# Internet Appendix A98: Bank Disciplinary Tools

## A98.1 Illustrative Pitch Template Example


<table>
<thead>
<tr>
<th>Pitcher’s Name</th>
<th>Bao Hoang Nguyen (UQ Winter Scholar)</th>
<th>FoR category</th>
<th>Bank Disciplinary Tools</th>
<th>Date Completed</th>
<th>04/07/2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Working Title</td>
<td>Disciplinary tools and bank risk exposure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(B) Basic Research Question</td>
<td>What is the role of bank disciplinary tools and how do they interact in reducing bank risk exposure? How does this role change after the global financial crisis?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(D) Motivation/Puzzle</td>
<td>Since the collapse of banking system in the GFC, policy makers and regulators have proposed regulatory reforms aiming at discouraging bank risk taking to protect the stability of banking system. The noticeable changes were seen in activities of Basel Committee on Banking Supervision where existing capital requirements were strengthened and the role of market discipline was promoted. An investigation into the separate and interactive impacts of bank disciplinary tools such as capital adequacy, charter value and market discipline on incentives for risk taking by banks might shed light on whether the regulatory reforms will influence bank risk exposure in the way one would hope.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (E) Idea?            | To investigate the impacts of bank disciplinary tools on bank risk exposure, bank capital, charter value and market discipline are used in this study as key explained variables for bank risks which are represented by equity risks (including total risk, systematic risk, and idiosyncratic risk) and default risk/credit risk. Other bank-specific determinants (size, dividend payout ratio, and revenue diversification) and country-level determinants (bank concentration, explicit deposit insurance, economic freedom, stock market turnover, GDP growth rate, GNI per capita) are also taken into account. The interactive impacts of bank disciplinary tools on bank risk taking are examined by using interaction terms of market discipline with each of bank capital and charter value. The interaction terms between post-GFC dummy variable and each bank-specific determinant are used to evaluate the impact of GFC on bank risk.  
**Basic hypothesis:** negative relationship between bank risk and each bank disciplinary tool. |
| (F) Data?            | Country: 15 Asian Pacific countries (Australia, Bangladesh, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Philippines, Pakistan, Singapore, Sri Lanka, Taiwan and Thailand). Reason: The countries in this region are engaged in the process of deregulation, bank privatization and financial liberalization while the industry is witnessing more consolidation (Turk-Ariss, 2010); therefore, they provide a fertile laboratory to examine issues of bank risk.  
**Unit of Analysis:** Individual banks.  
**Sample interval:** Yearly  
**Sample period:** 15 years (1996-2010).  
**Data Type:** Bank-specific and Macro-level  
**Sample Size:** Unbalanced panel data of 2544 bank-year observations.  
**Data Sources:** Bankscope, Osiris database and DataStream database. No hand collecting required.  
**Data Issue:**  
- Excluding: (a) banks with less than three consecutive yearly observations or without data on the main variables; (b) subsidiaries when parent data are available to reduce the impact of double counting.  
- To avoid effects of outlier observations, a symmetric winsorization at a 5% cut-off for all variables is applied. |
| (G) Tools?           | Research Method:  
- Applying bank fixed-effects with country-level clustering.  
- Using two-step system generalized method of moments (GMM) estimation technique (Arellano and Bover (1995), and Blundell and Bond (1998)) |
| (H) What’s New?      | It is the first study to explicitly analyse the influence of bank capital, charter value and market discipline as bank disciplinary tools on bank risk. Moreover, it is
the first time the impact of charter value on market discipline in reducing bank equity risk and credit risk is investigated. The additional novelty is examining the effect of the GFC on the relationship between bank disciplinary tools and bank risk.

(I) So What?
The finding of this paper will enhance the understanding about risk perspective of banking system. It is crucial for regulators/supervisors to evaluate their regulatory reforms and gain better understanding of capacities and incentives to reduce risk of banks across Asia-Pacific region.
The finding of this paper is also important to equity holders, bond holders and borrowers who have concern in understanding the risk and return profile of financial institutions.

One bottom line

(J) Contribution?
This study contributes to the current literature about bank risk by designing a more comprehensive approach of bank risk exposure determinants (Separate effects and moderating effects of key determinants – Bank capital, charter value and Market discipline; Pre-GFC vs Post-GFC). It also provides regulators, especially those in Asian Pacific region, with an empirical evidence to reassess their bank regulatory procedure. Moreover, the finding of this study helps answer the controversial question: has Basel III been on right track when it imposed the stricter requirements in endeavour to reduce the volatility of banking system?

(K) Three Key Findings
- Bank risk is positively related to bank capital and negatively related to bank charter value and market discipline.
- Market discipline complements bank capital but substitutes bank charter value in reducing bank risk exposure.
- The magnitude of the charter value coefficient falls dramatically with the GFC for all risk measures.

Mickey Mouse Diagram: