EVERGREEN GAVEKAL

Monthly Chartbook

SEPTEMBER 2015

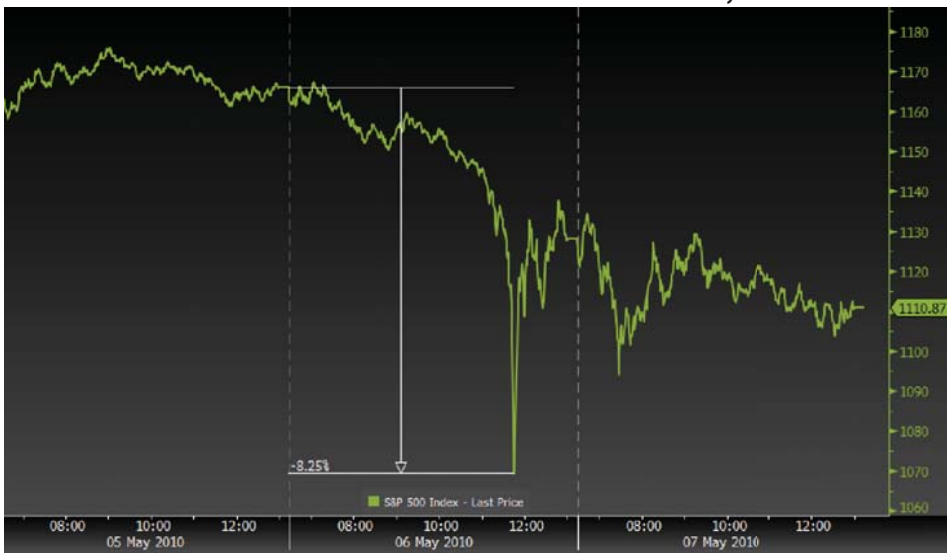
BY JEFF DICKS

FLASH CRASH 2.0

On May 6th, 2010, financial markets experienced one of the most severe intraday declines in history—now known as the infamous "Flash Crash". For a brief history review, markets were fragile at the time given the recent memory of the financial crisis combined with a deteriorating situation in Greece. May 6th was no exception, as US equity indices traded down a little over 2% by early afternoon. But what happened next revealed how much the market structure had really changed. In the following minutes of trading, the Dow experienced its biggest intraday drop in history, instantaneously plunging 600 points—nearly 1000 points below the previous days close (almost a 9% decline). Just thirty minutes later, however, the market had recovered most of the late-day decline.

Over the following months regulators had little explanation for the glitch, and even blamed it on a "fat finger" trade. Eventually, regulators faulted algorithmic trading, and since that day there have been 22 criminal counts handed out for market manipulation. Trader Navinder Singh Sarao is widely known as the biggest culprit. The day of the flash crash, Sarao entered roughly $200 million worth of sell orders, which were programmed to both modify and cancel before being executed. To regular market participants, this activity looked real, and despite orders not being filled, this was a key catalyst that sent markets into freefall. Market regulators have since banned this tactic known as "spoofing" as well as adding circuit breakers to exchanges to limit large moves. One would reasonably assume that markets learned their lesson and regulators made necessary changes that should prevent these types of events from recurring, right? Wrong. On Monday, August 24th, 2015, a little over five years since the original "Flash Crash", we experienced yet another one of these events. In this month's Chartbook, we will dive into the abnormal trading activity that occurred just a few weeks ago. We'll also draw comparisons to the flash crash of 2010 and explore why these events are likely to recur given a structural change in market dynamics. Finally, we will take a look at where we think the stocks markets are headed from here.

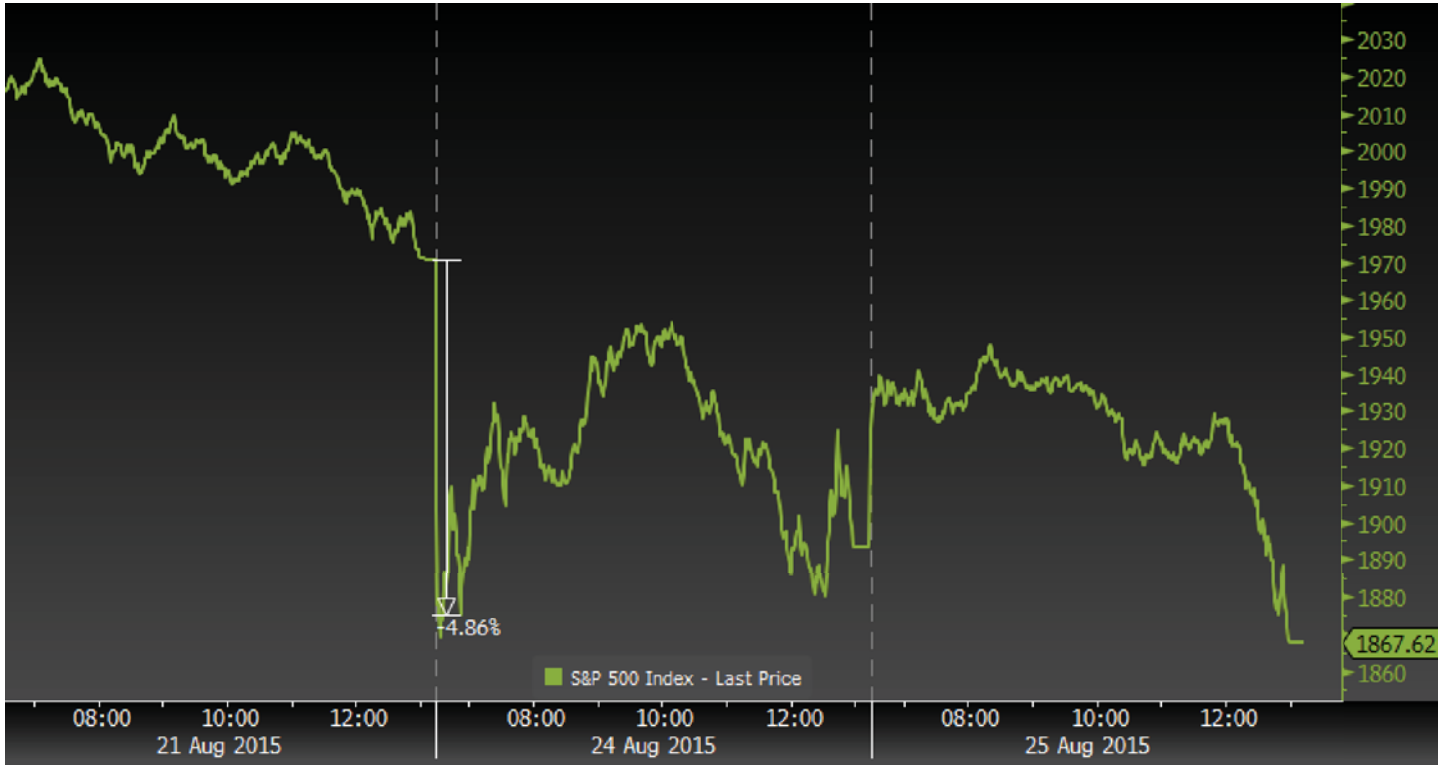
S&P 500—FLASH CRASH—MAY 6, 2010



Source: Evergreen GaveKal. Bloomberg

Flash Crash 2.0

S&P 500 – FLASH CRASH – AUGUST 24, 2015

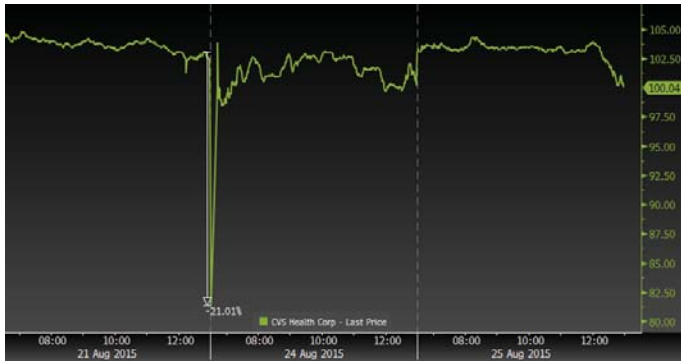


Source: Evergreen GaveKal. Bloomberg

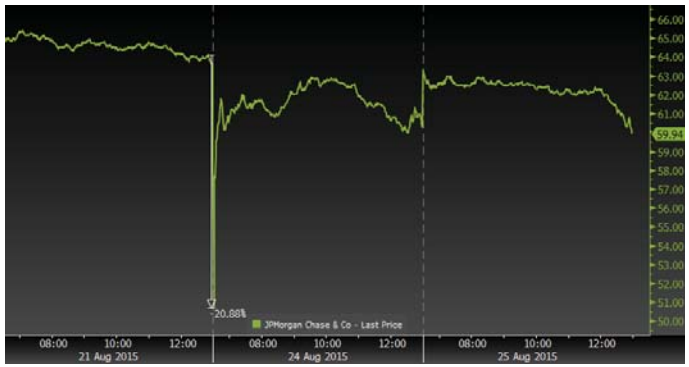
- This time around the S&P plunged by 5% in a matter of minutes to kick off the trading day on August 24th.
- While the decline was less severe than 2010, individual stocks and ETFs had much more pronounced drops, as we will see in the following charts.

Flash Crash 2.0

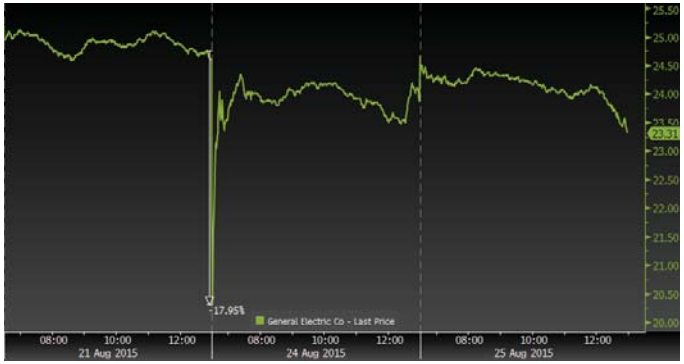
CVS CORP—AUGUST 24, 2015



GENERAL ELECTRIC—AUGUST 24, 2015



JP MORGAN—AUGUST 24, 2015



Source: Evergreen GaveKal. Bloomberg

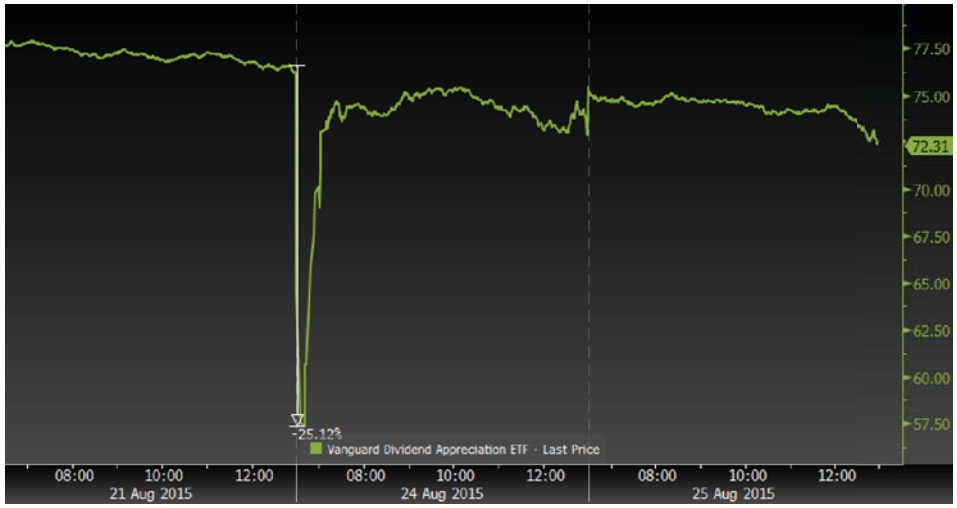
· The charts above illustrate what happened over the same time frame to three of the top 25 members in the S&P 500.

· As you can see, these three companies (which are highly liquid) each traded down close to, or over, 20% in early trading.

Flash Crash 2.0

BY JEFF DICKS

VANGUARD DIVIDEND APPRECIATION ETF



Source: Evergreen GaveKal. Bloomberg

iSHARES CORE S&P 500 ETF

Source: Evergreen GaveKal. Bloomberg

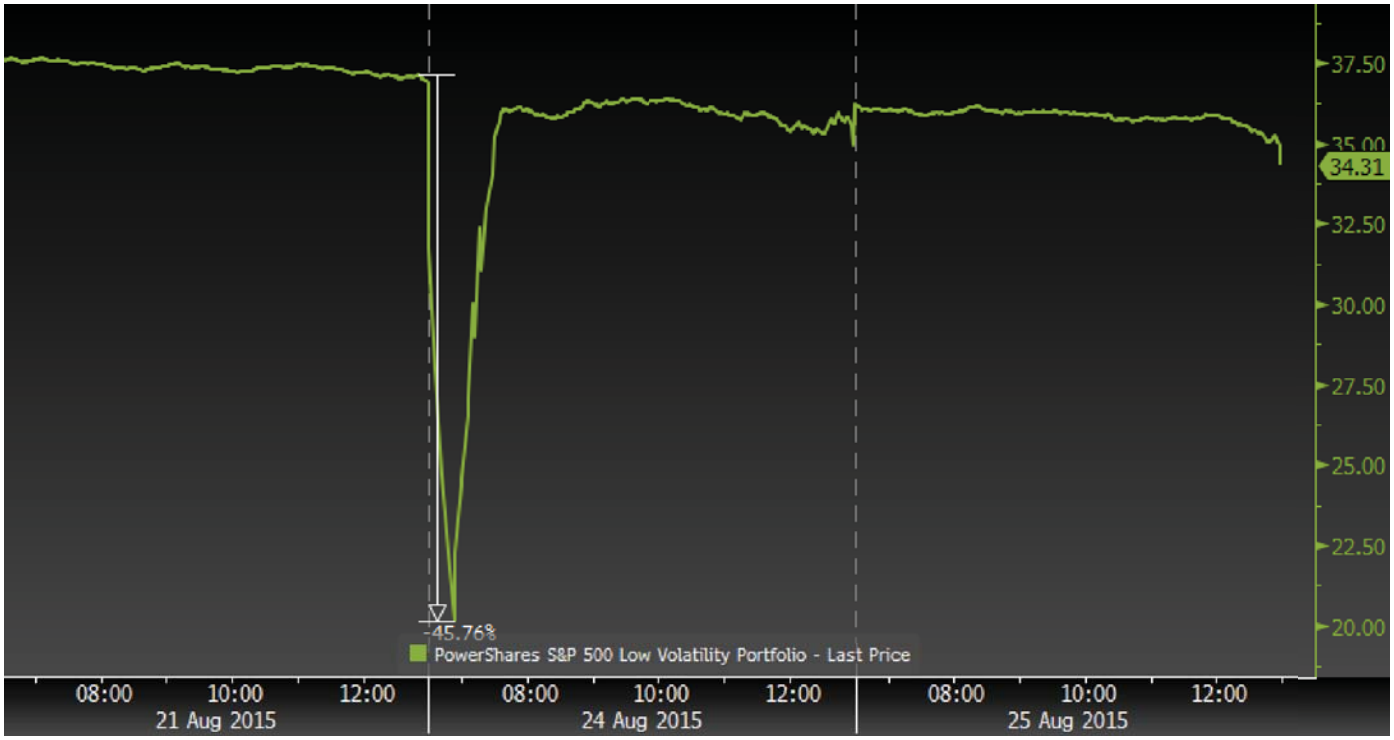
· Exchange Traded Funds (ETFs)—known for their liquidity advantage over mutual funds—played a key role in the declines that day. As you can see above, these two large cap ETFs traded down over 20%—materially more than their underlying markets.

· The problem this time was that many individual stocks were frozen from trading that morning. This caused ETF liquidity providers to widen bid/ask spreads for these products.

· Typically, when there are large sell orders for ETFs, these liquidity providers are able to buy the ETFs and hedge through the underlying stocks they hold. With this option not available, these ETFs went into a free-fall.

Flash Crash 2.0

POWERSHARES S&P 500 LOW VOLATILITY ETF



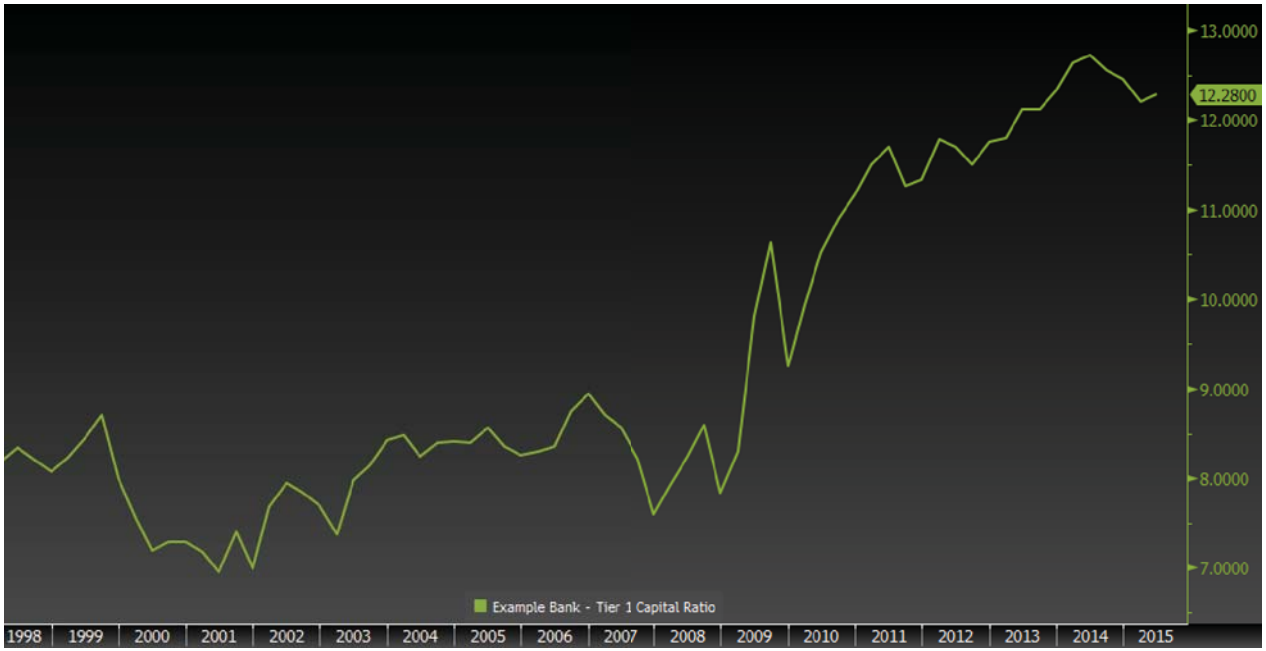
Source: Evergreen GaveKal. Bloomberg

· This chart shows one of the most pronounced declines of the day. Ironically, the PowerShares S&P **Low Volatility ETF**, crashed by nearly 50% in early trading!

· Sadly, there were holders with "stop-loss orders" that sold their position with steep losses only to see the position recover before they knew what happened

Flash Crash 2.0

LARGE-CAP BANK TIER 1 CAPITAL RATIO



Source: Evergreen GaveKal. Bloomberg

· Adding to the lack of liquidity, bank regulation has limited the ability of banks to be liquidity providers, as they typically have in the past.

· These institutions, due to financial regulation, have been required to strengthen their balance sheets and limit, or in many cases, stop proprietary trading activity.

· This no doubt makes banks safer, but it also limits trading activity and increases the magnitude of downside during highly volatile periods.

Flash Crash 2.0

NYSE, S&P 500 AND DOW VOLUME CHART

Source: Evergreen GaveKal. Bloomberg

· Additionally, holding riskier assets (like stocks) requires more reserve capital, which makes these activities less profitable.

· This has led to much lower equity and fixed income risk taking by trading desks, which limits the ability for banks to act as the buffer they have been historically.

· As you can see here, the trading volumes for the NYSE, S&P 500, and Dow have significantly eroded over the last several years.

Flash Crash 2.0

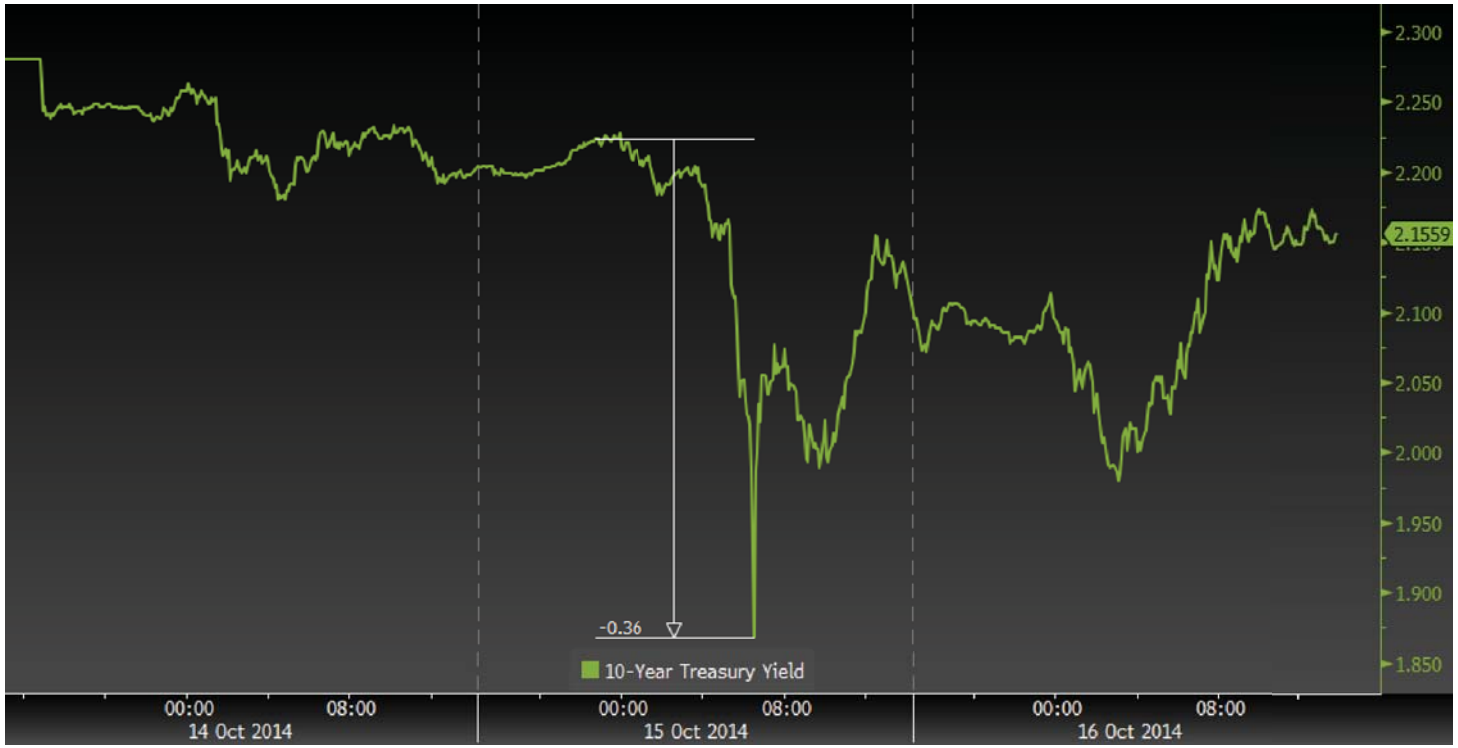
US BANK DEALER HOLDINGS OF CORPORATE BONDS

Source: Evergreen GaveKal. Bloomberg

- In addition to equity trading, corporate bond liquidity has declined substantially.
- The chart above illustrates the massive decline in corporate debt inventory on banks' balance sheets.
- We believe during periods of bond market volatility many corporate fixed-income issues will be difficult to sell.
- The good news is this should provide an opportunity for investors with cash to buy into these periods of instability.

Flash Crash 2.0

10- YEAR TREASURY YIELD - OCTOBER 15, 2014



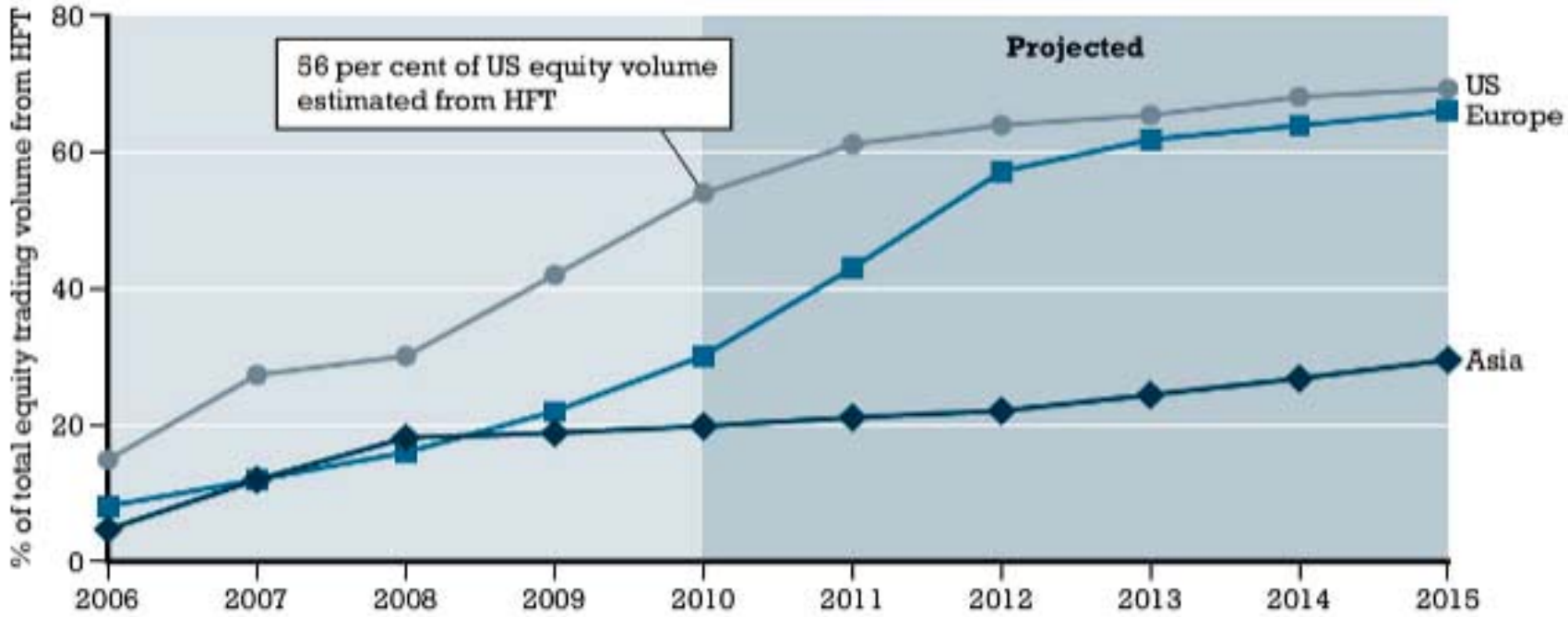
Source: Evergreen GaveKal. Bloomberg

· Last year we even saw the most liquid market in the world, US treasuries, experience it's own "flash crash" event.

· As you can see yields plunged by over 30 basis points in less than an hour, which was a move estimated to occur just once every three billion years!

Flash Crash 2.0

HIGH FREQUENCY TRADING VOLUME ASA % OF TOTAL EQUITY VOLUME



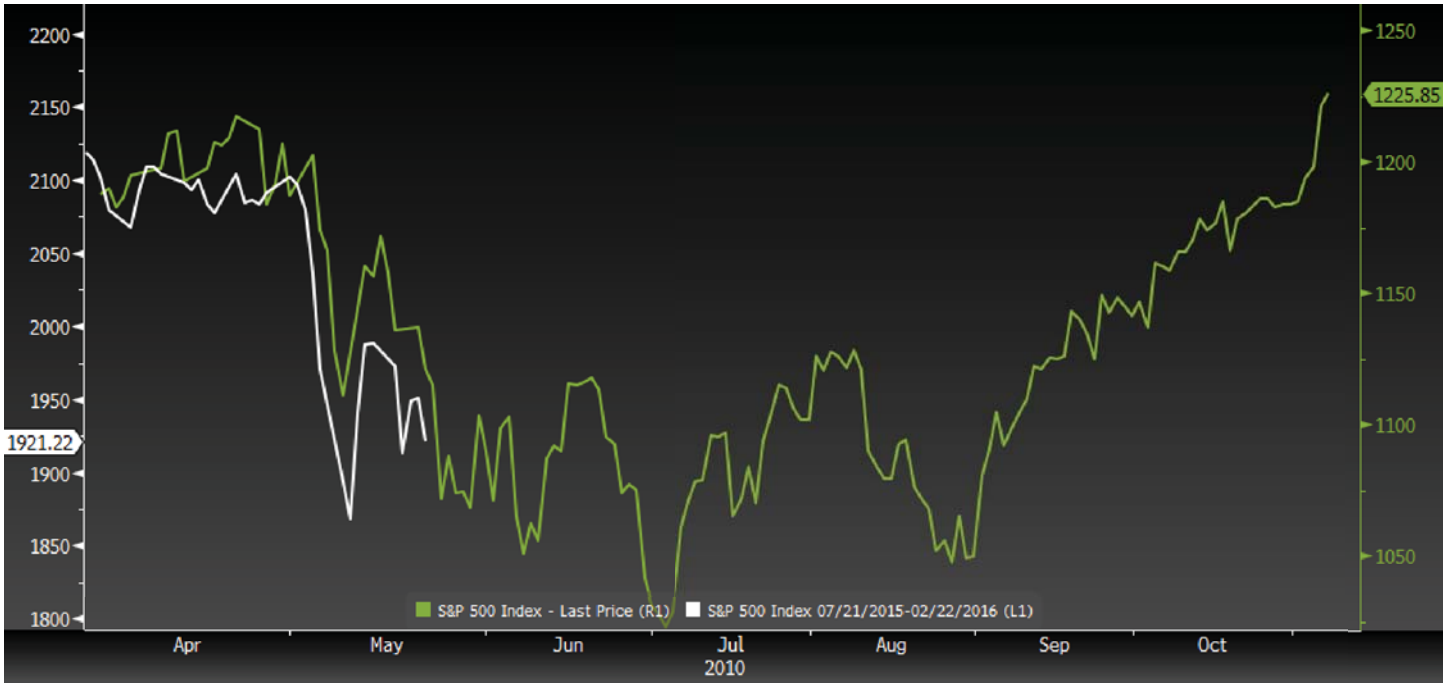
Source: TABB Group, BCC

· The issue does not only come down to lower trading volume, but also the composition of that volume. We have seen a marked increase in high-frequency trading, which is estimated to make up over 50% of the volume in today's market.

· Thus, there is lower liquidity and high frequency trading, which magnifies market moves—particularly on the downside.

Flash Crash 2.0

2010 FLASH CRASH RELATIVE TO 2015 FLASH CRASH



Source: Evergreen GaveKal. Bloomberg

· The chart above shows how the market trended post-2010 flash crash. If today's market followed that path, which it has mirrored quite closely to date, stocks would break through the recent lows and trough around 1,800 on the S&P.

· We believe at this level it makes sense to slowly add additional exposure to stocks, which equate to around a 15% decline from the recent peak. That said, we also believe this downdraft will be more severe than 2010.

Flash Crash 2.0

S&P 500 LONG-TERM RESISTANCE 1,600

Source: Evergreen GaveKal. Bloomberg

· As our CIO David Hay pointed out in last week's *Evergreen Exchange*, market technicians often use historical resistance levels as new support levels on the market.

· This means 1,600 on the S&P is setting up to be a key level, which we believe would warrant fairly aggressive stock accumulation. We are not sure if this will occur this year, but we have a high conviction a deeper correction is coming.

Flash Crash 2.0

MAY 2010 VERSUS SEPTEMBER 2015

	May 2010	Sept 2015
Cyclically Adjusted P/E	20.47x	24.34x
Median Price-to-Sales	1.6x	2.0x
Market Cap-to-GDP	105%	145%
Margin Debt Outstanding	$236 Billion	$487 Billion
S&P 500 Earnings YoY	55% YoY	-2% YoY
S&P Avg Trading Volume	1,140 million shares/day	540 million shares/day

Source: Evergreen GaveKal

· We created a table on this page to illustrate why we believe a larger drawdown is more likely.

· As you'll notice, valuation metrics are much loftier and speculation is fairly rampant due to far higher margin debt. Earnings growth rates have also significantly slowed down.

Conclusion

In sum, we think that flash crash type events, and similar overshoots, are even more likely to occur than they were in 2010. We have seen marked declines in equity and fixed-income trading volumes, less ability for banks to act as market makers, and a continual increase in high-frequency trading. Adding all these ingredients together results in a cocktail of increasingly unstable market conditions—one where larger shocks may happen more easily than in the past. And, the rapid proliferation of ETFs, which have made it easier for investors to quickly sell baskets of securities, only adds to these risks.

Looking ahead, we think it makes sense to keep portfolios conservatively positioned. The S&P 500 is only down 8% from recent highs, and given the magnitude of this bull market, we think it's likely just the tip of the iceberg. Some reasons for our stance include more expensive valuations and a weaker market structure than 2010's flash crash, as well as excess leverage in the system. We truly believe we are in the midst of a period of heightened volatility that should be guarded against by higher than normal levels of cash. While we recommend strategically using these reserves during market draw downs, we also suggest waiting for a larger correction than we've seen before going "all-in".

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Our Current Likes and Dislikes

EVERGREEN | GAVEKAL

We moved emerging stock markets to "We Don't Like" this week.

WE LIKE

- Large-cap growth (on a deeper pull back)
- International developed markets (on a deeper pull back)
- Canadian REITs
- Intermediate Treasure notes
- BB-rated corporate bonds (i.e., high-quality, high yield)
- Cash
- Publicly-traded pipeline partnerships yielding 7%-12% (MLPs)
- Intermediate-term investment grade corporate bonds, yielding approximately 4%
- Gold-mining stocks
- Gold
- Intermediate municipal bonds with strong credit ratings
- Long-term municipal bonds
- The Indian stock market
- Long-term Treasury bonds

WE'RE NEUTRAL ON

- Most cyclical resource-based stocks
- Large-cap value
- Short-term investment grade corporate bonds
- High-quality preferred stocks yielding 6%
- Long-term investment grade corporate bonds
- Short yen ETF
- Emerging market bonds (local currency)
- Short euro ETF
- Blue chip oil stocks
- Emerging bond markets (dollar-based)
- Bonds denominated in renminbi trading in Hong Kong (dim sum bonds)
- Canadian dollar-denominated bonds

WE DON'T LIKE

- Real Estate Investment Trusts (REITs)*
- Small-cap value
- Mid-cap value
- Small-cap growth
- Mid-cap growth
- Floating-rate bank debt (junk)
- Lower-rated junk bonds
- **Emerging stock markets**

*However, some small and mid-cap issues look attractive (and are becoming even more so)

the Evergreen VIRTUAL ADVISOR