

The market risk framework

In brief

Revised market risk framework

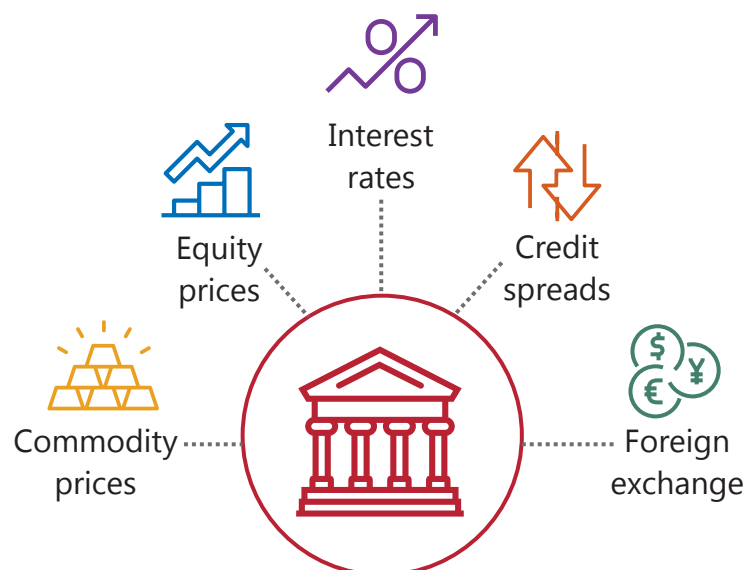
The failure to prudently measure risks associated with traded instruments caused major losses for some banks during the global financial crisis. The Basel Committee's revised framework marks a significant improvement to the pre-crisis regulatory framework by addressing major fault lines.

What is market risk and why is its measurement being updated?

Many banks have portfolios of traded instruments for short-term profits. These portfolios – referred to as trading books – are exposed to market risk, or the risk of losses resulting from changes in the prices of instruments such as bonds, shares and currencies. Banks are required to maintain a minimum amount of capital to account for this risk.

The significant trading book losses that banks incurred during the 2008 global financial crisis highlighted the need for the Basel Committee to improve the global market risk framework. As a stop-gap response, in July 2009 the Committee introduced the Basel 2.5 framework to help improve the framework's risk coverage in certain areas and increase the overall level of capital requirements, with a particular focus on trading instruments exposed to credit risk (including securitisations).

The main drivers of market risk



"Market risk: the risk of losses arising from movements in market prices."

2016 revised framework and review

Following up on the Basel 2.5 framework, the Committee initiated a fundamental review of the trading book regime. Based on multiple consultations and quantitative impact studies, the Committee published a revised standard in January 2016. In 2018, the Committee consulted on further targeted revisions to the framework.

What changes were proposed?

From 2012, the Committee initiated a fundamental review of the trading book. This comprehensive review sought to address the inadequacies in the design and calibration of the market risk framework's internal models and standardised approaches.

The result of this review – the 2016 revised framework, originally scheduled for implementation in 2019 – set out stricter criteria for assigning instruments to the trading book. It overhauled the internal models methodology to better address risks observed during the crisis, reinforced the process for supervisors to approve the use of internal models and introduced a new, more risk-sensitive standardised methodology.

While monitoring the implementation and impact of the new framework, the Committee acknowledged ongoing implementation challenges and issues in design and calibration. To address these, and give banks more time to develop their infrastructure, the Group of Governors and Heads of Supervision, the Committee's oversight body, in 2017 extended the implementation date to 2022.

In 2018, the Committee proposed a set of targeted revisions to the market risk framework related to the assessment that decides whether a bank's internal risk management models properly reflect the vulnerabilities facing individual trading desks. The consultation also proposed refinements to and recalibrations of the standardised approach.

Measures of market risk

Value-at-risk (VaR)

A measure of the worst expected loss on a portfolio of instruments resulting from market movements over a given time horizon and a pre-defined confidence level.

Expected shortfall (ES)

A measure of the average of all potential losses exceeding the VaR at a given confidence level, which makes up for VaR's shortcomings in capturing the risk of extreme losses (ie tail risk).

Revised market risk framework, January 2019

In January 2019, the Committee revised the framework to address outstanding design and calibration issues of the 2016 framework and to provide further clarity to facilitate its implementation.

What are the key elements?

Changes to the boundary of the banking book and the trading book

The revisions clarify the scope of positions subject to the market risk framework, including the treatment of equity investments in funds and the treatment of foreign currency positions.

Changes to the internal models approach

The revisions overhaul the design of the profit and loss attribution test to better differentiate between well and poorly performing models. Targeted changes address the impact of non-modellable risk factors (NMRFs).

Changes to the standardised approach

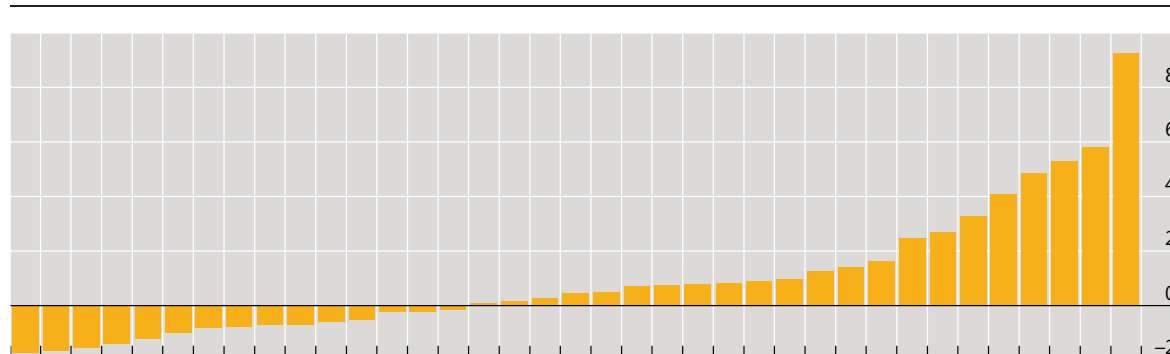
The revisions better align the treatment of foreign currency positions, options and index instruments with the associated risks. Risk weights are lowered by 30% for general interest rate risk and by 50% for FX risk. Banks with relatively small or simple trading portfolios may continue to use a recalibrated Basel 2.5 standardised approach, subject to supervisory approval.

What is the impact of the revisions?

Compared with Basel 2.5, the amended framework is estimated to increase market risk capital requirements by 22%, on average. Market risk-weighted assets (RWAs) would account for 5% of total RWAs on average, compared with 4% under Basel 2.5.

Estimated change in share of total market risk-weighted assets as a percentage of total Basel III risk-weighted assets based on December 2017 data

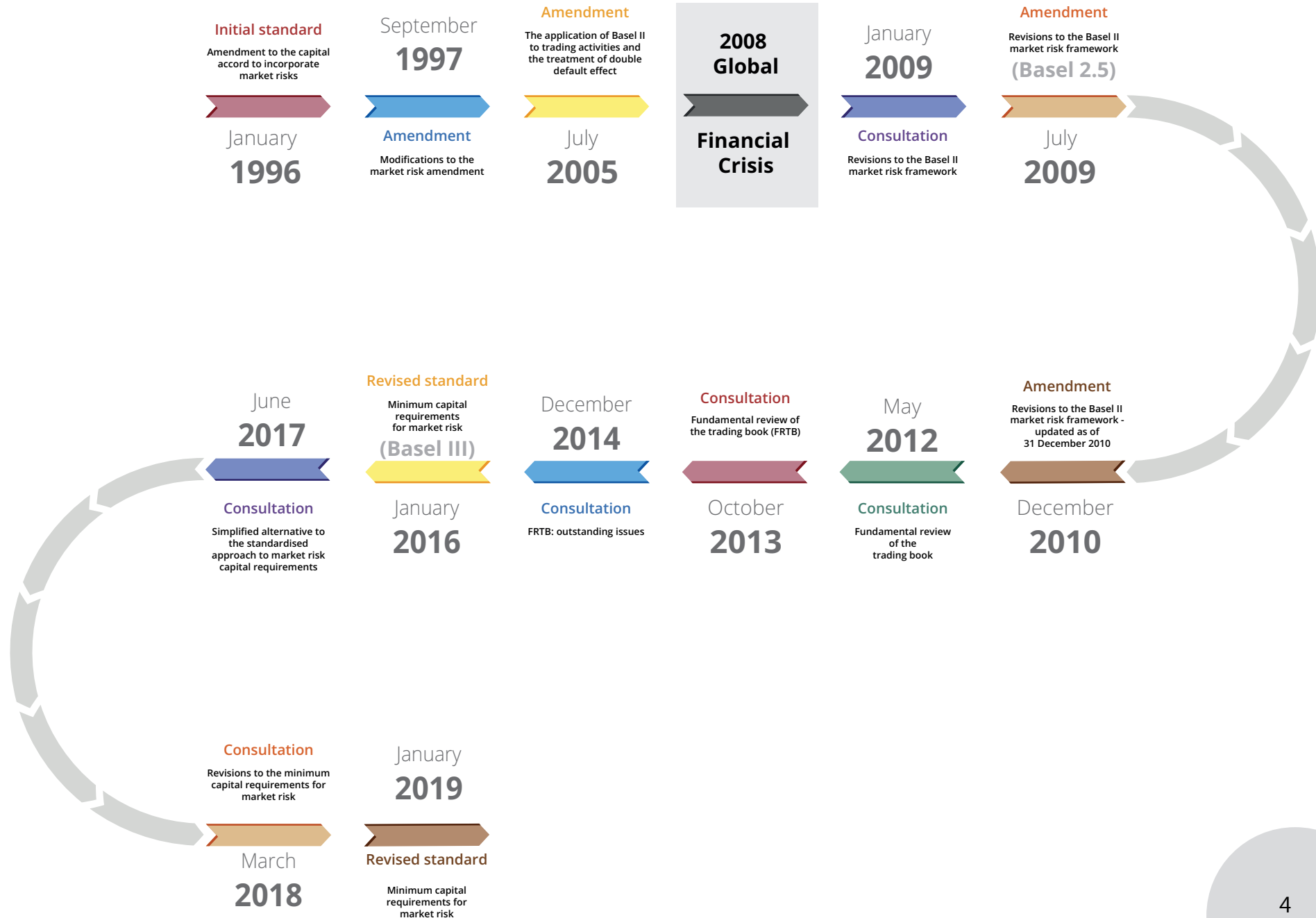
All banks, in percentage points



Sample (horizontal axis) = 37 banks; weighted average = 0.9%p.

Source: Basel Committee on Banking Supervision.

A history of minimum capital requirements for market risk



Key features of the revised market risk framework

Current Basel 2.5 framework (amended in 2010)	Boundary between the banking book and trading book	Use and validation of banks' internal models	Risk measurement under the internal models approach	Risk measurement under the standardised approach
Standard (issued in 2016)	<p>Assignment to the trading book primarily relies on the bank's intent to trade an instrument</p> <p><i>Issue: weak definition provides opportunity for banks to move instruments across the trading book-banking book boundary in pursuit of lower capital requirements</i></p>	<p>Model approval/removal determined on a bank-wide basis</p> <p><i>Issue: model approval processes poorly positioned to deny/remove approval for trading desks that are deemed inappropriate for model use</i></p>	<p>Capital requirements primarily determined using value-at-risk (VaR) models</p> <p><i>Issue: insufficient measurement of tail risks and liquidity risk of trading portfolios; permits unrestrained diversification benefits</i></p>	<p>Risk measurement based on an exposure-by-exposure building block approach</p> <p><i>Issue: outdated calibration and insufficiently risk-sensitive to serve as a credible complement and fall back to the internal models approach</i></p>
Revised standard (issued in 2019)	<p>Robust boundary to clearly specify appropriate contents of the trading book and restrict arbitrary reassignment</p> <p>Further specification of regulatory book assignment requirements with better articulated precedence and clarification for certain exposures</p>	<p>Model approval/removal determined at the trading desk level; separate, more stringent capital requirements for risks not appropriate for modelling ("non-modellable risk factors" or NMRFs)</p> <p>New test metrics to discern poorly performing models; improved criteria for the identification of NMRFs</p>	<p>Expected shortfall measure replacing VaR; separate NMRF capital requirement; fall back to the standardised approach for trading desks that fail model approval assessments</p> <p>Adjustment to capital requirements to address cliff effects and calibration issues for trading desks and risks that fall short of processes to assess modellability</p>	<p>Risk-sensitive measurement primarily based on the loss a bank could suffer (ie sensitivities) under a defined stress scenario</p> <p>Refined measurement method for FX risk, options and index instruments; recalibrated risk weights for general interest rate risk and FX risk</p>