Financial Crisis, Corporate Governance, and Bank Capital

In the aftermath of the 2007–8 financial crisis, senior policymakers and the media have blamed excessive risk taking by bank executives in response to their compensation incentives for the crisis. The inevitable follow-up to this was to introduce stronger financial regulation in the hope that better and more responsible behavior could be induced. Despite the honorable intentions of regulation, such as the Dodd-Frank Act of 2010, it is clear that many big banks are still deemed "too big to fail." This book argues that by restructuring executive incentive programs to include only restricted stock and restricted stock options with very long vesting periods and financing banks with considerably more equity, the potential of future financial crises can be minimized. It will be of great value to corporate executives, corporate board members, institutional investors, and financial policymakers, as well as graduate and undergraduate students studying finance, economics, and law.

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Financial Crisis, Corporate Governance, and Bank Capital

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to

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for the lessons on intellectual capital and incentives…

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Preface

Despite the honorable intentions of the Dodd-Frank Act to make "too-big-to-fail" banks a thing of the past, investors and policymakers believe that many big banks are still too big to fail. This issue has come up repeatedly in the 2016 US presidential campaign and among senior policymakers in the United States and Europe. We propose a solution to the too-big-to-fail problem that can be implemented with minimal or no additional regulations, only the intervention of corporate board members and institutional investors in these big banks.

While some have argued that incentives generated by executive compensation programs led to excessive risk-taking by banks contributing to the 2008 financial crisis, there are more important causes of the financial and economic crisis that started in 2008. For example, public policies regarding home mortgages whose goal was to increase home ownership by those who could not otherwise afford it are perhaps the single most important cause of the financial and economic crisis of 2008.

Our focus in this book, however, is on whether incentives generated by bank executives' compensation programs contributed to excessive risk taking. We recommend the following compensation structure for bank executives: incentive compensation should consist only of restricted stock and restricted stock options – restricted in the sense that the executive cannot sell the shares or exercise the options for one to three years after his or her last day in office. We contend that this incentive compensation package will focus bank managers' attention on the long run and discourage them from investing in high-risk, value-destroying projects. We discuss and provide solutions to many of the caveats that arise, specifically regarding under-diversification and loss of liquidity. Also, we discuss and comment on

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two recent executive compensation reform proposals – one by six US federal agencies and another by the UK Prime Minister's office.

Similarly, we suggest that director incentive compensation be constructed along the same lines as the one for the executives proposed in the preceding paragraph. Specifically, all incentive compensation for directors should consist only of restricted equity (restricted stock and restricted stock option) – restricted in the sense that directors cannot sell the shares or exercise the options for one to three years after their last board meeting.

Our recommendation for executive and director compensation is based on our analysis of compensation structure in banks. However, our recommendation for executive and director compensation is fully applicable to other industries in the nonfinancial sector.

The aforementioned equity-based incentive programs lose their effectiveness in motivating managers (and directors) to enhance shareholder value as a bank's equity value approaches zero (as they did for the too-big-to-fail banks in 2008). Additionally, our evidence suggests that bank CEOs sell significantly greater amounts of their stock as the bank's equity capital (tangible common-stock-to-total-assets ratio) decreases. Hence, for equity-based incentive structures to be effective, banks should be financed with considerably more equity than they are being financed currently. Greater equity financing of banks coupled with the aforementioned compensation structure for bank managers and directors will drastically diminish the likelihood of a bank falling into financial distress; this will effectively address the too-big-to-fail problem and the Volcker Rule implementation that are two of the more significant challenges facing implementation of the Dodd-Frank Act. Our recommendation for significantly greater equity in a bank's capital structure is consistent with the spirit of the Financial CHOICE Act recently proposed by the US House Financial Services Committee.

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This book partly draws on our prior research, which stresses different aspects of the restricted-equity executive incentive compensation proposal, including

Bhagat, S., and B. Bolton. 2014. "Financial Crisis and Bank Executive Incentive Compensation." *Journal of Corporate Finance* 25, 313–41.

Bhagat, S., and H. Tookes. 2012. "Voluntary and Mandatory Skin in the Game: Understanding Outside Directors' Stock Holdings." *European Journal of Finance* 18, 191.

Bhagat, S., Bolton, B., and Romano, R. 2014. "Getting Incentives Right: Is Deferred Bank Executive Compensation Sufficient?" *Yale Journal of Regulation* 31, 523–64.

Bhagat, S., Bolton, B., and Lu, J. 2015. "Size, Leverage, and Risk-Taking of Financial Institutions." *Journal of Banking and Finance* 59, 520–37.

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