

Illuminate

ANALYSIS THAT REVEALS

JULY 2017

ECONOMIC OUTLOOK

*Pessimism's Pitfalls as an Investment Strategy:
The Perils of the "Next Subprime"*

THE CARLYLE GROUP

GLOBAL ALTERNATIVE ASSET MANAGEMENT

Pessimism's Pitfalls as an Investment Strategy: The Perils of the "Next Subprime"

By Jason M. Thomas

Every few months, a risk materializes in global financial markets that some observer labels "the next subprime" crisis.¹ Allusions to the toxic mortgage loans that nearly brought down the financial system are not subtle. Comparisons to subprime mortgages resonate precisely because the psychological wounds from the Great Recession run so deep.

Not surprisingly, the most fervent believers in "next subprime" narratives tend to be those investment managers or strategists who perceive another "Big Short" opportunity. The Michael Lewis book (and Paramount film) romanticized the idea of the clear-eyed contrarian able to perceive the cracks in the financial system before everyone else and construct portfolios to profit from its eventual demise. In the wake of the crisis, it is easy to see the allure of these types of strategies. What institution wouldn't prefer blockbuster returns to the emotional toll of another 2008-style near-death experience?

The psychological scars of the Global Financial Crisis made "Big Short" investment strategies more appealing but less likely to succeed.

Unfortunately for many investors, the search for the "next subprime" has not been a particularly fruitful investment strategy. Positioning portfolios to profit in a tail-risk scenario is not cost-free; the cumulative drag on returns can be quite meaningful as put options expire worthless, short-positions get stopped out in a rising market, and central bank policy adjusts to confront new risks. Since the recession ended June 2009, the cumulative return on the broadest U.S. stock market index (Russell 3000) has been 3x, an annually compounded return of 15%. Rather than metas-

tasizing into something akin to 2008, the market dips from "next subprime" scares emanating from the U.S., Europe, and China instead offered attractive buying opportunities for astute investors.

There may be more to this than dumb luck.

The Big Short[s] and Hedge Fund Performance

The failure of post-crisis "Big Shorts" may help to explain why so many hedge funds have lagged public markets. After outperforming stocks by 6.6% per year between 1997 and the end of the Great Recession, hedge funds have underperformed the market by -9.4%, in the aggregate, since then.³ There are many explanations for this phenomenon, including increased competition, fewer market inefficiencies to exploit, and the natural difficulty achieving the same returns as assets under management (AUM) grow exponentially. Yet, a decomposition of monthly hedge fund returns suggests that the search for the "next subprime" is a big part of the story.

By their nature, hedge funds are designed to generate returns that are less volatile than and largely uncorrelated with public equities. Between 1997 and 2017, the average market beta on hedge fund returns has been 0.37, which implies that a 10% increase (decrease) on the stock market would be associated with a 3.7% increase (decrease) in hedge fund returns, on average. This market beta has been roughly the same in the period before and after the crisis. The decline in hedge fund returns, therefore, can be attributed to the decline in "alpha," or outperformance after accounting for market covariance. Since the end of the Great Recession, average hedge fund alpha has declined from 5.2% per year to just 0.2% (Table 1).

Linear measures of market dependence, like beta, can be less informative as a measure of hedge funds' net market exposure because of the nonlinearities introduced by active trading in derivatives markets.⁴ Some of what gets classified as "alpha" likely reflects "exotic beta," or the incremental profits derived from higher-order market dependence.⁵

TABLE 1

Average Hedge Fund Returns, 1997-2017²

Period	CAPM Alpha	Beta * Excess Market Return	Risk-Free Return	Total Return	Fama-French Alpha
1997-2017	3.3%	2.5%	2.6%	8.4%	3.2%
1997- June 2009	5.2%	0.6%	4.0%	9.8%	4.6%
July 2009- April 2017	0.2%	5.7%	0.2%	6.1%	1.5%

¹ Defaulting auto loans recently earned this moniker. A Google search for "auto loans next subprime" returns 476,000 results. June 26, 2017.
² Data from Barclay Hedge Fund Index, June 2017.

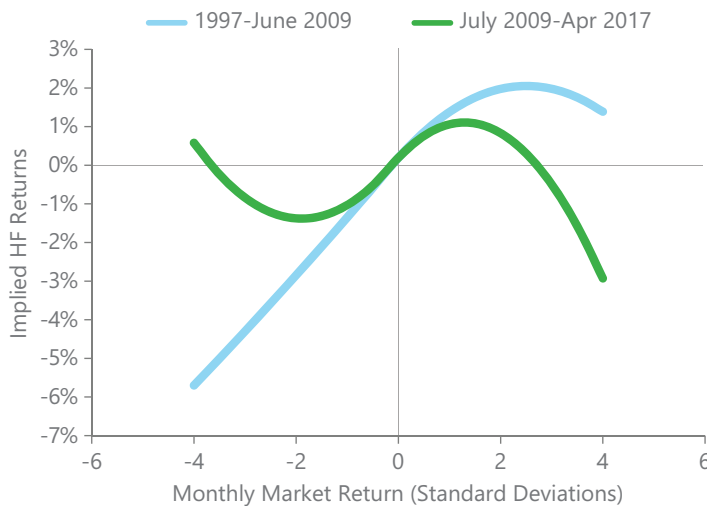
³ Data from Barclay Hedge Fund Index, June 2017. The Recession ended June 2009.
⁴ Agarwal, V. and Naik, N. (2004), "Risks and Portfolio Decisions Involving Hedge Funds." *Review of Financial Studies*.
⁵ Chen, Y. et al. (2014), "Sentiment Risk and Hedge Funds Returns," *American Economic Review*.

Consequently, the decline in average hedge fund alpha may partly reflect the drag from strategies designed to perform slightly worse in rising markets but profit in extreme (negative) circumstances.

Indeed, regressions of hedge fund returns on the payoffs of synthetic put and call options suggest that a statistically significant shift in industry-wide portfolio construction has occurred since 2009, with a sizeable increase in exposure to nonlinear short positions. Average portfolios appear to have less exposure to market gains and significantly greater protection against steep market drops.

Between 1997 and 2009, a two standard deviation decline in the stock market (roughly -9.5%) was associated with a -3% decline in monthly hedge fund returns. Since then, hedge fund returns would be expected to fall by just -1% in response to the same market decline and actually rise as market losses intensified from there (see Figure 1). The improved performance in the left tail of the distribution comes at the expense of lower returns when the market rises—not a favorable trade-off in the context of the 2009-2017 bull market.⁶

FIGURE 1
Changing Exposure to Stock Market Returns⁷



The Post-Crisis Change in Perceptions and Behavior

Perhaps the post-crisis shift towards more aggressive downside protection makes sense and these types of portfolios will be rewarded handsomely once one of the various market risks turns into something more malignant. Alternatively, it could be that these strategies have not worked

⁶ These stylized facts should be treated with some caution. The results have been derived from highly aggregated data and assume that all other risk factors are held constant. In practice, short positions tend to be concentrated in specific categories of assets that the investor expects to “blow up,” such as China’s currency, peripheral euro-denominated debt, auto loans, or long-duration bonds. As a result, actual performance would depend on the weighting of each strategy in the overall hedge fund index and these strategies’ relationship to the broader market.

⁷ Bloomberg, June 2017.

precisely because the same psychological factors that make “next subprime” investment strategies seem more appealing have also led to behavioral changes among business managers, regulators, central bankers, and market participants that make a crisis similar to 2008-2009 much less likely to occur.

Risks do not exist in a vacuum. A market dislocation or mispricing must intersect with private sector vulnerability (excessive leverage, illiquidity, short-term funding, etc.), and public sector passivity to metastasize into a full-blown crisis. Vulnerability and passivity are shaped, in part, by perceptions.

Cognitive research finds that the range of potential outcomes we can conceive generally depends on our own past experience.⁸ Similar research finds that we tend to overestimate the value of knowledge gained from our experience in ways that systematically understate the likelihood of infrequent events.⁹ Virtually no one active in markets, government, or business had any personal basis for expecting a crisis on the scale of 2008-09 because the collapse in asset prices, corporate profits, GDP, and payrolls was unlike anything observed since the 1930s. It seems likely that businesses were less liquid, institutional investors less hedged, and policymakers less inclined to intervene in markets than would have been the case had the possibility of a 2008-style event been fully internalized.

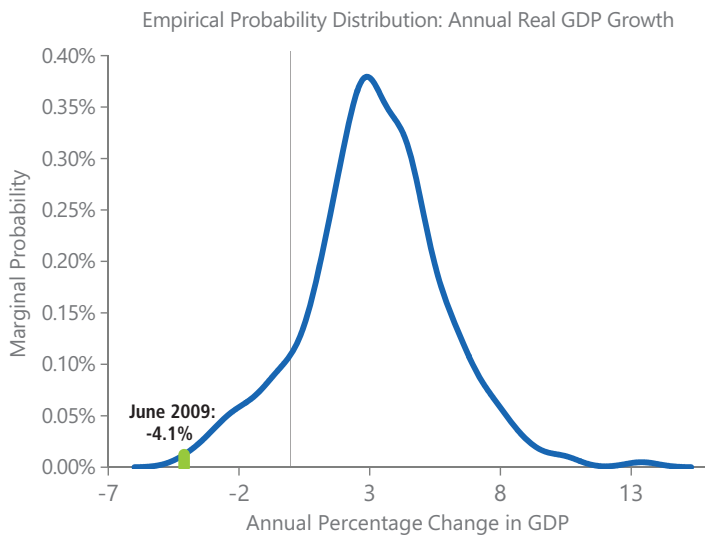
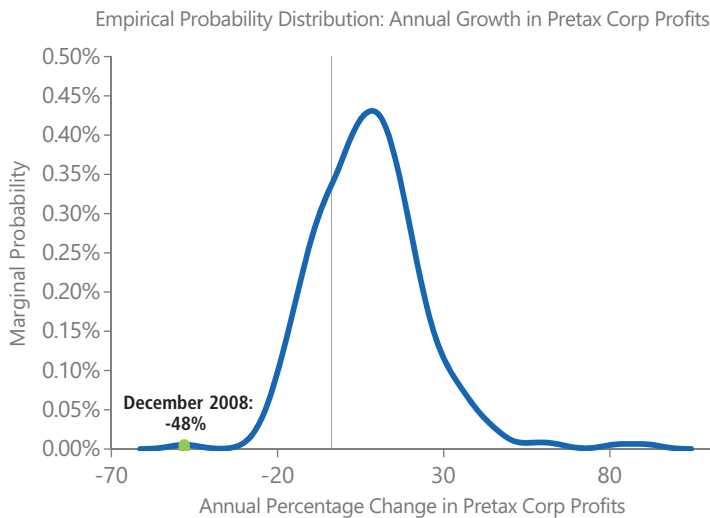
Now that a global financial crisis has moved from abstract theoretical construct to concrete experience, businesses hold more cash, banks are less leveraged, and policymakers have proven far more willing to intervene through new regulations as well as asset purchases and capital injections to stabilize markets. The events of 2008-09 create appreciation for the *possibility* of events like 2008-09, which prompts risk-reducing behavioral changes that make the system more stable.

Compare the apparent trade-offs facing U.S. policymakers in September 2008 to those confronting their European counterparts in 2012. When ECB President Mario Draghi pledged in July 2012 to do “whatever it takes” to preserve the euro, he possessed subjective, experiential knowledge unavailable to Treasury Secretary Hank Paulson in September 2008 when he “never once considered that it was appropriate to put taxpayer money on the line in resolving Lehman Brothers.”¹⁰ Worries about moral hazard abounded in both cases. The risk of inaction only became evident in hindsight.

⁸ Tversky, A. and Kahneman, D. (1973), “Availability: A Heuristic for Judging Frequency and Probability,” *Cognitive Psychology*.

⁹ Tversky, A. and Kahneman, D. (1977), “Intuitive Prediction: Biases and Corrective Procedures,” *Decision Research*, Technical Report PTR-1042-77-6. Specifically, the biases of conditionality and anchoring lead observers implicitly to base expectations on “normal operating conditions,” or past experience, which makes large departures from normal conditions appear to be less probable than is actually the case.

¹⁰ Transcript, Press Briefing with Treasury Secretary Henry Paulson, September 15, 2008.

FIGURE 2**Contraction of 2008-09 Expected Once Every 80.7 Years¹¹****FIGURE 3****Decline in Corporate Profits of 2008-09 Expected Once Every 138 Years¹²****Conclusion**

The economic recovery that began July 2009 has proven more resilient than many observers would have anticipated. Market participants and regulators learned from the Great Recession in ways that make the “next subprime” crisis less likely. Rather than fall prey to elaborate narratives of ruin, or the tendency to expect the next recession will look like the last one, investors would be better served to focus on conventional risks and opportunities. The best investment strategies will continue to be those that outperform the market in most years rather than those that deliver spectacular returns in one year out of one hundred.

Jason M. Thomas is a Managing Director and the 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. He is based in Washington, D.C.

Mr. Thomas serves as the economic adviser to the firm’s corporate private equity and real estate investment committees. His research helps to identify new investment opportunities, advance strategic initiatives and corporate development, and support Carlyle investors.

Previous to joining Carlyle, Mr. Thomas was Vice President, Research at the Private Equity Council. Prior to that, he served on the White House staff as Special Assistant to the President and Director for Policy Development at the National Economic Council. In this capacity, he served as the primary adviser to the President for public finance.

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 studied as a Bank of America Foundation, Leo and Lillian Goodwin Foundation, and School of Business Fellow. He 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

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.

References to particular portfolio companies are not intended as, and should not be construed as, recommendations for any particular company, investment, or security. The investments described herein were not made by a single investment fund or other product and do not represent all of the investments purchased or sold by any fund or product.

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.

¹¹ Bloomberg, June 2017.

¹² Bloomberg, June 2017.