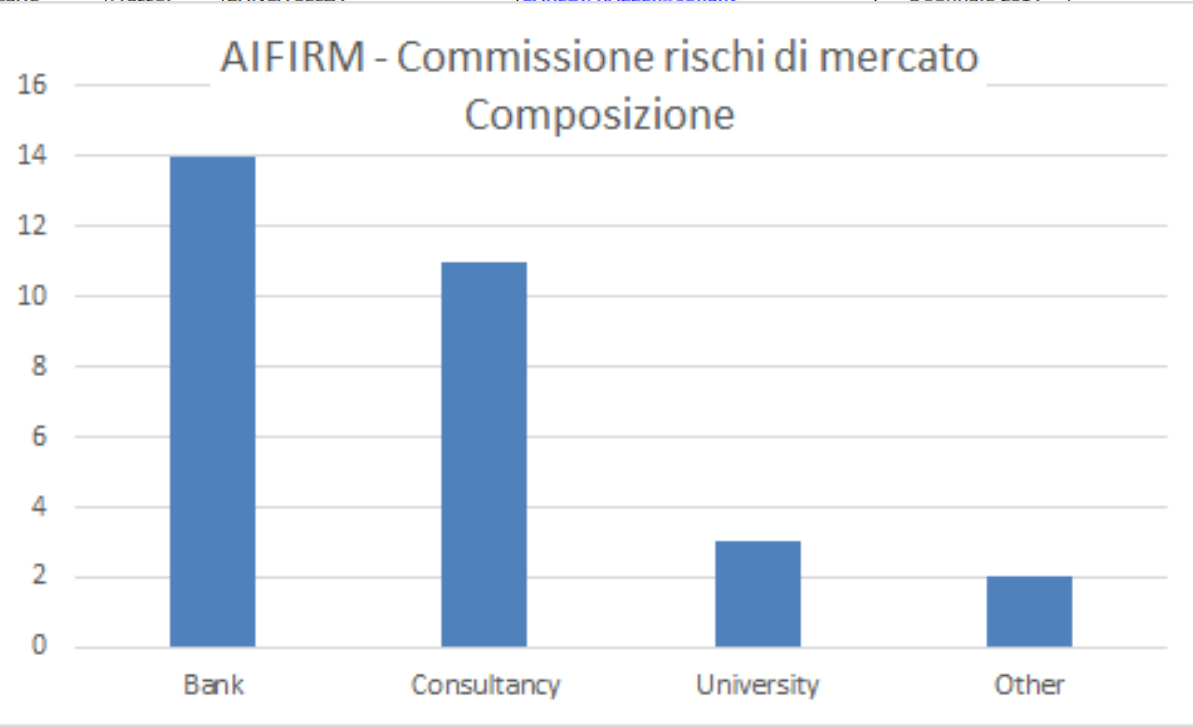
Prudent valuation framework



2: Commissione Rischi di Mercato

Membri e lavori

Commissione Rischi di Mercato - Prudent Valuation						Meetings				
#	Nome	Cognome	Organizzazione	E-mail	Data Iscrizione	7 febbraio 2014	14 marzo 2014	17 aprile 2014	26 maggio 2014	27 giugno 2014
1	Salvatore	Chianese	ICCREAH	schianese@iccreah.bcc.it	7 gennaio 2014					
2	Carlo Enrico	De Bernardi	BANCA POPOLARE MILANO	CARLO.ENRICO.DE.BERNARDI@BPM.IT	8 gennaio 2014			X		
3	Carlo	Frazzei	BANCA SELLA	CARLO.FRAZZEI@sella.it	8 gennaio 2014					
4							X			
5										
6										
7								X		
8										
9								X	X	
10								X	X	X
11						X		X	X	X
12						X				
13										
14										
15										
16										
17								X	X	X
18						X		X	X	
19						X			X	
20						X		X	X	
21						X		X		
22						X		X		X
23						X		X		X
24										
25										
26										
27								X	X	
28										
29	Armando	Capone	ACCENTURE	armando.capone@accenture.com	23 maggio 2014					
30	Vincenzo	Tetti	BCC TONIOLO	vincenzo.tetti@bcctoniolo.it	28 maggio 2014					
							11	12	9	5



Fonte: segreteria AIFIRM, giugno 2014

2: Commissione Rischi di Mercato

Position paper

SEC.	CONTENTS	PAGE
1	EXECUTIVE SUMMARY	4
2	INTRODUCTION	5
3	HISTORY OF PRUDENT VALUATION	5
4	REGULATORY REQUIREMENTS (E&Y)	6
5	PRUDENT VALUATION SCOPE	9
6	GENERAL ASSUMPTIONS AND CONSIDERATIONS	11
7	THEORETICAL BACKGROUND	15
8	TEST PORTFOLIO	17
9	AVA CALCULATION UNDER THE SIMPLIFIED APPROACH	17
10	AVA CALCULATION UNDER THE CORE APPROACH	19
11	PRUDENT VALUATION FRAMEWORK	40
12	APPENDIXES	42
13	REFERENCES	42
14	GLOSSARY	43

2: Commissione Rischi di Mercato

Eventi/Conferenze

- 28 May 2014: London Stock Exchange, Milano, prudent valuation course, M. Bianchetti, U. Cherubini, E&Y.
- 16 May 2014: ABI conference, Roma, talk “*Funding Valuation and Prudent Valuation Adjustments (PVA & FVA)*”, M. Bianchetti, U. Cherubini
- 24 Sept. 2014: corso ABI, Milano, talk “*Prudent valuation*“, M. Bianchetti, P. Virgili.
- 12 Nov. 2014: webinar Numerix, “*Prudent Valuation: Bridging the Gap Between Pricing & Risk Management*”, M. Bianchetti ([link](#)).
- 24 Nov. 2014: London Stock Exchange, Milano, prudent valuation course, M. Bianchetti, U. Cherubini, E&Y.
- 10 Dec. 2014: Risk Minds, Amsterdam, talk “*Prudent Valuation - Bridging Pricing And Risk Management*”, M. Bianchetti ([link](#)).
- 25 Mar. 2015: WBS 4th CVA conference, London, corso “*Prudent valuation*“, M. Bianchetti, U. Cherubini ([link](#))
- May 2015: Global Derivatives, Amsterdam, talk “*Prudent Valuation - Bridging Pricing And Risk Management*”, M. Bianchetti ([link](#)).

Questions & Answers

References

Regulations

- 1) Financial Services Authority, “Dear CEO Letter: Valuation and Product Control”, August 2008, <http://www.fsa.gov.uk/pubs/ceo/valuation.pdf>
- 2) Financial Services Authority, “Product Control Findings and Prudent Valuation Presentation”, November 2010, <http://www.fsa.gov.uk/pubs/other/pcffindings.pdf>
- 3) Financial Services Authority, “Regulatory Prudent Valuation Return”, Policy Statement 12/7, April 2012, <http://www.fsa.gov.uk/library/policy/policy/2012/12-07.shtml>
- 4) R. Brar, “A Regulatory Perspective on Prudent Valuation and Best Practice in Product Control”, in “Managing Illiquid Assets”, E. Takagawa editor, Risk Books, 2012.
- 5) Regulation EU N.575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms and amending Regulation EU N.648/2012, 26 June 2013
- 6) EBA final draft Regulatory Technical Standards 31 March 2014 (EBA/RTS/2014/06)
- 7) International Accounting Standards Board, International Financial Reporting Standards 13 – Fair Value Measurement, 1° Jan. 2013, www.ifrs.org