

E ACCOUNTING FOR RISING LEVERAGED BUYOUT ACTIVITY

The value of global corporate leveraged buyout (LBO) transactions has expanded substantially over the past couple of years. Many of the deals have been characterised by high debt-to-equity ratios, which have reached levels comparable to those seen in the US LBO boom of the 1980s. Putting recent developments into historical perspective, this Special Feature recalls the implications of theories of optimal capital structure for recent developments and it explains how recent LBO activity has been facilitated by recently developed techniques for credit risk transfer. From a financial stability perspective, there are some concerns as it cannot be excluded that intense competition to win new deals in the pursuit of fee income, together with the strength of the bargaining power of private equity firms in negotiating terms for LBO transactions, may have led to an inadequate pricing of risks by investors in various forms of LBO debt. To mitigate these risks, banks will need to ensure the adequacy of stress-testing of their direct exposures and exercise vigilance in the monitoring of counterparty risks.

INTRODUCTION

In recent years, rapid growth in LBOs involving private equity sponsors has attracted considerable attention from market observers, central banks and prudential regulators alike. Private equity sponsors manage funds devoted to the acquisition of companies with the aim of improving their operational efficiency and financial structure. While originally the vast majority of target companies were not quoted in public equity markets, over the last couple of years, investments in listed companies, which are then taken private, have become increasingly common. In April 2007 the BSC, in cooperation with the ECB, published a report on large banks' exposures to LBO activity in the EU.¹ Based on a survey comprising more than 40 banks, the report found inter alia that debt exposures of banks to the EU LBO market are not large

relative to their capital buffers. However, some vulnerabilities were found such as the fact that some banks might be materially exposed to underwriting risk in LBO deals.² In addition, some operational risks may arise from the fact that the functioning of the LBO market is rather dependent on recently developed techniques for credit risk transfer.

The purpose of this Special Feature is to highlight specific financial stability issues related to the debt financing of corporate takeovers, an area in which banks have been playing a particularly important role.

SEQUENCES IN LEVERAGED BUYOUT TRANSACTIONS

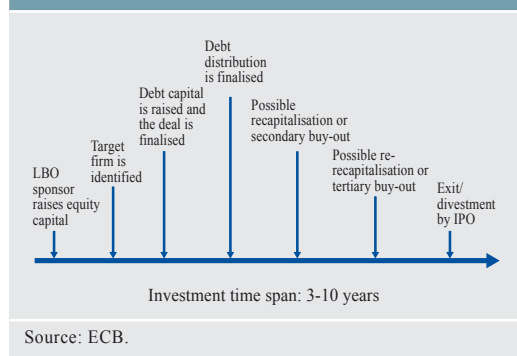
In broad terms, an LBO can be defined as an operation involving the acquisition, friendly or hostile, of a firm using a significant amount of borrowed funds (bonds or loans) to meet the cost of the takeover. LBO deals often involve private equity sponsors and where such a sponsor is involved, the assets of the acquired company, in addition to the assets of the acquiring private equity sponsor, are generally used as collateral for these loans. The debt usually appears on the acquired company's balance sheet and its free cash flow is used to repay the debt. Overall, LBOs allow private equity sponsors to make large acquisitions without having to commit a material amount of their own capital.

The financing of LBO projects tend to follow a particular model where equity and debt funding are raised sequentially (see Figure E.1). At the start, the general partners (GPs) – that is the managers of the LBO fund (or sponsor) – create

1 See ECB (2007), "Large Banks and Private Equity-Sponsored Leveraged Buyouts in the EU", April.

2 This risk arises from the large LBO debt concentrations which banks are exposed to from the day they agree to finance an LBO transaction until its completion, and throughout the debt distribution process by means of syndication or credit risk transfer (also called "warehousing" risk). This time frame, within which banks are vulnerable to changes in market sentiment and early defaults of acquired firms, has proven rather lengthy.

Figure E.1 Timeline of a leveraged buyout



Source: ECB.

a pool of capital by investing their own funds and raising equity capital from institutional investors (limited partners, LPs). The GPs may draw down these funds while companies targeted for acquisition are being searched for, but generally the funds need to be invested in target companies within a given time frame. Once target companies have been identified, debt financing is raised, typically from banks which subsequently distribute their credit exposures to the wider investor community.

During the corporate turnaround process, the LBO sponsors may either recapitalise the deal or sell the acquired company to another sponsor who will assume the remaining debt commitments. However, the most common exit by LBO investors – after the debt has been repaid – is by means of an initial public offering (IPO), where the acquired firm is floated on the stock market. After the exit, the proceeds of the operation are distributed among the general and the limited partners of the LBO fund.

Recent academic studies have suggested that the “sequenced” financing model used by LBO sponsors, which involves first general raising of equity capital followed by deal-specific debt financing, can be rationalised from the point of view of optimal contracting in the presence of informational asymmetries.³ In particular, it can be argued that although the GPs are expected to dedicate their skills to gathering information about the quality of the potential LBO targets,

it is optimal for the LPs (equity investors) to commit only a part of their funds and to induce the GPs into seeking additional deal-specific debt financing, as this increases the GPs’ incentives to pick the most profitable projects. On the other hand, the research has also shown that the initial raising of equity funds deprives the debt providers (banks) of full decision rights on each individual LBO project, and increases the expected quality of the investments that are undertaken by the GPs.

DEBT VERSUS EQUITY AS A MEANS OF FINANCING CORPORATE TAKEOVERS

Although the sequenced LBO financing model can be justified from the point of view of informational asymmetries, it is not that clear why the share of debt in LBO transactions tends to be much higher than the share of equity. From the point of view of standard corporate finance theory, the well-known Modigliani and Miller (MM) theorem states that under certain conditions the value of the firm – measured as the sum of the values of all financial claims on the firm’s future income – should be independent of whether the firms’ financial structure is dominated by equity or debt.⁴ Put another way, a decision by a firm to substitute debt for equity (e.g. to finance an LBO or to buy back its own stock) should not change the weighted average cost of capital that the firm has to pay to the investors who have claims on it. This is because a firm that increases its leverage by taking on more debt has to pay correspondingly higher returns to its equity holders, whose claims have become more risky because dividends are only distributed after interest is paid. Based on this argument, Modigliani and Miller conclude that decisions concerning a firm’s financial structure can only affect the distribution of the total value of the firm (as measured by its future stream of cash flows or earnings) among its stakeholders,

3 See, for instance, U. Axelson, P. Stromberg and M. S. Weisbach (2007), “Why Are Buyouts Leveraged? The Financial Structure of Private Equity Funds”, *NBER Working Paper*, No. 12826.

4 See F. Modigliani and M. Miller (1958), “The Cost of Capital, Corporation Finance and the Theory of Investment”, *American Economic Review*, June.

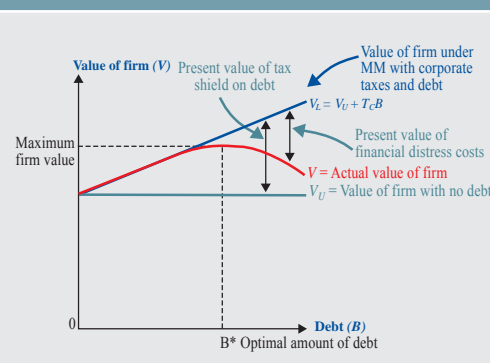
but not the magnitude of that value. Rather, the value of a firm should purely depend on “real” factors, such as cash flow and investment. All in all, given that the objective of an LBO sponsor is to maximise the resale value of the acquired companies, the MM theorem suggests that the nature of the claims (debt or equity) used to finance the acquisition should be irrelevant from the point of view of future value creation objectives.

In reality, however, institutional factors often play a role in determining the optimal financing structure of a corporate takeover. From this perspective, additional leverage may have both positive and negative impacts on the prospects of enhancing the expected future profits of the LBO acquired firm. On the positive side, the tax treatment of debt and equity typically differs, with a shift to debt financing often resulting in tax relief that positively affects the firm’s future cash flows.⁵ On the negative side, the existence of bankruptcy costs means that a higher debt burden, by increasing the firm’s probability of default, will depress the expected value of the firm’s expected future cash flows because of a higher cost of debt finance.

Figure E.2 illustrates the effect of taxes and financial distress costs on the expected value of a debt financed LBO project. The “tax shield” on debt arises from the fact that dividends are taxed while interest payments on debt are not. Therefore, the capitalised value of cash flowing to debt is greater than the same cash flows to equity. This preferential tax treatment increases the value of the firm for any additional level of debt. However, beyond an optimal level of debt such gains are partly offset by potential financial distress costs which rise with the leverage of the firm.⁶

More recently, researchers in corporate finance have pointed out that, apart from tax and bankruptcy considerations, the traditional MM framework also ignores the role of governance incentives, which is associated with the fact that the ownership of companies which have been acquired through LBOs tends to be rather

Figure E.2 The impact of debt financing on the value of a firm



Source: ECB.

concentrated, unlike publicly listed firms. Consequently, the LBO general partners, as representatives of the owners, may be in a better position to focus the attention of the acquired company’s managers on maximising cash flow and profits. Governance structures can include contractual constraints and covenants that limit managers’ actions, as well as managerial incentives such as salary structures that are connected to profits. The observation that increased leverage typically induces management to improve cost efficiency and generate additional cash flows to cover future debt repayments suggests that such governance incentives could provide a link, albeit not necessarily an unambiguous one, between debt financing and value creation.⁷

Finally, another factor important in determining the relative share of debt or equity financing in LBO deals appears to be the relative cost of debt versus equity financing which varies over the business cycle. Indeed, empirical observation of past episodes of intense LBO activity suggests

5 Indeed, the value of the company can be expressed as the value of a company financed by 100% equity plus the value of any future “tax shield” (i.e. the tax rate times the amount of debt) that can be created by adding debt to the capital structure.
 6 Empirically, the tax advantage offered by debt financing is likely to be quite relevant. Indeed, some proposals by national policymakers to limit the activity of LBO sponsors have focused on the possibility of reducing the tax incentives for additional leverage.
 7 See J. Tirole (2006), *The Theory of Corporate Finance*, Princeton: Princeton University Press.

that abundant liquidity and low interest rates have had a positive impact both on the share of debt in merger and acquisition (M&A) transactions and on the frequency of LBO deals.

CAPITAL STRUCTURE OF LBO TRANSACTIONS IN THE EU

The results of the BSC survey on private equity-sponsored LBOs in the EU provide a snapshot of the situation as of June 2006. Among other things, the results shed some light on the empirical distribution of debt versus equity in recent LBO deals in the EU. The survey results revealed that the equity component of the reported LBO transactions proved to be rather small. On average, equity represented slightly more than 20% of the capital structures of the five largest transactions to which each surveyed bank had committed capital in the year up to June 2006 (see Chart E.1).

In general terms, two factors seem to be important in explaining the low level of equity in recent LBO transactions. First, in a generally low interest rate environment and where market liquidity has been abundant the relative cost of debt capital has been significantly reduced. Second, in recent years equity appears to have been replaced in capital structures by subordinated debt, which has some equity-like

characteristics but enjoys the tax advantages of debt financing.

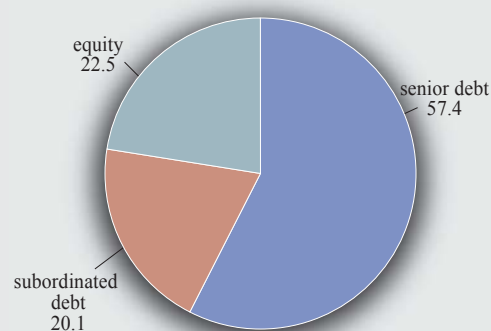
Testifying to a possible substitution effect between equity and subordinated debt, larger LBO transactions appeared to be associated with smaller shares of senior debt (or, conversely, larger proportions of subordinated debt, see Chart E.2). However, the low equity component per se seems to be a general phenomenon across recent deals, as no relationship between the equity share and the deal size, or indeed any other characteristic of the LBO transactions, could be found.

The breakdown of the debt component of the surveyed LBO transactions shows that in the EU, banks provide mostly senior debt to fund LBOs. For almost three-quarters of the banks surveyed, the safest type of senior debt – i.e. tranche A (secured) – constituted, on average, around 20% of LBO debt financing provided for their largest five transactions in the year up to June 2006 (see Chart E.3 for capital turnover banks). This is in contrast to the US market where, according to Standard & Poor's, senior tranche A debt accounted for a mere 0.8% of total bank debt to LBOs.⁸

8 See Standard & Poor's (2006), "European Leveraged Buyout Review", Q4.

Chart E.1 Capital structure of LBO transactions

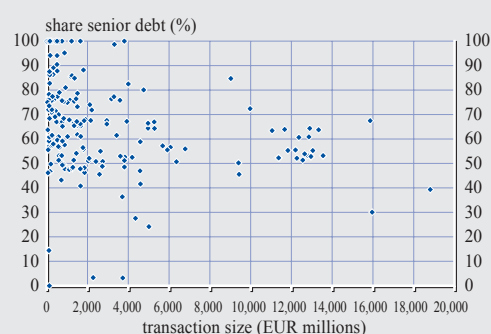
(percentages, June 2006)



Source: BSC.
Note: Based on the largest five LBO transactions of 41 large banks active in the EU leveraged buyout market.

Chart E.2 Size of LBO transactions and the relative share of senior debt in financing structures

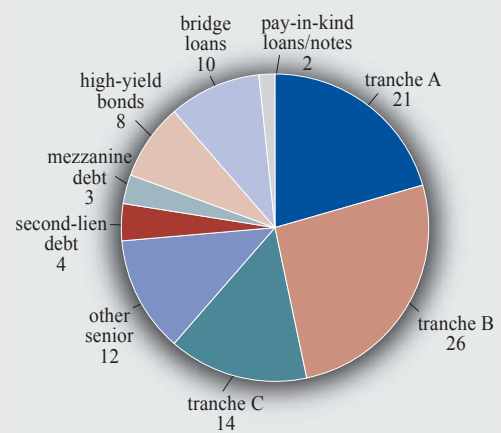
(June 2006)



Source: BSC.
Note: Based on the largest five LBO transactions of all banks.

Chart E.3 Debt composition of LBO transactions for capital turnover banks

(percentages, June 2006)



Source: ECB.

Note: Capital turnover banks are defined as banks whose participation in LBO transactions is mostly oriented towards fee income, thereby aiming at a rapid distribution of credit exposures. Breakdown based on the five largest LBO transactions of capital turnover banks.

A common feature in recent debt structures on both sides of the Atlantic seems to be that an increasing share of current LBO financing has been provided in the form of leveraged loans – generally comprising senior loan tranches B and C, usually with a non-amortising structure,⁹ as well as second-lien and mezzanine debt. Leveraged loans, which are described in detail in the next section, are typically sold via syndication to other banks and institutional investors.

FINANCIAL INNOVATION IN THE DEBT MARKETS AND LBO ACTIVITY

This sub-section takes a closer look at the various parts of the LBO debt financing structures, and discusses the role of financial innovations which have facilitated LBO financing at different times.

JUNK BOND MARKETS AND THE US LBO BOOM OF THE 1980s

Some observers have compared the recent high level of LBO activity with the wave of hostile takeovers and LBOs in the US in the 1980s,

when in some years acquisition volumes reached 10% of stock market capitalisation. The financing of the spate of corporate takeovers in the 1980s was to a great extent facilitated by the emergence and rapid growth of the high-yield, or junk, bond market. Typically entailing relatively high default risk, junk bonds are generally unsecured obligations, rated below investment-grade (i.e. lower than BBB- by Standard & Poor's, Baa2 by Moody's and BBB- by Fitch bond-rating services). Hence, investors also require higher yield to hold such instruments. Covenants on these bonds also tend to be looser than those on investment-grade bonds or bank loans, providing the issuer with more operating flexibility.¹⁰

Until the late 1970s new bonds publicly issued to large groups of investors were purely investment-grade. The junk bonds which were publicly traded at that time were generally securities which had originally been issued with an investment-grade rating but had subsequently been downgraded. The US corporate debt market changed when the first originator-issued junk bonds were launched in the 1980s, providing companies that had previously been excluded from the corporate bond market with access to the capital markets.¹¹ Investor appetite for low-rated debt derived from relatively high risk-adjusted returns: after deducting losses from the bonds that had defaulted, a diversified portfolio of junk bonds performed better than a portfolio of investment-grade bonds.

In the first half of the 1980s LBO companies which were financed by junk bond debt experienced improved operating profits and few defaults.¹² In the latter half of the 1980s,

⁹ A non-amortising (or bullet) loan is a loan that has a one-off payment of principal and interest at its termination.

¹⁰ Covenants are conditions imposed on the borrower in a loan agreement (e.g. obligations to make timely payments, or restrictions on actions such as selling or transferring assets).

¹¹ The development of the junk bond market is often associated with Drexel Burnham Lambert, a US investment bank which dominated trading in the junk bond markets at the time.

¹² See S. Kaplan and J. Stein (1993), "The evolution of buyout and financial structure in the 1980s", *Quarterly Journal of Economics*, No. 108.

however, roughly one-third of all LBO firms defaulted on their debt. Studies show that the reason for these defaults was not related to a drop in efficiency.¹³ The profitability of the firms continued improving, but not sufficiently to pay off the enormous amount of debt that had been taken on during the takeover process. Moreover, towards the end of the decade, the search for LBO targets also extended to industries with less steady cash flows, which are inherently more risky candidates for LBO transactions. In addition, the success of many of the deals in the early 1980s attracted new market participants who understood the potential of the LBO market, and pushed up the purchase prices.¹⁴

Junk bond issuance in the US reached its peak in 1988 before there was an abrupt upturn in the number of defaults by junk bond issuers in 1989 and 1990. With the credit cycle turning, confidence of market participants in the junk bond market waned, which contributed to a drying up of liquidity in the market. The troubles in the junk bond market subsequently played a role in accelerating the LBO market bust as many underwriting banks were forced to buy back the bonds of insolvent and failing companies, thus depleting their capital and eventually bankrupting several institutions. A number of savings and loans (S&L) institutions, which had been major buyers of junk bonds, also went bankrupt. Although the roots of the S&L crisis went much deeper and cannot directly be attributed to the fall of the high-yield bond market, the difficulties experienced by S&L institutions added to the general negative sentiment at the time. For all of these reasons, the junk bond market is often mentioned as an important catalyst both for the boom and the bust of the US LBO market in the 1980s. Nevertheless, it subsequently recovered and has since proven to be a lasting financial innovation.

LEVERAGED LOAN MARKETS AS A MEANS OF CURRENT LBO DEBT FINANCING

The recent growth in LBO activity has coincided with an expansion of the market for leveraged loans (LLs). LLs are loans granted to sub-investment-grade borrowers who typically have very high debt-to-equity ratios on their balance sheets. These loans are secured instruments (unlike junk bonds), offering greater repayment flexibility and requiring less information disclosure than regular loans. A gradually increasing degree of standardisation in the LL market has also facilitated the development of hedging instruments such as loan credit default swaps (LCDSs), which improve the scope for risk management among investors. Against this background, over the past few years LLs have developed from an opaque, relationship-based business to a market that is both transparent and open to institutional investors, attracting very large inflows of investor capital both in the US and in the EU.¹⁵

In an important parallel to the junk bond boom of the 1980s, today's leveraged loans are increasingly originated by syndications of large LBO transactions. Indeed, according to Standard and Poor's data, the share of LBO syndications as a source of LLs doubled in 2005 and again in 2006 to total almost 50% of all leveraged loans. A key driver of supply has been LBO recapitalisations. Together with sales to other LBO funds (secondary buyouts), these have increased in popularity as an exit strategy for LBO sponsors at the cost of traditional IPOs. Such "recycled" LBO deals tend to be completed at steadily increasing enterprise value/EBITDA (Earnings Before Interest, Taxes, Amortisation and Depreciation) multiples: in 2006 these

13 See B. Holmström and S. Kaplan (2001), "Corporate governance and merger activity in the United States: making sense of the 1980s and 1990s", *Journal of Economic Perspectives*, No. 15.

14 Against this background, Holmström and Kaplan (2001) argue that seen ex post, much of the benefit of the improved discipline, incentives and corporate governance brought about by LBO transactions could have accrued to the selling shareholders rather than to the post-buyout LBO investors.

15 Standard and Poor's estimates that due to the surge of European LBO activity throughout the past couple of years, the European segment of the LL market is now almost comparable in size to the US market.

averaged 9.7 times EBITDA for recapitalisations compared with an average of 7.3 times EBITDA in public-to-private transactions. The average total leverage of LBO-syndicated LLs reached almost 6 times EBITDA in 2006.¹⁶

Senior secured LLs have developed into a stable asset class and, as they have attractive risk-return characteristics, demand for such loans has increased significantly. So-called institutional loans (loans which are positioned higher in the seniority structure) of issued leveraged loans are particularly appealing to managers of collateralised debt obligations (CLOs), who are attracted by the stable high yield to maturity guaranteed by the bullet-type amortisation structures. CLOs themselves are complex structured products that are designed to generate higher yields compared to equivalently rated debt instruments. The more subordinated LLs are typically purchased by dedicated credit hedge funds (see Chart E.4).

In 2006, 11% of new leveraged loans were rated in the sub-investment-grade BB category, and 87% in the lower single B category (see Chart E.5). Compared to the figures one year earlier, there was a deterioration in credit quality in the LL markets, as evidenced by the fact that within the single B category, 37% of all loans

in 2006 were at the lower end (B-), compared with 33% in 2005. Also consistent with lower credit quality, market participants reported that borrowers had requested an increasing number of loan covenant waivers. Lenders and investors in LLs are often ready to accept such requests in order to secure a steady stream of excess yield or to ensure future deal origination fees.

All in all, innovations in the debt capital markets, themselves driven by strong demand by investors seeking high yield, could have been an important factor, although by no means the only one, in facilitating the activity in the LBO market both in the 1980s and at present.

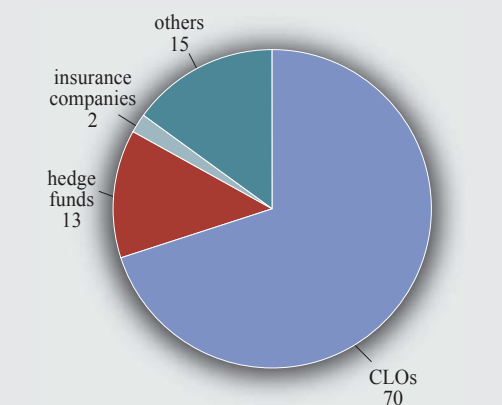
POSSIBLE FINANCIAL STABILITY ISSUES

Although the recent expansion of the global LBO market and the role that banks have been playing in this process have recently attracted considerable attention, it is important to recognise that banks have been actively involved in LBO transactions from the very outset of the market, and that although several

¹⁶ When assessing the credit quality of LBO sourced LLs, the total amount of debt, its maturity profile and the cost of debt servicing is typically assessed against its cash-flow generating ability to service the debt over time.

Chart E.4 Purchasers of European leveraged loans

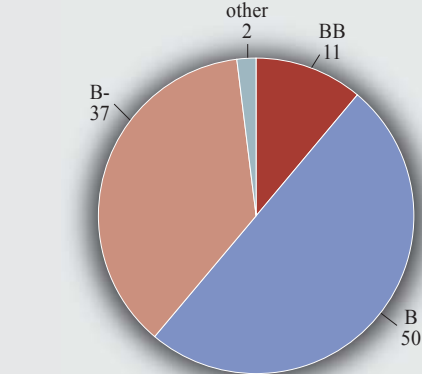
(percentages; 2006)



Source: Standard and Poor's.

Chart E.5 Credit quality of European leveraged loans

(percentages; 2006)



Source: Standard and Poor's.

lessons can be learned from earlier episodes, banks today are far better prepared to assess and manage risk than in the past.

In the current context, the negative impact of rising short-term interest rates on loan-servicing burdens could well have been partially offset by the buoyant economic environment, the strength of corporate profitability, low default rates, non-amortising debt structures and covenant waivers. At the same time, persistently low returns from long-term government bonds have been an important factor in driving investor demand for high-yielding securities such as leveraged loans. This combination has led to a situation where even poorly performing debtors continue to have access to new financing facilities, and where they can negotiate waivers and reset covenants. This may have held default rates at lower levels than might have otherwise been the case. These developments could raise some financial stability concerns, since an abrupt change in market confidence or in credit market liquidity conditions could result in an abrupt surge of default rates. Possible losses in the leveraged loan market could then contribute to a further withdrawal of funds, and hence accelerate the worsening of the credit cycle.

When contemplating the possible implications on financial stability of increasing activity in the leveraged loan markets, the following three aspects are worth mentioning. First, even though progress has been made, leveraged loans are still not a standard debt product, and hence fluctuations in the liquidity of the secondary market are more likely than in more mature markets. Second, and related to the first point, leveraged loans are more difficult to hedge. Third, recent developments in the LBO market – as highlighted in the BSC report – suggest that compressed margins on leveraged loans might not fully reflect the higher levels of risk embedded in “covenant-lite” or no-covenant debt structures and in non-amortising loan tranches.

In addition, some investment banks’ active involvement in M&A and LBO transactions

could have made their revenues excessively dependent on the fee income derived from these activities. According to Bloomberg data, in 2006 M&A fees collected by the largest 20 investment banks around the globe stood at around USD 35 billion, of which more than one-quarter was generated by LBO transactions. This figure far exceeds fee income from equity and bond underwriting, which were reported to account for just over USD 21 billion and USD 14 billion respectively. LBO transactions have also driven fees in bond markets and generated business for debt underwriters, as sales of junk bonds rose 50% in 2006 to reach just below USD 200 billion.

CONCLUDING REMARKS

While banks’ LBO debt exposures appear to be contained, as indicated by the BSC survey results, it cannot be excluded that intense competition to win new deals in the pursuit of fee income, together with the strength of the bargaining power of private equity firms in negotiating terms for LBO transactions, may have led to an inadequate pricing of risks by investors in various forms of LBO debt. To mitigate these risks, banks will need to ensure the adequacy of stress-testing of their direct exposures and exercise vigilance in the monitoring of counterparty risks.