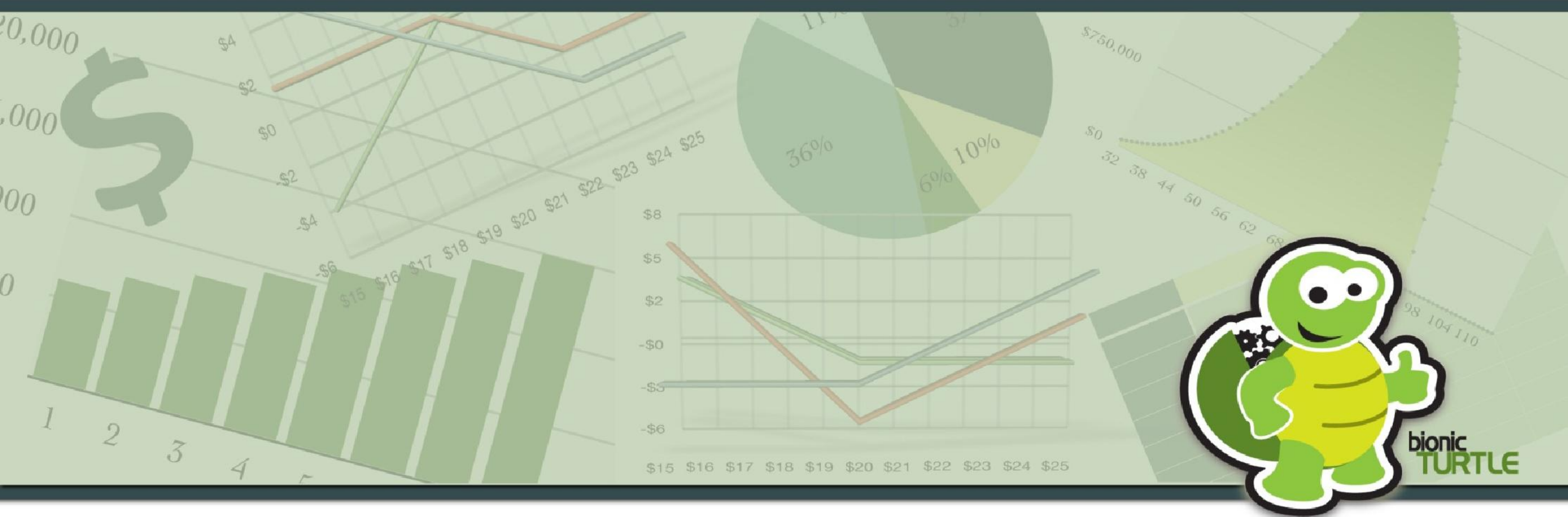

P2.T7. Operational & Integrated Risk Management

Bionic Turtle FRM Practice Questions

Mark Carey, "Capital Regulation Before the Global Financial Crisis," GARP Risk Institute

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Mark Carey, "Capital Regulation Before the Global Financial Crisis"

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P2.T7.20.7. Capital regulation before the global financial crisis (1 of 2)

Learning objectives: Explain the motivations for introducing the Basel regulations, including key risk exposures addressed and explain the reasons for revisions to Basel regulations over time. Explain the calculation of risk-weighted assets and the capital requirement per the original Basel I guidelines. Describe measures introduced in the 1995 and 1996 amendments, including guidelines for netting of credit exposures and methods to calculate market risk capital for assets in the trading book.

20.7.1. The Basel regulatory framework has undergone several major renovations but started in the late 1980s when the Basel Committee on Banking Supervision[1] published the first Basel accord, which is now called Basel I; this original Basel I was implemented in 1992. According to Carey (GARP Chapter 19), which **BEST** summarizes the motivation(s) of the original Basel?

a) To formalize regulatory capital requirements with a set of regulations (i.e., Basel) that would become legal requirements and therefore carried the force of law; i.e., the motivation was legal
b) Regulators realized that specific measures of short- and long-term liquidity were necessary given that liquidity crunches had been the essential common denominator of recent financial disasters; i.e., the motivation was liquidity
c) The growth of cross-border finance required both the solvency of banks during stressful periods and fair competition (aka, level playing field) between banks competing in each other's home countries; i.e., the motivations were bank safety and competitive concerns
d) In the wake of a global recession, there was a motivation to incentivize banks to increase their lending (which had been historically low) in order to grow the developed and emerging economies; i.e., the motivation was economic recovery especially of emerging economies

[1] BCBS at https://www.bis.org/bcbs/

20.7.2. In regard to the original Basel I accord, each of the following is true **EXCEPT** which is false?

a) There are (were) only four risk weights: zero, 20%, 50%, and 100%
b) Total regulatory capital must exceed 8.0% of risk-weighted assets (RWA) and Tier 1 capital must exceed 4.0% of RWA
c) Traditional off-balance-sheet exposures were converted to a credit-equivalent (CE) that, in turn, was assigned a risk weight based on the counterparty
d) The credit equivalent (CE) for derivatives was their current market value such that out-of-the-money positions subtracted from the bank's RWA

20.7.3. The original Basel I accord is generally viewed as successful but deficient. Several of its deficiencies arguably owe to simplicity; these over-simplifications were subsequently cured with additional rules but at the cost of complexity. For example, the original Basel I accord was about 30 pages, while Basel II was 250 pages. One weakness of Basel I was that it gave almost no credit for the netting of derivatives contracts. The 1995 Amendment, as GARP explains, "allowed reductions in credit equivalent amounts when enforceable bilateral netting agreements were in place[2]."

Shortly after the 1995 Amendment, the 1996 Amendment was a major milestone and revision to the original Basel I accord. Which of the following statements is **TRUE** about the implication of the 1996 amendment?

a) It introduced the third pillar, which was praised for giving supervisors a consistent rule-enforcing playbook
b) Conditional on meeting several criteria including daily backtesting, banks could now employ their own internal value at risk (VaR) model to determine capital requirements for market risk
c) To reduce regulatory arbitrage, it removed all internal approaches so that only standardized approaches could be applied to credit, market, and operational risk, which had the effect of reducing regulatory arbitrage
d) The 1996 amendment removed Tier 2 capital so that only Tier 1 capital remained, but Tier 1 capital was bifurcated into common equity (highest quality buffer) and non-common equity

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[2] Chapter 19, GARP's 2020 FRM Part II: Operational Risk and Resiliency, 10th Edition. Pearson Learning Solutions

Answers:

20.7.1. C. True: The growth of cross-border finance required both the solvency of banks during stressful periods and fair competition (aka, level playing field) between banks competing in each other's home countries; i.e., the motivations were bank safety and competitive concerns

Carey explains, "Two events motivated creation of Basel I.

- First, the growth of cross-border finance continued after Herstatt's failure and it was evident that the G10 nations had a common interest in ensuring that banks had enough equity to absorb large losses.
- Second, international banks were competing vigorously in each other's home countries. However, minimum levels of required capital varied significantly across nations, creating a perception that banks headquartered in countries with low minimums had a competitive advantage. In response, members of the BCBS decided to develop a global mini-mum standard to "level the playing field" and avoid a race to the bottom. That is, while the Basel Accord was partly about ensuring safety and soundness, negotiations also had an element of maneuvering for perceived competitive advantage[3]."

20.7.2. D. False: if the CE were to subtract from RWA, that would imply they somehow added safety and effectively served as a buffer. Instead, the credit-equivalent amount was the sum of the current exposure (CE) plus an add-on (based on the add-on factor) such that negative market values were treated as zero exposures; i.e., this is thematic: credit exposure = max(0, value)

In regard to (A), (B) and (C), each is TRUE:

- There are (were) only four risk weights: zero (e.g., cash, claims on OECD governments), 20% (e.g., claims on OECD banks), 50% (uninsured residential mortgages) and 100% (all other exposures)
- The original Basel I accord introduced the so-called Cooke ratios: Total regulatory capital must exceed 8.0% of risk-weighted assets (RWA) and Tier 1 capital must exceed 4.0% of RWA
- Traditional off-balance-sheet exposures were converted to a credit-equivalent (CE); Carey's example is a $100.0 million five-year loan commitment from an OECD bank that is converted to a $10.0 million credit equivalent; i.e., loan commitments with an original maturity greater than one year are converted at 20%, while loan commitments with an original maturity less than one year are converted with a 0% factor. Then the $10.0 million credit equivalent is assigned a 20% risk weight because the counterparty is an OECD bank, so the RWA contribution is $20.0 million * 20.0% = $4.0 million.

[3] Chapter 19, GARP's 2020 FRM Part II: Operational Risk and Resiliency, 10th Edition. Pearson Learning Solutions

20.7.3. B. True: Conditional on meeting several criteria including daily backtesting, banks could now employ their own internal value at risk (VaR) model to determine capital requirements for market risk

In regard to (A), (C) and (D), each is FALSE. Instead, true are the following:

- Basel II introduced the second (this is the pillar with the requirements for supervision) and third pillars (public disclosures to promote market discipline)
- The 1996 amendment introduced both a standardized approach to market risk and, importantly, an internal models approach (IMA). The IMA permitted qualifying banks to utilize their own VaR model for market risk. This was considered an important step. As Carey says, "The internal models-based approach embodied a major change in philosophy by permitting banks to use internally developed risk measures as the inputs to formulas specified by regulators[4]."
- The 1996 amendment created a new Tier 3 capital (mostly unsecured subordinated debt) that could be used to satisfy part of the market risk capital requirements.

Discuss here in the forum: *https://www.bionicturtle.com/forum/threads/p2-t7-20-7-capital-regulation-before-the-global-financial-crisis-1st-of-2.23279/*

[4] Chapter 19, GARP's 2020 FRM Part II: Operational Risk and Resiliency, 10th Edition. Pearson Learning Solutions