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The Great Recession: Investing Lessons Reinforced

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Summary

- A critical analysis of the housing bubble and subsequent Great Recession gives us an opportunity to revisit and reinforce important lessons for all investors.
- Investor behavior was an important element of the era. Collective investor behavior helped inflate the bubble and exacerbate the downturn. Individual investor behavior—good and bad—helped determine respective investing outcomes during the period.
- While these lessons are discussed in the context of the Great Recession, we believe that they are valid in any economic and investing environment. Investors should benefit by referring to them often.

In our previous white paper, we revisited the causes of the Great Recession at its decennial. In this edition, we reflect upon investing lessons gleaned from the period leading to the housing bubble and financial crisis and their aftermath. While these lessons are especially relevant to the events of 2007-2009, all of them are valuable for investing during any period.

There is a big difference between *investing* and *speculating*.

By our definition, investing is acquiring an asset that provides the investor the right to future cash flows (or potential cash flows) generated by its normal business operations or intended purpose. The intrinsic value of such an investment is the sum of all future estimated net cash flows discounted to their present value by an appropriate risk-adjusted rate. Over time, an investment's return is largely determined by fundamentals and can include price appreciation and/or investment income (largely coupon payments or dividends).

Some examples of investments include:

- Common stock of high-quality companies held for a reasonable amount of time
- Bonds
- Representative exchange-traded funds or mutual funds
- Commercial or residential rental real-estate properties
- Private businesses with established business models

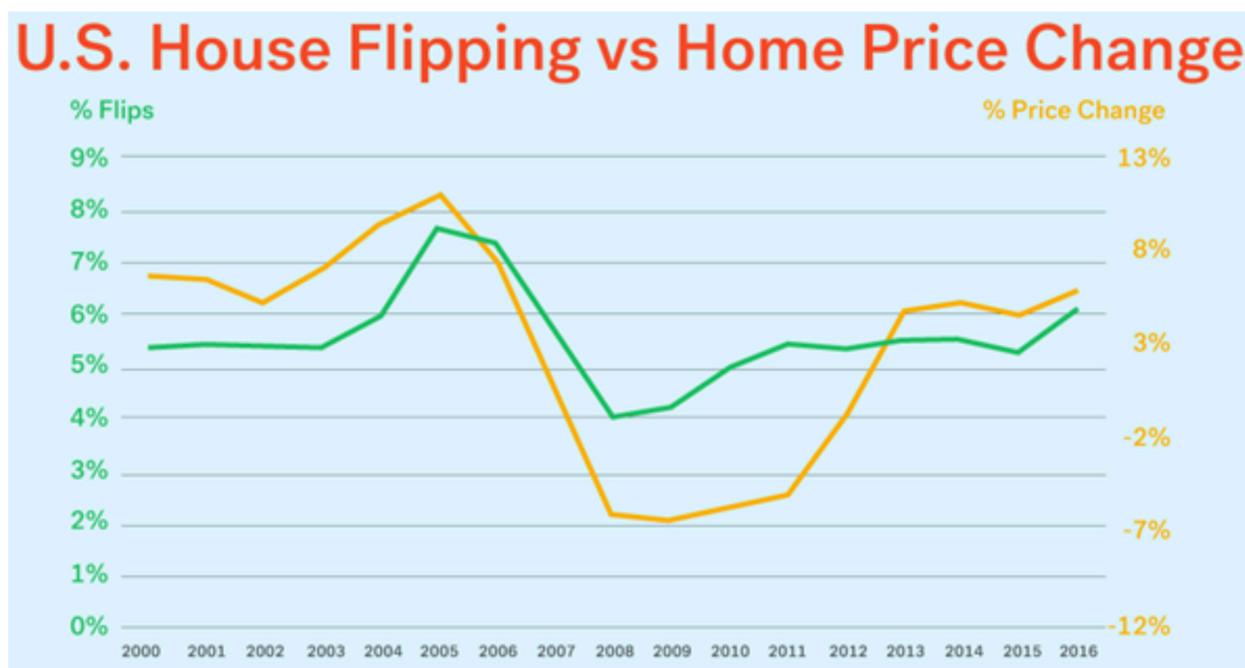
In contrast, speculating is acquiring an asset with no clear income potential, where a speculator's return is determined primarily by selling the asset to another party willing to purchase it at a higher price. In most speculation, there are little, if any, periodic income streams for the holder.

Speculative assets can include:

- Art and other collectibles
- Cryptocurrencies
- Penny stocks
- Precious metals
- Startup companies
- Undeveloped land held for speculation

Much of the activity in real estate leading up to the Great Recession was speculative. As shown in Exhibit 1, the percentage of home sales across the United States that were “flips” rose to more than 7.5% as the housing price bubble inflated, up from only about 5.5% at the beginning of the decade.

EXHIBIT 1: U.S. HOUSE FLIPPING VS. HOME PRICE CHANGE



Sources: Trulia Public Records Data and House Price Estimates; Clayton Wealth Partners (CWP).

There is nothing inherently wrong with speculating. Both investing and speculating are means to increase wealth, and certain speculative assets like gold can provide diversification benefits. But speculators must realize that when demand wanes and there is no longer an incremental buyer willing to purchase the speculative asset, the speculator may be left holding a depreciating asset (and any associated liabilities like mortgages) or may be required to sell at a lower-than-expected price.

Risk matters at least as much as return.

Investors tend to focus most on returns—both absolute and relative to benchmarks, other asset classes and other investors. Too often, they end the review of their portfolio performance once they quickly determine how much their capital increased or decreased. The second critical part of such an analysis is determining—and being comfortable with—how much risk an investor is willing to accept to achieve those returns.

Risk comes in various forms. Academics often refer to investment risk as “volatility” (by how much the value of an investment or portfolio fluctuates above and below an average rate) and measure it in standard deviations.¹

Few seem to mind upside volatility—that is, when it leads to outsize positive returns. But volatility can have a symmetrical downside, resulting in significant underperformance and/or negative returns. Thus, an investor who wishes to participate in high or outsize returns on the way up is exposed to potentially symmetrical underperformance on the way down. Importantly, the higher the return potential an investment has, the riskier—that is, the more volatile—the investment tends to be.

Debt increases the volatility of investment returns.

The widespread and increasing use of debt during the housing bubble was one of the main factors that contributed to the severity of the financial crisis that followed. A practical example can show the impact of leverage on investing returns, and how potentially dangerous it can be to individuals

In the following simple scenarios, Individuals A and B each purchased a house for \$100,000 which subsequently appreciated 10%, netting a \$10,000 gain for each. They differed, though, in the amount of down payment (i.e., equity) and mortgage (i.e., debt) they used to purchase their respective houses. Individual A purchased his house using 100% cash, while Individual B purchased his using only a 5% down payment and mortgaging the rest. The implications are depicted in Exhibit 2.

EXHIBIT 2: INVESTMENT GAIN SCENARIOS WITH AND WITHOUT DEBT

	INDIVIDUAL A	INDIVIDUAL B
House purchase price	\$ 100,000	\$ 100,000
Equity financing	100,000	5,000
Debt financing	-	95,000
House price appreciation (%)	10%	10%
House price appreciation (\$)	10,000	10,000
New house value	\$ 110,000	\$ 110,000
Return on individual's equity	10%	200%

Source: CWP.

Exhibit 2 demonstrates the outsize return for Individual B, who earned a 200% gain on his initial \$5,000 investment with the use of a large amount of leverage. The same \$10,000 absolute gain represented a much lower return on equity of 10% for Individual A's \$100,000 equity investment.

Now let's consider a *loss* scenario using significant debt. Exhibit 3 summarizes the same parameters for Individuals A and B, but here the value of each house *declines* by 5%.

EXHIBIT 3: INVESTMENT LOSS SCENARIOS WITH AND WITHOUT DEBT

	INDIVIDUAL A	INDIVIDUAL B
House purchase price	\$ 100,000	\$ 100,000
Equity financing	100,000	5,000
Debt financing	-	95,000
House price appreciation (%)	-5%	-5%
House price appreciation (\$)	(5,000)	(5,000)
New house value	\$ 95,000	\$ 95,000
Return on individual's equity	-5%	-100%

Source: CWP.

Here, the price of each house fell \$5,000. Individual A incurred a loss of only 5% of his initial equity investment. But the same \$5,000 depreciation resulted in a 100% loss on Individual B's equity investment due to his large debt financing.

During the bursting of the housing bubble, many homeowners actually lost *more* than 100% of their equity investments (which would have happened to Individual B in Exhibit 3 had his house depreciated more than 5%). Too-low down payments and severe declines in home prices not only completely wiped out homeowners' equity, but they left owners with homes that were worth less on the market than their underlying mortgages. At this point, homeowners would be considered "underwater", leading to potential insolvency and, during the Great Recession, to many home foreclosures

While the above illustrates the impact of debt on home purchases using relatively extreme scenarios of 0% financing and 95% financing, the same concepts can be applied to other areas of investing. Material amounts of debt are common in margin trading, private equity and corporate acquisitions.

Borrower beware.

Valuation matters.

Warren Buffett summarized it best when he channeled Ben Graham and stated, "Price is what you pay; value is what you get."²

Buffett's quote highlights a very important difference between *price* and *value*, which investors too often forget or ignore to their detriment. *Valuation* is the analysis of the relationship between an asset's estimated intrinsic and its price, and it allows an investor to determine

whether an asset might be considered “cheap” or “expensive.” It is beyond the scope of this white paper to discuss methods of determining value, but over time, the value of quality assets tends to increase, and asset prices typically follow. Occasionally, though, prices and values can diverge, sometimes materially.

The price paid for an asset is one of the most important variables for determining an investment’s total gain or loss. Consider the simple equation:

$$\text{Total Realized Investment Gain (Loss)} = (\text{Price}_{\text{sold}} + \text{Total Investment Income}) - \text{Price}_{\text{paid}}$$

The greater the price paid for an investment, the lower the total investment gain, all else equal. An investor increases his chance for a smaller gain (or loss) when he purchases an asset at a price significantly higher than its intrinsic value. Such was the case for many homebuyers as the housing bubble inflated and home prices decoupled significantly from underlying fundamentals and other metrics.

The business cycle matters.

Having a sense in which stage the current business cycle lies and how an investment is likely to act in other phases is critical for investors. An investment may perform well in the current business environment, but what happens when, inevitably, conditions change?

Many of the mortgages underwritten during housing bubble were priced for success only if the borrower-friendly economic conditions at the time were to continue indefinitely. For example, many adjustable-rate mortgages (ARMs) offered exceptionally low “teaser” interest rates for the first few years of the mortgage, which kept total monthly payments relatively low. After a set period of time, the interest rate would reset to a higher, market-based rate. Here, numerous borrowers expected to simply refinance their current ARMs once they reset—or to even take out a similar loan on a new, larger house.

But eventually the economy turned, wreaking havoc for certain mortgage borrowers and lenders. Credit conditions tightened, preventing many from refinancing. As the rate on ARMs reset higher, monthly payments became more burdensome. The recession worsened, and some of these same stressed borrowers lost their jobs, contributing to widespread defaults and foreclosures. The pain spread to investors who held bond-like securities that were backed by these mortgages that no longer provided critical cash flows.

The experts don’t always get it right.

“While local economies may experience significant price imbalances, a national severe price distortion seems most unlikely in the United States, given its size and diversity.”

— Alan Greenspan, Chairman of the Federal Reserve, October 19, 2004³

“Although a ‘bubble’ in home prices for the nation as a whole does not appear likely, there do appear to be, at a minimum, signs of froth in some local markets where home prices seem to have risen to unsustainable levels.”

— Greenspan, June 9, 2005⁴

“...housing markets are cooling a bit. Our expectation is that the decline in activity or the slowing in activity will be moderate; that house prices will probably continue to rise but not at the pace that they had been rising.”

— Ben Bernanke, Chairman of the Federal Reserve, February 15, 2006⁵

The inclusion of the quotes above is not intended to insult the men to whom they are attributed. Rather, it is to illustrate that, despite their intelligence, experience and (in most cases) good intentions, the “experts” are not infallible. In this case, the experts include advisors, brokers, investment bankers, the financial media, government officials, ratings agencies, Wall Street analysts, and other pundits.

Ultimately, investors are responsible for their own independent thinking.

Incentives influence actions.

One of the basic tenets of psychology is that people do what they are incentivized to do. This is particularly true when considering financial incentives. For example, profit-seeking entities seek to maximize their revenues, so they often structure the pay of their salespeople with commissions. The higher and/or more lucrative the revenue a salesperson generates for a company, the greater the commissions.

Perverse incentives were common during the housing bubble. As we discussed more thoroughly in our companion white paper on the causes of the Great Recession, bankers, corporate officers, mortgage originators, traders, Wall Street executives and others were compensated handsomely for actions that substantially increased revenue while simultaneously taking excessive risk that contributed to the Great Recession.

Investors should fully understand the incentives of those with whom they interact. How are they compensated? What risks do they bear? Are the interests of the other parties aligned with their own?

If you don't understand it, don't invest in it.

Financial innovation is a constant on Wall Street. Many new products are introduced with good and specific intentions to fill a certain need. Too often, though, investors looking for ever-higher returns rush to purchase these new products without fully understanding how they work or where their risks lie.

Collateralized debt obligations (CDOs) were one such example that loomed large during the crisis. Originally created in the 1980s, CDOs were billed as a way to diversify mortgage risk for loan originators and took on a prominent role in the financial crisis as their use increased substantially in the 2000s. (Here, too, we discuss CDOs more fully in our companion white paper.) As the crisis intensified, CDO investors who were unaware of, didn't understand or ignored the underlying risk suffered.

We believe Buffett and his investing partner Charlie Munger drive this home quite well and encourage investors to stay within their circle of competence: “Charlie says we have three boxes: In, Out and Too Hard. You don't have to do everything well. At the Olympics, if you run the 100 meters well, you don't have to do the shot put.”⁶

Put another way, just because investors *can* invest in something doesn't mean they *should*.

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“Black swan” events can and do happen.

In ancient times, it was presumed that black swans did not exist simply because no one had ever seen one. This assumption was upended when black swans were finally observed in the wild. Black swans became a metaphor for the notion that just because something *hasn't* happened yet doesn't mean that it *can't* or *won't* happen in the future.

Author and scholar Nassim Nicholas Taleb is credited with developing “black swan theory.” Here, a black swan is an event that is considered highly improbable but has very significant consequences if and when it does occur.

In our opinion, the housing crisis was a black swan event. Until it occurred, the housing market was framed as a large number of individual markets, each with their own unique factors that influenced local prices. Home prices could and did decline in any given market, but few considered the likelihood or impact of home prices falling simultaneously across the nation.⁷ And clearly, the consequences were substantial.

Investors should attempt to identify as many possible scenarios involving their holdings, no matter how unlikely, and then for each try to answer the question “What if?”

Liquidity matters.

Liquidity refers to how quickly an asset can be converted to cash. The more liquid the asset, the easier and more quickly it can be turned to cash. On one end of the liquidity spectrum is cash itself—by definition. A house is towards the other end of the spectrum, given the length of time it takes to complete a transaction because of the number of steps required (showings, inspections, etc.) and the number of parties involved (buyers, sellers, brokers, lenders, etc.).

Liquidity is important for a couple of reasons. Companies must have sufficient liquidity for their normal business operations, and households require it for their day-to-day financial needs. Just as important, highly liquid assets are desired in times of serious financial stress. When markets for highly illiquid assets begin breaking down, these illiquid assets may depreciate rapidly as buyers, already relatively few in number for illiquid assets, fail to materialize. Such was the case during the housing crisis. Other assets, like certain private equity, actually require “lock-up periods” which can prohibit investors from redeeming their investment for a number of years.

Investors should ensure that their investments in aggregate provide enough current liquidity for normal activities and to provide a cushion in times of financial stress.

The bigger the bubble, the more painful and longer the recovery.

As an asset bubble forms and inflates, investors can make a lot of money. When the bubble bursts, financial pain ensues in direct proportion to the preceding gains.

Consider some of the more significant asset bubbles in relatively recent history, as shown in Exhibit 4:

EXHIBIT 4: MEASUREMENTS OF SIGNIFICANT ASSET BUBBLES IN RECENT YEARS

ASSET	REFERENCE BENCHMARK	DATE OF BUBBLE PEAK	SUBSEQUENT PRICE DECLINE	DATE THAT PRIOR HIGH WAS REACHED AGAIN	LENGTH OF RECOVERY
Japanese stocks	Nikkei 225	December 1989	-82%	n/a	n/a
U.S. tech stocks	Nasdaq	March 2000	-78%	April 2015	15 years, 1 month
U.S. housing	S&P CoreLogic Case-Shiller National Home Price Index	July 2006	-27%	November 2016	10 years, 4 months

Sources: Nikkei, Nasdaq, S&P Core Logic Case-Shiller, CWP.

After almost 40 decades, the Nikkei has yet to reclaim its previous high mark.⁸ Those who invested in Japanese stocks at their peak, when the Nikkei's P/E ratio reached nearly 70 times⁹ (see: Valuation matters), easily remain underwater. And the data for U.S. housing above is for the *national* average. A number of markets, including certain larger metro areas, fell more than 27% and took longer to recover.

When investors observe outsize gains for assets that are unreasonable given underlying fundamentals, they should remember that the bigger the party, the more painful and longer the hangover.

Conclusion

The housing bust and Great Financial Crisis brought some misery for almost everyone. But it has provided the opportunity for lessons to learn or become reacquainted with. Investors would be wise to keep them close at all times, especially when the next asset bubble forms.

NOTES

- 1 We embrace this definition of risk, particularly for those with a short investing timeframe. For a long investing time horizon, we also define risk as the potential loss of purchasing power, including the possibility of permanent loss of capital.
- 2 Buffett, Warren. 2008 Berkshire Hathaway Chairman's Letter.
- 3 Remarks by Chairman Alan Greenspan. "The mortgage market and consumer debt." At America's Community Bankers Annual Convention, Washington, D.C., October 19, 2004. Federalreserve.gov.
- 4 Testimony of Chairman Alan Greenspan. "The economic outlook." Before the Joint Economic Committee, U.S. Congress, June 9, 2005. Federalreserve.gov.
- 5 "Greenspan and Bernanke: Evolving Views." The New York Times, August 22, 2007.
- 6 Buffett, Warren. 2006 Berkshire Hathaway Annual Meeting.
- 7 As author and professor Michael Haliassos points out in *Financial Innovation: Too Much or Too Little?*, Americans had reason to believe that house prices could never go down: based on the Office of Federal Housing Enterprise Oversight purchase index, home prices never fell nationally in any single quarter between 1975 and 2005.
- 8 As of March 31, 2018.
- 9 Forbes.