Lazarus returns: private equity after the recession; update on Microsoft-Skype announcement

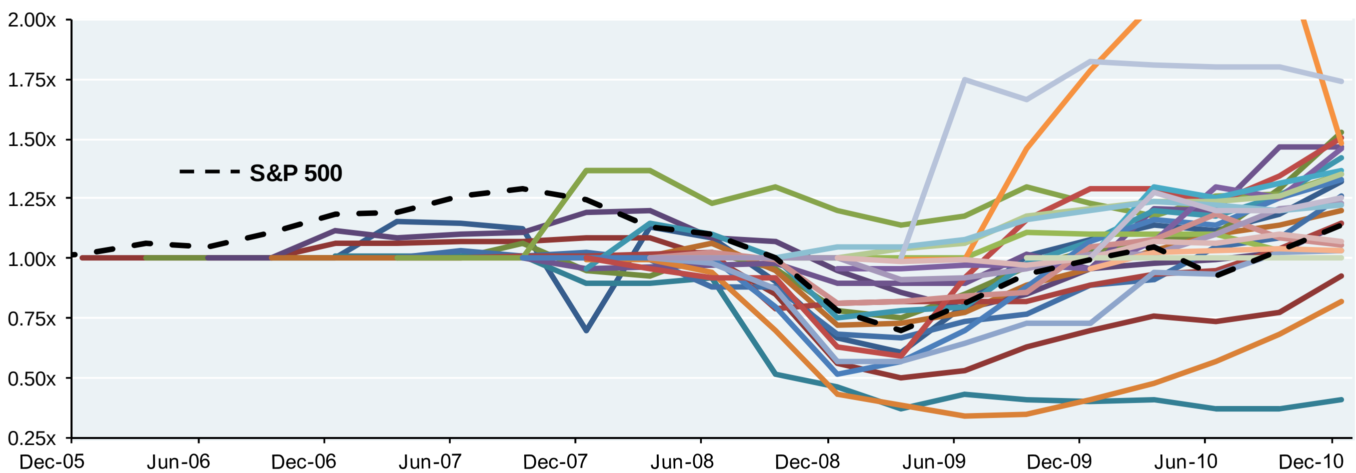
Our recent Eye on the Market notes have spent a lot of time on the US debt ceiling, the situation in Japan[1], rising oil prices and the failure of Middle Eastern growth models, the deteriorating European periphery, Asian inflation and other challenges to the global improvement in corporate profits. I cannot recall a period when there were quite so many macroeconomic headwinds facing a private sector recovery. Our view remains the same: while profits are likely to grow this year (by 10%-12%), markets are unlikely to pay much for them, since P/E multiples reflect sustainability of the profits themselves. Portfolios are positioned for a single-digit return year on developed market equities. This week: a look at private equity in the wake of the recession, and an update on one of our manager's largest holdings: Skype.

Our private equity experience, 2005-2010. In the aftermath of the worst days of the financial crisis, almost all of our private equity portfolio companies had been marked down substantially. We wrote an Eye on the Market in August 2009 informing clients of the following views; we have included an update for each.

August 2009 View	2011 Update
Prices for sub-investment grade loans and bonds were not always accurate reflections of what LBO companies were worth, given the collapse of the CLO market, declines in Libor and other technical factors	The S&P Leveraged Loan index, which fell from 100 to 65 cents on the dollar in early 2009, is now back at 96 cents (see chart on page 3)
Super-easy Fed policy, improvements in leading indicators (e.g., J.P. Morgan's Global Purchasing Manager Index) and consensus earnings revisions pointed to a stronger global economy in 2010-2011, which would support many portfolio companies	Global industrial production rose by 30% from August 2009 through March 2011; S&P 500 quarterly operating profits increased by 43% from Q3 2009 to Q1 2011
Terming out of loan and bond maturities, and purchases of debt at a discount, would give many managers more time to work through the challenges of the recession	The wall of 2012-2014 sub-investment grade loan and bond maturities in US debt markets was reduced by 40%
We expected our managers to at the minimum return original capital. In August 2009, this seemed like a "*Peace with Honor*" outcome, given the severity of the global recession	See chart below

The chart below shows the Multiple of Investment ("MOI") of all private equity funds we offered to our clients from 2005 through 2009. These funds comprise a mix of traditional developed market buyout, emerging markets, growth equity and sector-specific funds. Most of the funds reached a nadir in the Spring of 2009, and like Lazarus of Bethany, climbed out of the abyss along with the rest of the financial markets. As we noted in 2009, the private equity industry has plenty to prove here, with many managers having invested a lot of capital at peak valuations (many larger deals in 2006 and 2007 were purchased at 10x-14x cash flow, and at peak earnings). Delivering positive returns on capital through one of the more difficult market and economic periods of the last 70 years would go a long way towards doing that.

J.P. Morgan Private Bank private equity platform funds raised since 2005
Gross multiple of invested capital: manager reported investment value plus distributions divided by total invested capital



Source: J.P. Morgan Private Bank, compiled from quarterly fund manager reports. Universe includes all funds offered to clients from 2005 through 2009. Gross of management and incentive fees.

[1] There has probably been a melt-through in reactors 1, 2 and 3, unnoticed by plant managers until last week due to faulty readings of pressure differentials designed to indicate water levels. Without water to serve as a heat transfer, decay heat of the nuclear materials appears to have burned through reactor vessels. The risk of faulty readings was discovered in the US in 1993; unclear if Japan was aware of it. More next week.

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The MOI values shown are not a prediction of the future, as there are several years left in the investment periods for many of these funds, during which time any number of positive or negative things could happen. In terms of capital called, our 2008 and 2009 vintage funds were able to put a substantial amount of money to work at bottom-of-cycle valuations. We expect distributions to continue to rise, now that the IPO market has reopened and bank lending conditions have eased.

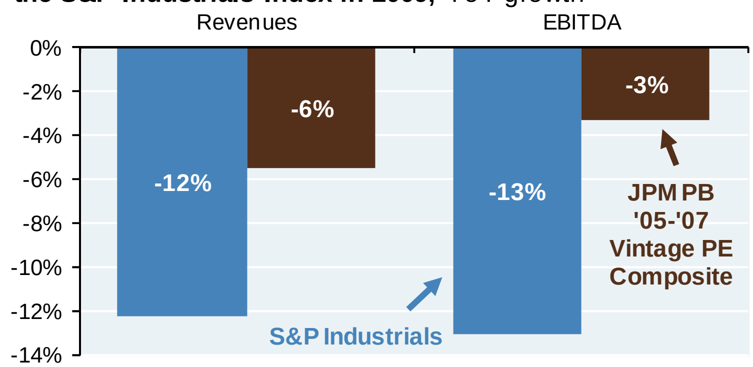
Substantial capital put to work at trough valuations (2008-2009) and a modest increase in distributions

Average percent by vintage year	2005	2006	2007	2008	2009
Gross Invested Capital (% of total commitments)	100%	85%	58%	47%	35%
Gross Distributions (% of total commitments)	22%	15%	6%	6%	11%

Source: J.P. Morgan Private Bank.

For one more look at our private equity performance during the crisis, we turn to the LBO Composite referenced in our August 2009 and June 2010 EoTM. The LBO composite aggregates three diversified large-cap buyout funds on our platform whose commitments were largely deployed in 2006-2007 (comprising 43 portfolio company investments). The chart below compares their revenue and cash flow declines in 2009, which was the worst year of the recession, to the revenue and cash flow decline of the S&P Industrials Index. The S&P Industrials Index, not to be confused with the S&P Industrials sector, was the primary predecessor to the current S&P 500 Index. It broadly represents all sectors, with limited exposure to transportation, utilities and financials. As shown, the LBO Composite survived the recession with smaller declines in profits.

J.P. Morgan Private Bank LBO Composite outperformed the S&P Industrials Index in 2009, YoY growth



Source: Standard & Poor's, J.P. Morgan Private Bank.
S&P Industrials: S&P 500 ex Financials, Transports, Utilities.

Private equity in portfolios: how is the industry doing? Recent studies are favorable, but it depends whom you ask

Our views on private equity in high net worth portfolios include a piece we wrote in 2006, "*You are not the Yale Endowment*". In this note, we stressed the need to understand the leverage, risk, cash flow, taxation and generational differences between Ivy League endowments and most families. Our bottom line, borrowing from ancient Greece, is "all things in moderation". Rather than embracing Ivy League private equity allocations of 15%-25%[2], we recommend Balanced[3] portfolio private equity allocations of 5%-7%. We strongly recommend that clients spread their private equity allocations across multiple vintage years and strategies (sector funds, global funds, large cap, small/mid cap, geographic funds, and private credit strategies).

As for broad analyses of private equity returns, there are diverging points of view. A recent report from Cambridge Associates ("*U.S. Private Equity Index and Benchmark Statistics, Private Investments, December 31, 2010*") shows that **between 1986 and 2010, private equity outperformed several different equity indices across 3, 5, 10, 15 and 20 year time frames, and by a wide margin** (4%-6% per year over the last 15 years). The equity categories included large cap and small cap stocks across Dow, S&P, Wilshire and Russell stock universes. However, there are several academic studies that take issue with these results, for survivorship bias and other computational reasons.

A study was released in February 2011 which assesses the relative performance of private equity with greater detail and specificity than prior efforts. Using individual reports provided by limited partners, professors of finance at Duke and Ohio State University analyzed 990 private equity funds from 1984 – 2010. The paper, entitled "*Private Equity in the 21st Century: Cash Flows, Performance and Contract Terms from 1984-2010*", came to the following conclusions:

- The **median private equity manager outperformed the S&P 500 net of fees by around 1.5% per year over the entire period**. Larger funds tend to outperform by even more, from 1.5%-2.5%
- **Management fees tend to be correlated with higher returns (e.g., alignment of interests)**. Furthermore, they found that this alignment of interests is higher in the private equity industry than in traditional equity mutual funds
- Lastly, they take issue with the methodology of some recent analyses[4] which estimate lower relative returns for private equity, noting that such studies independently create their own valuations of deals that have not yet been liquidated

[2] At Ivy League schools, 15%-25% private equity allocations were subsets of alternative investment allocations of 50%-60% as of June 2008.
[3] The Balanced portfolio may not be suitable for all investors and is shown for illustrative purposes only.
[4] The Duke and Ohio State authors take issue with the assumptions made on unliquidated funds by Phalippou (Oxford) and Gottschalg (HEC Paris). As shown on the first page, unliquidated funds can rise substantially during a recovery due to operational and financial leverage.

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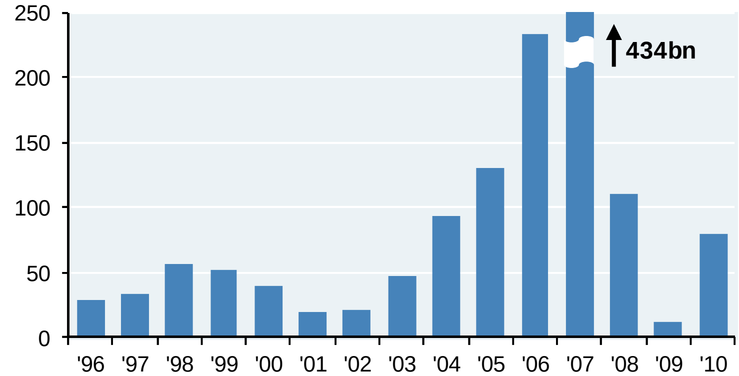
Private equity: the outlook going forward

In the wake of the recession, leveraged buyout activity collapsed. As prices in the leveraged loan markets recovered in 2009 and 2010, the new issue market for leveraged loans recovered as well, which allowed for LBO activity to rise in tandem (see charts, below; the number of deals has risen faster than dollar volume). Volumes are well below the boom days of 2007, levels which we do not expect to see again in our lifetimes. LBO activity in the range of $15-$20 billion per quarter seems sustainable, particularly with the re-emergence of the US CLO market and demand from leveraged loan mutual funds. The rate of LBO activity is now similar to the average level of activity since 1985, excluding the boom-bust period of 2006 to 2009.

As prices in the leveraged loan market recovered…
S&P/LSTA US Leveraged Loan Index

Source: Standard & Poor's. It is not possible to invest directly in an index.

…US LBO volumes picked up as well
Billions, USD

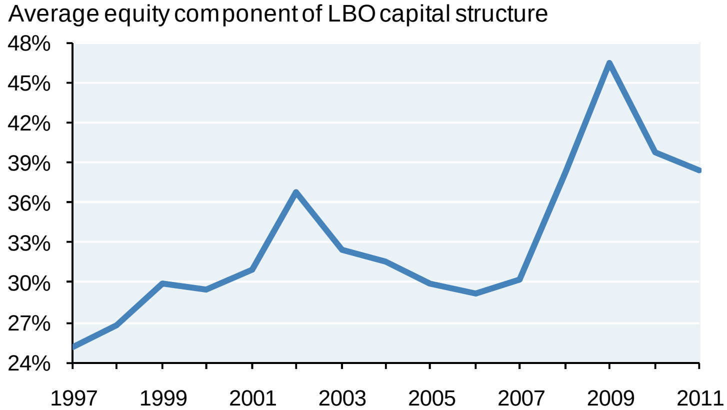


Source: Standard & Poor's.

At the peak frenzy of the LBO cycle in 2007, average equity contributions were low (~30%), and purchase multiples were high (~10x). There was an immediate retrenchment to more conservative terms in 2009, but LBO volumes were light, and not representative of a steady-state market. LBO equity levels are now higher than during the prior decade, as lenders require more credit enhancement. As for purchase multiples, they are back to the levels of 2005 and 2006. Deal sizes are generally smaller, with the average transaction having fallen from $2 billion in 2007 back to what it was earlier in the decade, around $760 million. **When considering multiples, deal sizes, leverage and other factors, the LBO industry looks like it did in the period from 2002 to 2005, rather than its 1980s counterpart (characterized by both lower purchase multiples and higher leverage).**

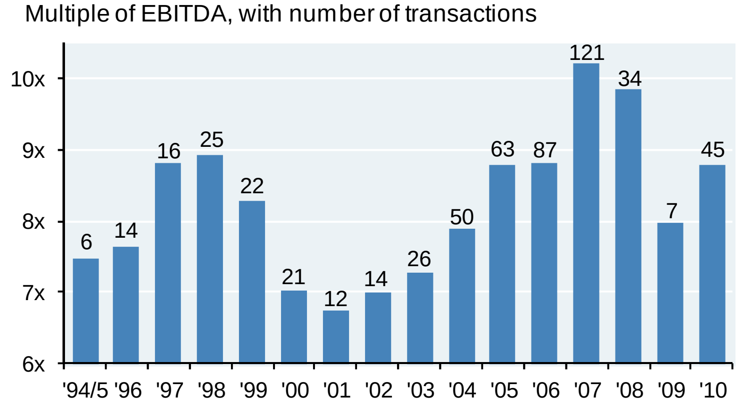
While current purchase multiples between 8x and 9x cash flow are not cheap, many companies benefit from having substantial operating leverage, such that marginal increases in revenues create substantial bottom-line profitability. This is often measured as "incremental margins," and as of December 2010, incremental margins for the S&P 500[5] were 26%, more than double the base margin rate of 12%. In our view, high incremental margins are mostly a reflection of depressed labor costs, which according to the BEA are at their lowest level in 60 years relative to sales. If the world is able to grow at 6%-7% in nominal terms, that should provide a boost for many industrial and service sector companies owned by LBO buyers. Just as importantly, LBO exits rose by 90% from 2009 to 2010, an indication that the LBO pipeline is functioning again. Exits take the form of initial public offerings, sales to other private buyers and sales to corporate buyers.

Higher equity contributions
Average equity component of LBO capital structure



Source: Standard and Poor's.

Private equity purchase price for LBO's > $500MM
Multiple of EBITDA, with number of transactions



Source: Standard and Poor's.

[5] This analysis excludes financials, utilities and energy, since they are generally not targeted by buyout investors.

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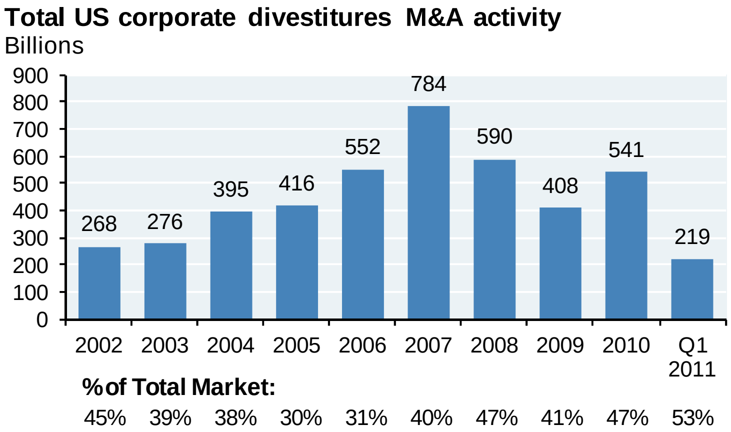
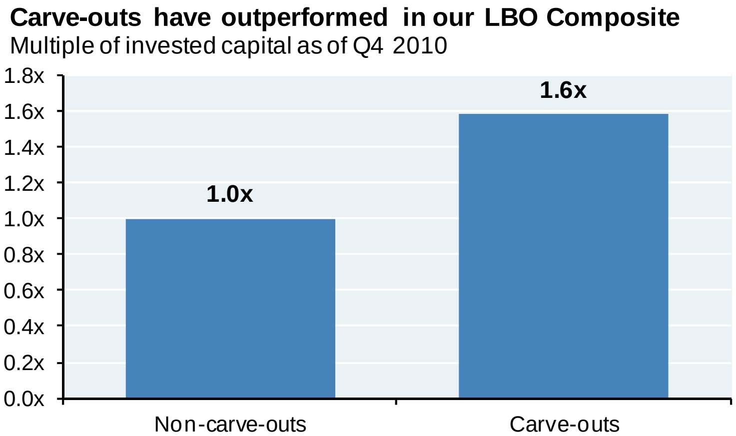
Corporate carve-outs

Over the past year, our managers have increased their focus on corporate carve-outs — the acquisition of non-core assets or business lines sold by parent companies, typically multinational conglomerates. Corporate divestiture activity increased in 2010, rising to over 50% of all M&A deals in Q1 2011, compared to less than a third during the LBO boom years of 2005-2007. The increase in corporate divestiture activity is partly a function of the improvement in capital markets and the recovery in equity market valuations compared to several years ago: as valuations have risen, the bid-ask spread between buyers and sellers of corporate assets has diminished and corporations have been more willing to prune non-core lines of businesses. Private equity firms can be an effective solution for corporate sellers, particularly where there is no natural strategic acquirer or where the seller is interested in retaining an equity stake in the business.



Source: Dealogic M&A Manager.



Source: J.P. Morgan Private Bank.

Have private equity managers been able to deliver on the promise of improving operating performance in corporate carve-outs? To answer this question we look at the corporate carve-outs in the LBO Composite. The carve-out deals in the Composite represent approximately 16% of invested capital and tend to be more cyclical businesses with operating margins of about two thirds of the overall index. Our managers paid lower prices for these businesses (about 2x EBITDA less) than they paid for the other deals. As shown in the chart on the right, these businesses were valued at 1.6x invested capital as of 12/31/10, compared to the rest of the portfolio which is currently held at 1.03x cost.[6]

<u>Skype Update: the Microsoft purchase</u>

When one of our private equity managers took a controlling stake in Skype in November 2009, I thought of the film *The Man in the White Suit (1951).* Alec Guinness invents a suit that repels dirt and never wears out. It's welcomed as a brilliant invention until textile trade unions and management realize that it puts an end to the suit business (his suit unravels at the end, saving him from an angry mob). At first glance, Skype's free voice, video and text messaging services rang a bell; great invention, but how were they going to get paid for it, particularly since the more people that join its network, the less money Skype would earn (since out-of-network calls are a large source of revenue)? Our manager's purchase price of $2.7 billion (excluding $370 million of additional costs for settlement of litigation expenses) was $2.4 billion for goodwill, and only $300 million for tangible assets and "identifiable intangible" assets of some kind.

It all came down to whether Skype could create a durable network effect, which we looked at in detail in our October 27, 2009 Eye on the Market. We focused on the network effect histories of online search engines, web mail providers, rich internet application software (e.g., Adobe Flash Player, Sun Java, Microsoft Silverlight), video sharing, online retailing, social networking and web browsers. We concluded that Skype is a utility with more inelastic demand than social networking and video sharing, and that unlike companies such as YouTube, Skype doesn't incur large additional costs for new subscribers (e.g., bandwidth, file storage), and would benefit as broadband installations grew around the globe. The risk: VoIP technology is becoming more standardized, as other companies figure out the necessary audio and video translations ("codecs"), peer-to-peer and PC firewall issues.

According to its SEC S-1 filing in April 2011, around 9 million of Skype's 663 million registered users were paying for Skype value-added services (calls to/from landlines, known as SkypeOut; voicemail; connecting to the internet with Skype Access), resulting in 20% year-on-year revenue growth in 2010, and 31% margins[7]. As for the monetized and yet-to-be-monetized

[6] As of year-end, the LBO Composite is currently marked at 1.12x as compared to its March 2009 trough valuation of 0.72x

[7] Based on Skype's Adjusted EBITDA as of 12/31/2010. See footnote 7 for additional explanation.

opportunity, in 2010, Skype customers used 207 billion minutes of video and voice conversations, and calling minutes increased 159% in the 18 months following our manager's purchase.

As a result, it was with no small degree of satisfaction that we read about Microsoft's announced agreement to purchase Skype for $8.5 billion last week. In principle, Skype could improve Microsoft's presence in the consumer market and add real-time communication technology to enhance their Lync offering and other products/platforms for enterprises. Lync uses a single interface to deliver video presence, instant messaging, voice, and online meeting capabilities, and can be accessed using computers, phones and browsers. Microsoft's announced purchase of $8.5 billion works out to be 9.9x 2010 revenue, 32.2x 2010 adjusted EBITDA and 49.8x 2010 unlevered free cash flow[8]. **If this is the kind of money that the cash-rich tech giants have to spend on acquisitions (according to the WSJ, tech companies had $350 billion in cash and equivalents in Q3 2010), it could be good news for growth equity investors that have positioned companies for these strategic buyers.**

Michael Cembalest
Chief Investment Officer

LBO = Leveraged Buyout; CLO = Collateralized Loan Obligation; MOI = Multiple of Invested Capital; EBITDA = Earnings Before Interest Taxes Depreciation and Amortization; VoIP = Voice Over Internet Protocol; BEA = Bureau of Economic Analysis; IPO = Initial Public Offering

J.P. Morgan Global Purchasing Manager Index = An indication each month of global business conditions, based on data collected from around 10,000 purchasing executives in the US, UK, Germany, France, Italy, Spain, Ireland, Netherlands, Austria, Greece, Poland, Czech Republic, Russia, Denmark, Hungary, Switzerland, US, Mexico, Japan, China, India, Taiwan, Hong Kong, Korea, Turkey, Singapore, Australia, New Zealand, Israel, Brazil, and South Africa

[8] "*Skype Acquisition Announcement*", John DiFucci, J.P. Morgan Securities LLC, May 10, 2011. EBITDA is a widely used measure of ongoing cash flow derived by adding depreciation back to operating profits. "Adjusted EBITDA" as calculated by Skype in its S-1 appears designed to create a measure of recurring EBITDA after its conversion into a public company, and adds back to operating profits certain items such as: adjustments for stock-based compensation, realized losses on a credit amendment, external transaction costs, a variety of compensation considerations, litigation settlement costs, foreign exchange gains/losses and bad debt expense. "Unlevered free cash flow" is an analyst's measure of free cash flow, with interest costs added back under the assumption that the multiple should reflect the cost of buying the business with no debt.