

Illuminate

ANALYSIS THAT REVEALS

SEPTEMBER 2014

ECONOMIC OUTLOOK

Higher Rates May Not Be All That Bad

FEDERAL RESERVE

THE CARLYLE GROUP

GLOBAL ALTERNATIVE ASSET MANAGEMENT

Higher Rates May Not Be All That Bad

By Jason M. Thomas and Kewsong Lee

In an addendum accompanying its September policy statement, the Federal Open Market Committee (FOMC) outlined its plans to “normalize the stance of monetary policy.” The Fed will first complete its “taper” of asset purchases in October 2014 and then increase its target for the fed funds rate sometime in the first half of 2015. While some worry about the effect higher rates will have on financial market conditions, far more significant could be the signal policy normalization sends to business leaders: after six years of near-zero interest rates and more than \$3.5 trillion in cumulative asset purchases, the U.S. economy is finally strong enough to stand on its own.

Business investment has been exceptionally weak in the wake of the financial crisis due to unprecedented uncertainty regarding the growth of consumer demand, changes in regulatory and fiscal policy, the sustainability of public and private indebtedness, and the unwinding of ultra-accommodative monetary policy.¹ The Fed’s policy change could send a powerful message to executives that the period of acute uncertainty requiring massive monetary stimulus has passed and it is now time to expect employment, output, and spending growth to normalize with interest rates. Managers that internalize this message should exhibit an increased willingness to transact, take risks, and anticipate new opportunities. While this positive shock to confidence will likely be fragile and depend on other developments, its impact on the investment environment is likely to far exceed the modest impact of cash yields rising from zero to one or two percent.

Higher rates are also likely to reestablish discipline on borrowers and management teams, which will increase economic efficiency. Near-zero interest rates redefine what it means to be “underperforming” by lowering hurdle rates and the opportunity cost of funds. The result has been complacency among managers and softer deal volumes than one would anticipate based on demand from would be acquirers. Low returns have also pushed investors further out onto the risk spectrum, which leads to less discrimination among credits and impairs the competitive position of healthier firms.

For reasons we detail below, monetary policy normalization could generate spending increases, efficiency gains, and increased mergers and acquisitions (M&A) activity that more than offset the negative effects of higher short-term interest rates.

(1) Corporate Divestitures and External Financing Conditions

Underinvestment since the financial crisis has created strong demand for corporate acquisitions as a means to

generate earnings growth.² But deal markets are two-sided; strong demand for acquisitions can only be satisfied if existing owners are willing to sell. Management teams generally decide to part with assets to relieve financing constraints (thereby generating cash or repaying debt); focus attention on “core” businesses; or dispose of units that are of more strategic value to prospective acquirers than the current owner.³ Even when these motives exist, a deal will only be consummated if a prospective bidder is willing to meet management’s “reservation price” for the asset.⁴

Accommodative monetary policy has relaxed the financial constraints that would cause some managers to sell assets in a more normal environment. Management teams are generally predisposed to acquire assets, not divest them, with the majority of firms acquiring three businesses for every one they divest.⁵ The natural inclination is to grow larger, not shrink.⁶ Businesses generally only sell subsidiaries when doing so is necessary to fund expansion in another unit or to avert default.⁷ Since 2010, a record \$1.5 trillion in cumulative speculative grade loans and bonds have been refinanced.⁸ Much of the refinancing volume has consisted of the same credits returning to markets to access progressively more favorable terms. Exceptionally accommodative credit markets have enabled management teams to avoid tough decisions.

Given the decline in businesses’ cost of capital, it is no surprise that management teams prefer to hold onto business units, however lackluster their performance. Management teams have little incentive to sell a business unit unless they know how to reinvest the sale proceeds in a manner that is more accretive than simply holding the asset. Indeed, in our experience we have found that corporates usually choose to dispose of assets only after consummating an acquisition, not beforehand.

Since the start of 2011, the aggregate weighted cost of capital for U.S. public companies has fallen by about 28% from its historic average, from 9.0% to 6.5% (Figure 1). Over the same period, the aggregate operating earnings yield on U.S. public companies has actually increased relative to its long-run average by 14%.⁹ Higher earnings yields and a lower average cost of capital means that the typical business unit is 25% more likely to earn more than

1 C.f. Wright, I. (2014), “Firm Investment and the Term Structure of Uncertainty,” Stanford University Working Papers; Bloom, N. et al. (2013), “Held Back by Uncertainty,” IMF Finance & Development March 2013; Baker, S. et al. (2013), “Measuring Policy Uncertainty,” Chicago Booth Research Paper No. 13-02; Taylor, J. (2014), “Rapid Growth or Stagnation: An Economic Policy Choice,” *American Economic Association Annual Meetings*, 2014.

2 Thomas, J. (2014), “Not the Fed’s Fault But it is Their Problem,” *Economic Outlook*, The Carlyle Group, June 2014.

3 Chen, H.S. and Guo, R. (2005), “On Corporate Divestiture,” *Review of Quantitative Finance and Accounting*.

4 Schlingermann, F. et al. (2002), “Divestitures and the Liquidity of the Market for Corporate Assets,” *Journal of Financial Economics*.

5 Mankins, M. et al. (2008), “How the Best Divest,” *Harvard Business Review*, October 2008.

6 Allen, J. and McConnell, J. (1998), “Equity Carveouts and Managerial Discretion,” *Journal of Finance*.

7 C.f. distress as key motivation for asset sales in Kruse, T. (2002), “Asset Liquidity and Asset Sales by Poorly Performing Firms,” *Financial Management*. Shleifer, A. and Vishny, R. (1992), “Liquidation Values and Debt Capacity: A Market Equilibrium Approach,” *Journal of Finance*.

8 Bank of America Merrill Lynch, High Yield Credit Chartbook, September 2014.

9 Capital IQ Database, September 25, 2014.

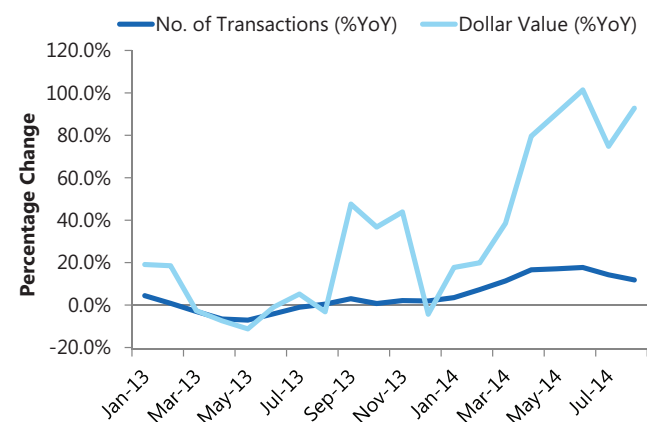
its firm-wide cost of capital than in normal circumstances.¹⁰ With cash yielding next to nothing and divestiture-funded stock buybacks likely dilutive, it is not clear how management would productively redeploy the cash proceeds of any sale.

Figure 1: U.S. Aggregate WACC, 1997-2014¹¹



Finally, by pushing up asset prices, accommodative monetary policy raises management's reservation price, forcing would-be acquirers to pay large premiums to fair value to secure the target business. Strategic deals completed in the first half of 2014 were completed at a 55% premium to the replacement cost of assets, on average.¹² Likely due to these high premiums, the recent M&A boom was mostly a large deal phenomenon involving strategic acquisitions of entire businesses, not dispositions of individual units. While the dollar value of global deal activity through this point of 2014 is up by over 70% relative to the same period a year ago, the number of transactions has increased by just 12% (Figure 2). Even when measured in dollars, deal activity in 2014 remains about 25% below the same period in 2007 in nominal terms.¹³

Figure 2: Annual Growth in Global M&A Volume (3MMA), 2013-2014¹⁴



¹⁰ This calculation is based on the difference between the aggregate earnings yield and the aggregate WACC over time and assumes that the earnings yield of subsidiaries is drawn from the same normal distribution as that for entire firms.

¹¹ Damodaran, A. (2014), *The Cost of Capital*, Available at: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/wacccentral.html.

¹² S&P Capital IQ M&A Database, July 5, 2014.

¹³ Thomson Reuters Database: <http://www.reuters.com/article/2014/06/30/us-deals-m-a-idUSKBNOF50A920140630>

¹⁴ S&P Capital IQ M&A Database, September 19, 2014.

The lack of deal volume, despite strong demand, has not gone unnoticed by activist investors. Hostile M&A volume reached a record high of \$560.1 billion globally through eight months of 2014, one-third higher than the previous high of \$421.3 billion in 2007.¹⁵ Activists appear eager to step in and drive change in situations where accommodative policy allows managers to either embrace inactivity or reservation prices well above fair value.

A modest increase in policy rates could be precisely what's necessary to change "market psychology." Higher interest rates could moderate sellers' valuation expectations, while simultaneously creating a sense among prospective buyers that the market "top" has already been reached. If management teams no longer demand large premiums to compensate for the risk that prices may be higher in twelve months' time, reservation prices could fall relative to market values, leading to a narrowing of bid-ask spreads and an increase in transaction volumes.

Increased transaction volumes are not only good news for those involved in M&A; dislodging undermanaged assets from existing owners increases overall economic efficiency. Subsidiaries of large corporations are generally less able to adapt rapidly to a changing investment opportunity set because they must compete with other divisions for finite internal resources. Corporate divestitures make investment at the spun-off business more sensitive to changes in investment opportunities, which improves the economy-wide allocation of capital.¹⁶

(2) Information Asymmetries and the Signal Sent by Fed Policy

The Fed is generally believed to possess superior information about the current state of the economy and its likely evolution.¹⁷ As a result, Fed policy statements and related communications are closely scrutinized for any evidence of a shift in the Fed's interpretation of economic conditions. At times, efforts to ease policy since December 2008 may have actually slowed the growth of private sector spending by signaling that the Fed had fresh concerns about the direction of the economy.

While the Fed's initial asset purchase program almost certainly helped to stabilize the economy by truncating the left tail of the distribution of macroeconomic outcomes, subsequent rounds of quantitative easing (QE) may have unsettled market participants by signaling that the Fed believed the economy was in even worse shape than it appeared. The decline in long-term interest rates since 2008 is often attributed to QE, but this is difficult to prove empirically. Most studies focus on the decline in yields from the date QE was announced,¹⁸ based on the reasonable assumption that markets are efficient and prices respond to information about QE before the actual purchases commence. The problem is that since the announcement

¹⁵ Thomas Reuters Database: <http://blogs.wsj.com/moneybeat/2014/09/25/as-dealflow-hits-2007-highs-here-are-some-hot-spots/>.

¹⁶ Gertner, R. (2002), "Learning about Internal Capital Markets from Corporate Spin-offs," *Journal of Finance*.

¹⁷ This is demonstrated via inflation determination in Romer, C. and Romer, D. (1996), "Federal Reserve Private Information and the Behavior of Interest Rates," NBER Working Paper No. 5692.

¹⁸ C.f. Gagnon, J. et al. (2010), "Large-Scale Asset Purchases by the Federal Reserve: Did They Work?" Federal Reserve Bank of New York Staff Report No. 441.

of QE also contains information about the Fed's view of the economy, it is difficult to disentangle the effects of expected purchases: did long-term rates fall because of QE, or because the Fed's embrace of QE signaled that trend growth and inflation were likely to remain subdued for some time to come?¹⁹

The Fed's "forward guidance" may have had a similar impact. In 2011, the Fed attempted to reduce near-term interest rates by providing an explicit time horizon for the period during which policy rates would remain "exceptionally low." Unfortunately, this time horizon was interpreted as the period during which the Fed believed the economy would remain depressed.²⁰ As a result, the benefits of lower rates were likely offset by downward revisions to expectations for future demand.

A willingness to raise interest rates would send an unmistakable message of confidence to market participants. If business managers interpret rate increases as a signal that the Fed believes the economy is finally strong enough to stand on its own, investment spending could accelerate as expectations for more robust demand offset marginally higher finance costs.

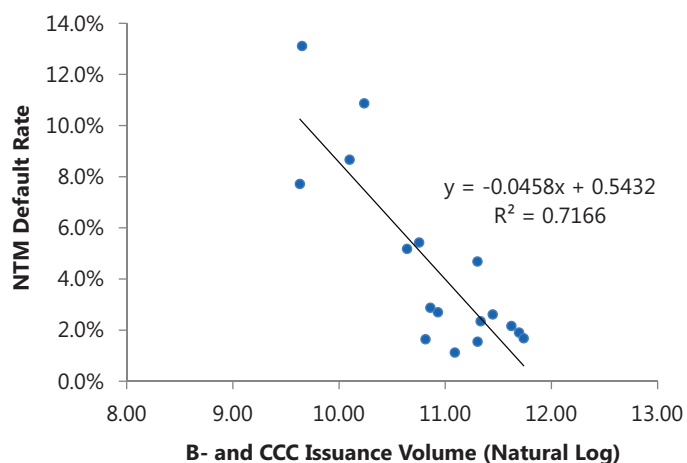
(3) Funding Liquidity, Distress, and the Exit of Inefficient Competitors

Poor financial performance is a necessary but not a sufficient condition for default. Whether a speculative grade borrower defaults or refinances when its liabilities mature depends more on the market's appetite for risk than the level of any specific financial ratio. A sustained period of low rates often results in a "reach for yield" where investors attempt to achieve fixed nominal return targets by assuming incremental risk.²¹ This portfolio shift increases demand for low-rated corporate obligations, which increases funding liquidity for highly leveraged corporate borrowers and places downward pressure on default and distress rates. As shown in Figure 3, the volume of B- and CCC debt issuance explains over 70% of the time series variation in the following year's corporate default rate. The aforementioned record refinancing volume has corresponded to default rates less than one-half of the historic average.

A modest tightening in financial conditions should increase funding pressures for the most leveraged borrowers and eventually translate to an increase in default rates. The first effects of such tightening could be felt among sovereign and corporate borrowers in Emerging Market Economies (EMEs), where low U.S. dollar interest rates have dramatically eased financial conditions and led to a credit boom.²² A tightening of financial conditions would not only increase the number of distressed investment opportunities, but also improve the relative position of more efficient competitors. By allowing underperforming businesses to stay

in business, low rates impede normal market processes by artificially reducing pricing power, profits, and investment incentives at healthy firms. The exit or restructuring of underperforming firms allows market share to be reallocated to more efficient competitors, which improves overall economic efficiency and accelerates productivity growth.²³

Figure 3: Speculative Grade Issuance and Default Rates the Following Year²⁴



(4) "Artificially Low Interest Rates" and Business Investment

Finally – and perhaps most paradoxically – higher policy rates could stimulate business investment by removing uncertainty regarding businesses' "true" cost of capital. Many commentators suggest that accommodative monetary policy has pushed interest rates to an "artificially low" level.²⁵ This type of analysis could leave one with the mistaken impression that rates would swiftly adjust upward to post-1950 averages if not for QE and other non-standard monetary policies. This uncertainty regarding the effects of Fed exit could act as more of a drag on investment than the higher rates themselves.

Neoclassical investment theory argues that firms will choose to invest until they have exhausted positive net present value (NPV) projects. By lowering external finance costs and hurdle rates, reductions in interest rates are supposed to stimulate investment spending by increasing the number of projects that exceed this lower hurdle. The problem is that if business managers regard low rates as "artificial," they may be disinclined to pursue the additional positive NPV projects. Rather than find themselves trapped in excessively low returns on irreversible projects that take years to complete, business managers may rationally choose to wait to invest until the Fed exits and there is more clarity regarding their "natural" cost of capital.²⁶ If term finance costs for businesses and consumers remain historically low even as the Fed normalizes policy, business managers may be more willing to invest and grow.

19 Woodford, M. (2012), "Methods of Policy Accommodation at the Zero Lower Bound," Federal Reserve Bank of Kansas City Annual Policy Symposium.

20 A commonly-cited example is the New York Times headline to the late-2014 guidance: "Fed Signals That a Full Recovery Is Years Away," Available online at: <http://www.nytimes.com/2012/01/26/business/economy/fed-to-maintain-rates-near-zero-through-late-2014.html?pagewanted=all>.

21 Greenwood, R. and Hanson, S. (2013), "Issuer Quality and Corporate Bond Returns," *Review of Financial Studies*.

22 Chinn, M. (2013), "Global spillovers and domestic monetary policy," Bank for International Settlements Working Paper No. 436.

23 Caballero, R. et al. (2008), "Zombie Lending and Depressed Restructuring in Japan," *American Economic Review*.

24 S&P Capital IQ M&A Database, September 19, 2019.

25 C.f. Krugman, P. (2014), "Not Knut," NY Times Blog, July 7, 2014.

26 This hypothesis was suggested by Bini Smaghi, L., (2013), "Many Targets, Many Instruments: Where Do We Stand?" Rethinking Macro Policy II: First Steps and Early Lessons, International Monetary Fund.

Conclusion

With the addendum to the September FOMC Statement, the Fed announced its intention to begin normalizing monetary policy next year. While some fear the impact higher policy rates will have on economic activity and deal finance markets, there are at least four reasons to believe modestly tighter policy could actually brighten the economic outlook, increase business confidence, and improve the investment environment. An increase in interest rates may be precisely the signal from the Fed that's necessary to unleash the "animal spirits," or sense of confidence, necessary for business managers to transact, assume risk, and grow their business.

Economic and market views and forecasts reflect our judgment as of the date of this presentation and are subject to change without notice. In particular, forecasts are estimated, based on assumptions, and may change materially as economic and market conditions change. The Carlyle Group has no obligation to provide updates or changes to these forecasts.

Certain information contained herein has been obtained from sources prepared by other parties, which in certain cases have not been updated through the date hereof. While such information is believed to be reliable for the purpose used herein, The Carlyle Group and its affiliates assume no responsibility for the accuracy, completeness or fairness of such information.

This material should not be construed as an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. We are not soliciting any action based on this material. It is for the general information of clients of The Carlyle Group. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual investors.

Jason Thomas is a Managing Director and Director of Research at The Carlyle Group, focusing on economic and statistical analysis of the Carlyle portfolio, asset prices, and broader trends in the global economy. Mr. Thomas is based in Washington, D.C.

Mr. Thomas' research helps to identify new investment opportunities, advance strategic initiatives and corporate development, and support Carlyle investors.

Mr. Thomas received a B.A. from Claremont McKenna College and an M.S. and Ph.D. in finance from George Washington University where he was a Bank of America Foundation, Leo and Lillian Goodwin, and School of Business Fellow.

Mr. Thomas has earned the Chartered Financial Analyst (CFA) designation and is a financial risk manager (FRM) certified by the Global Association of Risk Professionals.

Contact Information

Jason Thomas
Director of Research
jason.thomas@carlyle.com
(202) 729-5420

Kewsong Lee is a Managing Director and Deputy Chief Investment Officer of the Corporate Private Equity Group. He serves on the Management Committee, and is a member of each of the Firm's private equity fund investment committees. Mr. Lee is also involved in the Firm's corporate development activities. He is based in New York.

Prior to joining Carlyle, Mr. Lee was a partner at Warburg Pincus and a member of the firm's Executive Management Group. Most recently, he led the Consumer, Industrial and Services group, and in the past was actively involved in the firm's financial services efforts, capital markets group, and the development of the firm's buyout practice. During his 21 years at Warburg Pincus, Mr. Lee was involved in numerous public and private companies such as Neiman Marcus, Aramark, Arch Capital, Transdigm, Polypore, Knoll, Dime Savings Bank, and Endurance Holdings International.

Mr. Lee serves on the Board of the Lincoln Center Theater, where he is a member of the Executive Committee and co-heads the Investment Committee. He is also a Trustee at Choate Rosemary Hall and actively engaged on various committees for Harvard University, including the Faculty of Arts and Sciences Campaign Steering Committee. He received an AB in applied mathematics in economics at Harvard College, and an MBA from Harvard Business School.

THE CARLYLE GROUP

GLOBAL ALTERNATIVE ASSET MANAGEMENT