Procyclicality and Compensation

*Étienne Bordeleau and Walter Engert**

The design of compensation arrangements is typically aimed at aligning the interests of a firm's decision makers with those of shareholders to maximize profits and share value over some time horizon. As a result, compensation arrangements invariably embed incentives that can influence firm behaviour. More specifically, performance-based compensation mechanisms, intended to align the behaviour of decision makers with shareholders' interests, can establish a range of incentives, particularly with regard to the time frame over which decision makers maximize profits and shareholder return. In the case of financial institutions, such compensation arrangements, focused, for example, on short-term returns or not adequately adjusted for risk, could contribute to behaviour that exacerbates the development of asset-price bubbles and leads to subsequent financial collapse, as seen recently in a number of financial systems around the world.

Of course, such compensation-based incentives do not operate in isolation from other influences on the behaviour of decision makers, such as the risk-control function of the institution, which could mitigate the effects of any perverse incentives from compensation arrangements. In practice, the net effect of these potentially competing influences on firm behaviour depends partly on their relative strengths within the firm. For instance, can the risk-control function adequately constrain risk taking in a specific unit of a bank motivated by the prospect of large cash bonuses tied to the annual operating profits of that unit? Importantly, the broader environment in which the financial institution operates, including regulation and market conditions, also influences the overall effect of the incentives embedded in compensation arrangements. In sum, the ultimate effect of compensation arrangements on risk-taking behaviour and, in turn, the development of asset-price bubbles, is complex and probably varies over time and with circumstances.

Nevertheless, compensation practices at large financial institutions are widely believed to have contributed to the financial crisis that began in 2007. For example, a recent report of the Financial Stability Forum (FSF) (discussed further below) argues that high short-term profits led to the payment of generous cash bonuses to employees at financial institutions without adequate regard for the longer-term risks implied by such practices. The report further notes that "multiple surveys find that over 80 per cent of market participants believe that compensation practices played a role in promoting the accumulation of risks that led to the current crisis."

In the next section, some stylized facts regarding the compensation arrangements at major Canadian and U.S. financial institutions are compared. However, a thorough assessment of various compensation practices and their effects on risk-taking behaviour should take into account a range of influences, including accounting, tax, and regulatory aspects, which can vary over time and across countries. The recently published *Principles for Sound Compensation Practices*, formulated by the FSF, are included at the end of this article. These principles are meant to guide supervisory oversight of compensation practices at financial institutions around the world.

Stylized Facts on Executive Compensation at Canadian and U.S. Banks

This section presents data indicative of broad patterns in executive compensation at Canada's five largest banks and at a sample of major U.S. financial institutions, including

* Thanks to Jason Allen, Pierre Duguay, Alejandro García, Céline Gauthier, Ben Gully, John Jussup, and Teodora Paligorova for helpful discussion and comments on an earlier version of this article.

Box 1

Banks and Data Sources

The Canadian banks considered here are the five largest banks: RBC Financial Group, Bank of Montreal, CIBC, TD Bank Financial Group, and Scotiabank. These banks hold 90 per cent of the assets of the Canadian banking sector and about three-quarters of the assets of the deposit-taking sector. The major banks also play a key role in virtually all aspects of financial services in Canada. Data on executive compensation at Canadian banks are from management proxy circulars prepared for the banks' annual meetings.

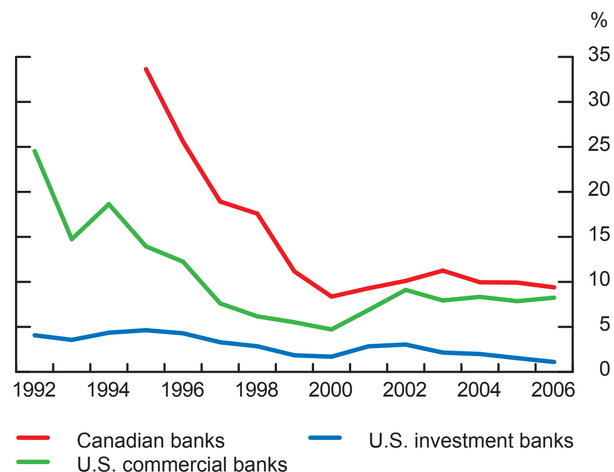
The U.S. commercial banks are selected from the top 20 U.S. banks in terms of assets as of 31 December 2004. Most of these banks have had a business mix broadly similar to that of the Canadian banks, benchmarked in a specific manner. That is, most of these U.S. banks have made a similar proportion of their revenue from retail banking. The U.S. commercial banks in this study are: Citigroup Inc., JPMorgan Chase & Co., Bank of America Corp., Wachovia Corp., Wells Fargo & Co., Washington Mutual Inc., U.S. Bancorp, SunTrust Banks Inc., National City Corp., Branch Banking & Trust Corp., Fifth Third Bancorp, Keycorp Limited, and The PNC Financial Services Group Inc. These institutions account for almost 80 per cent of the assets of the U.S. banking sector. The U.S. investment banks considered are Bear Stearns, Lehman Brothers Inc., Merrill Lynch & Co., Morgan Stanley, and The Goldman Sachs Group Inc. Data for the U.S. financial institutions are drawn from the ExecuComp database, maintained by Standard & Poors.

U.S. commercial and investment banks. (Box 1 provides information on the specific institutions covered and the data sources.) The focus here is on the compensation of the five top-ranking executives at these institutions, as identified in the proxy circulars for annual meetings and in the ExecuComp database.[1]

Chart 1 illustrates the evolution of executives' fixed (base) salaries relative to their total compensation at Canadian banks and U.S. financial institutions. Generally, the relative importance of fixed salary has been declining at all of these institutions. Notably, executives at U.S. investment banks have had relatively little in the way of fixed pay for many years—for example, about 2 per cent since 2000. Canadian banks, in contrast, have tended to have a higher, although also decreasing, share of executive compensation in the form of fixed pay, and this proportion has been stabilizing at around 10 per cent since the turn of the century. The relative importance of fixed pay at U.S. commercial banks has generally been trending somewhat below that at Canadian banks.

Chart 1 and subsequent charts suggest some degree of convergence in the pay practices of these groups of banks. Notably, all the Canadian banks in the sample began cross-listing their equity on the New York Stock Exchange in the mid-1990s (with the exception of Scotiabank, which cross-listed in 2002). According to Southam and Sapp (2008),

Chart 1: Fixed pay as a share of total compensation

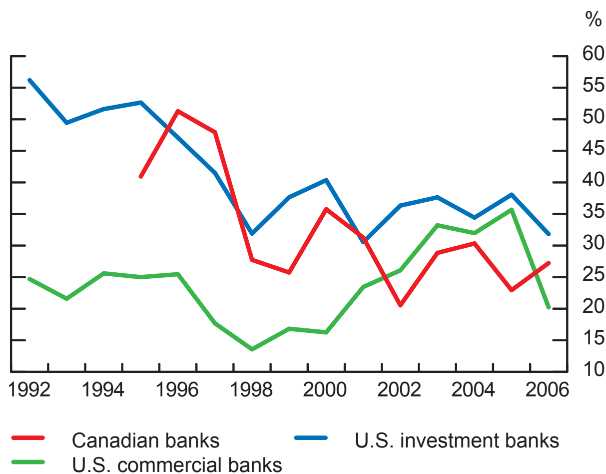


such cross-listing tends to encourage convergence of Canadian compensation towards U.S. practices. That is, enhanced integration associated with cross-listing reduces segmentation in the market for executive pay and encourages convergence in compensation structure and levels. At the same time, the increased prominence of variable performance pay might also reflect the growing importance of higher-variance revenues from financial market sources (as opposed to more traditional banking business) for commercial banks, particularly Canadian banks.

The next three charts consider elements of variable performance-based pay, that is, annual cash bonus, restricted stock grants, and stock options. Chart 2 shows

1 As pointed out by some observers, decision makers further down the institutional hierarchy may have compensation arrangements generating incentives that differ somewhat from those of the top executives considered here. At the same time, other things being equal, one might expect that the incentives offered to the most senior executives would influence decision making at lower levels of the organization as well.

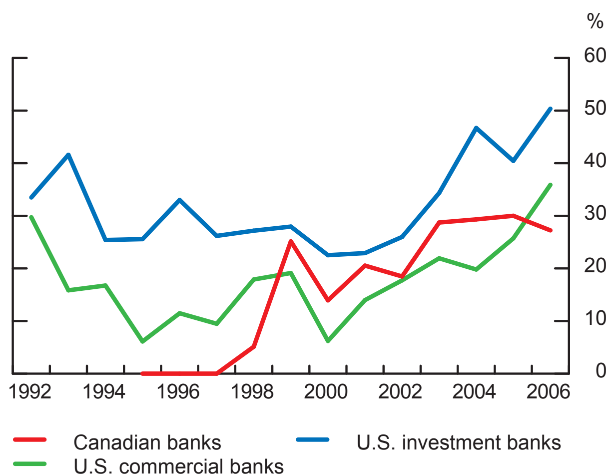
Chart 2: Annual cash bonus as a share of total compensation



that reliance on annual cash bonuses has declined over the sample period at Canadian banks and at U.S. investment banks, but has increased in relative importance at the U.S. commercial banks considered here, especially since 2000. Nevertheless, U.S. investment banks have relied the most on annual cash bonuses to compensate their top executives.

Chart 3 considers reliance on restricted stock grants. Such stock grants are compensation paid in the form of the employing institution's equity, where that equity is vested over a period of generally three (sometimes four) years. That is, certain rights associated with ownership of such stock are suspended for this period, such as the right to liquidate these positions. Chart 3 indicates that all institutions have been making greater use of restricted stock grants as a

Chart 3: Restricted stock grants as a share of total compensation

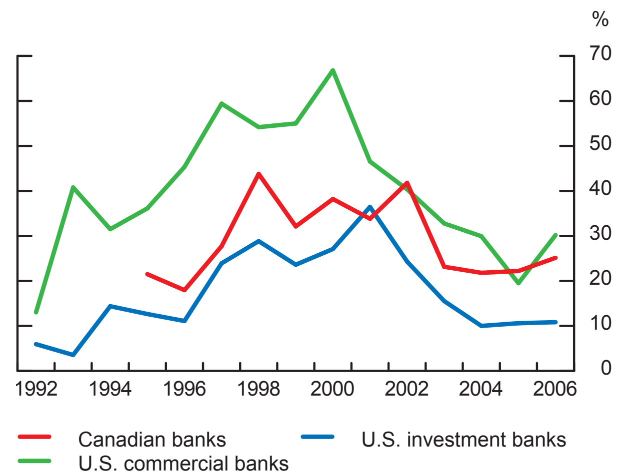


means of executive compensation over the sample period, particularly since 2000.

Stock options are widely used to compensate executives at financial institutions. These plans work similarly at major Canadian banks and at U.S. commercial and investment banks. A key common feature appears to be a vesting period of four years. More specifically, in the first year after receiving options, an executive could exercise, at most, a maximum of 25 per cent of the options. The remaining 75 per cent could be exercised in segments of 25 per cent per year over three years. It is important to note that such stock options appear to have a long duration, for example, 10 years. However, stock options are typically exercised substantially earlier than their maximum duration (e.g., in five to seven years).[2] Another common feature is that when executives depart, they have between 30 and 60 days to exercise their remaining options; otherwise, they are forfeited.

Reliance on stock options is illustrated in Chart 4, which suggests that in the first part of the sample period, there was growing use of stock options to compensate executives at financial institutions, followed by a general decline in their importance since the early 2000s.[3] This pattern reflects broader trends associated with heavy use of stock options as executive compensation in general through the 1990s, which has been associated with some concern

Chart 4: Stock options as a share of total compensation



2 Documents supporting the ExecuComp database (at Standard & Poors' Compustat website) indicate that executives rarely wait until the expiration date to exercise their options. The rule of thumb used in that database is that options are exercised after 70 per cent of the eligible term of the option.

3 The ExecuComp database provides values for the stock options paid to executives of the U.S. institutions in the sample by applying a modified Black-Scholes formula for American-style options. The same methodology was applied to value Canadian stock options paid to Canadian bank executives.

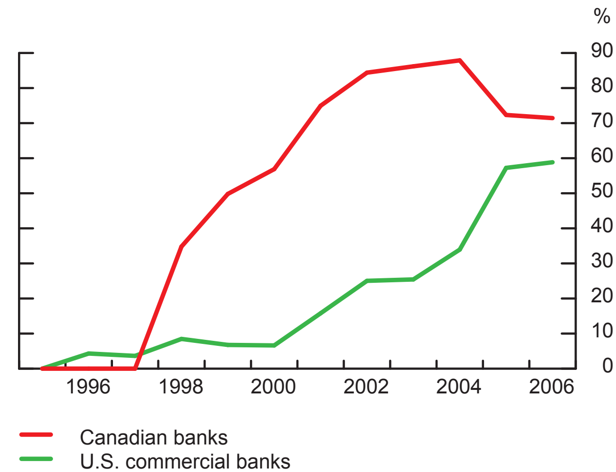
about their adverse effects on risk-taking behaviour, particularly at commercial banks. (See, for example, Chen, Steiner, and Whyte 2006, and Sanders and Hambrick 2007, who consider the case of U.S. banks.)

When considering different forms of variable performance-based compensation, such as those discussed above, the specific aspects of the compensation programs are, of course, important. For example, stock options that are in-the-money when granted would be similar to ordinary equity in terms of upside payout but would reduce compensation in the event of poor performance of the firm. Also, longer vesting periods associated with stock grants and options can improve their risk-mitigating properties. Similarly, where cash bonuses are paid, deferral of payouts (similar to vesting) and clawback features in the event of poor subsequent results can also provide risk-mitigating incentives. In addition, accounting, regulatory, and tax considerations may favour different forms of compensation, and these may vary by jurisdiction and over time.[4]

An important factor to consider when assessing the incentive effects of executive compensation arrangements is the amount of the decision makers' personal wealth that is at risk in the event that the institution makes imprudent decisions.[5] Of course, this is partly the point of providing compensation in the form of equity, such as restricted stock grants, particularly when vesting periods are long (say 5 to 10 years). Minimum share ownership requirements stipulate how much equity of the employing institution an executive must own indefinitely. Such a provision, for example, could require executives to hold equity worth 10 times their base salary indefinitely. Note also that such equity-ownership requirements at Canadian banks extend for a brief period (1 to 2 years) after retirement, providing some incentive to make prudent decisions even if retirement is imminent.

All the commercial banks considered here (except Washington Mutual) require their senior executives to own shares. As well, while the broad features of such programs seem to be similar across the various institutions, the amounts of required share ownership vary. Chart 5 shows the average minimum requirements for share ownership for chief executive officers (CEOs), given stock market valuations, weighted by total compensation, relative to total CEO compensation, for the Canadian and U.S. commercial banks in the sample.[6] These data also include shares owned by executives through compensation in the form of stock grants that must be held indefinitely (as long the CEO is in office). Chart 5 suggests that Canadian banks have required significantly greater stock ownership relative to total compensation on the part of their senior executives than have comparable U.S. commercial banks, although this gap appears to have been closed recently.

Chart 5: Minimum requirements for share ownership as a share of total compensation



Some of the features noted above suggest that compensation arrangements at major Canadian banks have had some relatively attractive attributes with regard to risk-taking behaviour, most notably, relatively large requirements for minimum share ownership. At the same time, the data surveyed have indicated convergence in the characteristics of executive compensation at major Canadian and U.S. banks. It must be stressed, however, that the particular effects on risk-taking behaviour of the various compensation practices discussed here, and the empirical implications of the differences over time or across the groups of institutions, are unclear. As observed above, other factors, such as the specific design of compensation arrangements, as well as the effectiveness of institutional risk management and prudential supervision, are also important features that condition the effects of the incentives created by particular compensation arrangements. These various considerations suggest that any oversight of compensation arrangements should take into account a range of factors, including governance.

Principles for Sound Compensation Practices

As emphasized by Jensen, Murphy, and Wruck (2004), "while executive compensation can be a powerful tool for reducing the agency conflicts between managers and the firm, compensation can also be a substantial source of agency costs if it is not managed properly." The recently published *Principles for Sound Compensation Practices*, formulated by the FSF, aim to provide for effective

4 For example, certain provisions of the U.S. Sarbanes-Oxley Act (2002) appear to have made the use of stock options as a compensation mechanism less attractive in the United States (Chhaochharia and Grinstein 2009).

5 In a prescient paper, Rajan (2005) argues that it is important to provide the right incentives for managers at financial institutions, so that they are not too myopic in their investment strategies and so that they internalize the risks that they take, by putting their personal wealth at stake. In a similar way, historically, in Canada (and elsewhere), bank shareholders were subject to double liability to sharpen incentives to discourage excessive risk taking. (See, for example, Hickson and Turner 2004.)

6 Such data do not appear to be readily available for investment banks.

management of compensation through several channels.[7] These Principles, which are reproduced below, are meant to guide supervisory oversight of compensation practices at financial institutions around the world. Note, however, that some aspects of the Principles may have already been incorporated by financial institutions and supervisors.

Effective governance of compensation

The boards of directors of major financial firms should exercise good stewardship of their firms' compensation practices and ensure that compensation works in harmony with other practices to implement balanced risk postures. The Principles need to become ingrained over time into the culture of the entire organization.

1. The firm's board of directors must actively oversee the compensation system's design and operation.
2. The firm's board of directors must monitor and review the compensation system to ensure the system operates as intended.
3. Staff engaged in financial and risk control must be independent, have appropriate authority, and be compensated in a manner that is independent of the business areas they oversee and commensurate with their key role in the firm.

Effective alignment of compensation with prudent risk taking

An employee's compensation should take account of the risks that the employee takes on behalf of the firm. Compensation should take into consideration prospective risks and risk outcomes that are already realized.

4. Compensation must be adjusted for all types of risk.
5. Compensation outcomes must be symmetric with risk outcomes.
6. Compensation payout schedules must be sensitive to the time horizon of risks.
7. The mix of cash, equity, and other forms of compensation must be consistent with risk alignment.

Effective supervisory oversight and engagement by stakeholders

Firms should demonstrate to the satisfaction of their regulators and other stakeholders that their compensation policies are sound. As with other aspects of risk management and governance, supervisors should take rigorous action when deficiencies are discovered.

8. Supervisory review of compensation practices must be rigorous and sustained, and deficiencies must be addressed promptly with supervisory action.
9. Firms must disclose clear, comprehensive, and timely information about their compensation practices to facilitate constructive engagement by all stakeholders.

The FSF has agreed that implementation of these principles should begin immediately and will be reinforced through supervisory efforts at the national level. National authorities, working through the FSF, will ensure coordination and consistency of approaches across jurisdictions.

7 The FSF brings together senior representatives of central banks, supervisory authorities, treasury and finance departments, international financial institutions, international standard-setting bodies, and committees of central bank experts. Its mandate is to assess vulnerabilities affecting the international financial system, identify and oversee action needed to address these vulnerabilities, and improve coordination and information exchange among the various authorities responsible for financial stability.

References

Chen, C., T. Steiner, and A. M. Whyte. 2006. "Does Stock Option-Based Executive Compensation Induce Risk-Taking? An Analysis of the Banking Industry." *Journal of Banking and Finance* 30 (3): 915–45.

Chhaochharia, V. and Y. Grinstein. 2009. "CEO Compensation and Board Structure." *Journal of Finance* 64 (1): 231–61.

Financial Stability Forum (FSF). 2009. *FSF Principles for Sound Compensation Practices*. Available at <http://www.fsforum.org/publications/r_0904b.pdf>.

Hickson, C. and J. D. Turner. 2004. "Free Banking and the Stability of Early Joint-Stock Banking." *Cambridge Journal of Economics* 28 (6): 903–19.

Jensen, M., K. Murphy, and E. Wruck. 2004. "Remuneration: Where We've Been, How We Got to Here, What Are the Problems, and How to Fix Them." Harvard NOM Working Paper No. 04-28.

Rajan, R. 2005. "Has Financial Development Made the World Riskier?" NBER Working Paper 11728.

Sanders, W. G. and D. Hambrick. 2007. "Swinging for the Fences: The Effects of CEO Stock Options on Company Risk Taking and Performance." *The Academy of Management Journal* 50 (5): 1055–78.

Southam, C. and S. Sapp. 2008. "Comparing CEO Compensation between Neighbours: What Can We Learn from Cross-Listed Firms?" University of Western Ontario, Richard Ivey School of Business Working Paper (January). Available at <http://ssrn.com/abstract=869868>.