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PASI NEWS

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Market Update – Volatility: *Back with a Vengeance*

by David A. Jaffe, M.D.

Let's be honest: 1,000 points drop in the DOW got your attention, didn't it? Never mind that 1,000 points just isn't what it used to be. In fact, all that really matters are percentages, and when the Dow Jones Industrial Average was residing at 25,000 (grant me a bit of nostalgia here), 1,000 points represented a "mere" 4%. Since the heady days of January, when it seemed the stock market could do nothing but keep rising, we've had many intra-day swings of several hundred DOW points. Yes, after a long period of quiescence, volatility is back.

Ironically, this year's initial market sell-off was likely sparked by the return of volatility. Seems like cause and effect are turned upside down, but in fact enough investors were betting *against* volatility (using complex options strategies) that when volatility returned, they were caught with their proverbial shorts down, and scrambling to cover simply accentuated the volatility they had bet against.

Such short-term market issues should be of little concern to long-term investors like you and me, but subsequent stock market activity this year has been driven by more fundamental concerns including rising interest rates and tariff threats sparking fears of a trade war. Such is the stuff of export barriers, rising import costs, inflation, and economic slowdown. After nine consecutive years of stock market gains, equities are richly priced with little room for disappointment.

Further unsettling investors has been loss of confidence in the stock market leadership of the high-flying tech sector, and for diverse reasons. Facebook's troubles over protection of user privacy are now well known. Worries about potential new regulatory burdens have taken some of the shine off of Alphabet's (Google) advertising business as well. Bumps in the proverbial road to autonomous vehicles have hurt confidence in Tesla and Nvidia, while anti-Amazon tweets drag down the stock of that company. Oh, and buyers seem hung up on the price of Apple's latest iPhone X.

After hitting an all-time high on January 26th, the S&P 500 settled down 0.76%, logging the first quarterly loss in over two years (including reinvested dividends). The PASI Composite stock portfolio largely matched the S&P 500 move, ending the first quarter with a 0.95% decline. Even bonds declined for the period as a consequence of rising interest rates, but it is important to reaffirm that this reflects a loss of market value that would only be realized if one were to sell the bonds, which we rarely do. Holding the bonds to maturity, we continue to receive the full interest payments and will collect the face value of the bonds on maturity. Still, the average PASI corporate bond declined 0.82%, meaning that a 60:40 balanced account saw a drop of 0.90% for the quarter.

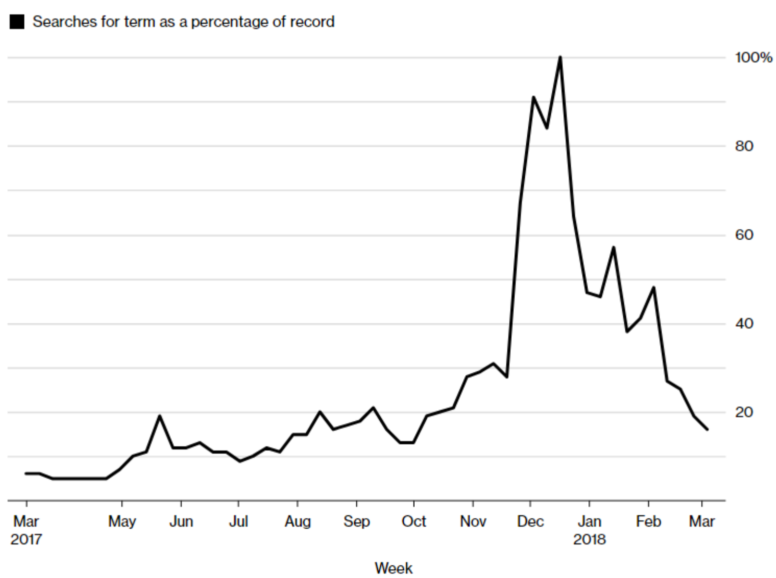
What the balance of the year holds is, as always, unknowable. Recent market gains have been bolstered by a truly global economic expansion, and for now that hasn't changed. We expect rising interest rates and inflation to remain muted, and as Nathan discusses in the following article, worries over the impact of rising rates on stocks are probably overblown. As bonds mature, we will capture higher interest returns at reinvestment, a benefit of our 5-year ladder strategy. As always, our focus is to maintain a portfolio of high quality companies which we believe can grow their businesses faster than the economy overall, and with reasonable stock prices relative to their growth prospects. As those businesses grow, the companies become more valuable and ultimately are rewarded with higher stock prices. Along that journey there are always bumps in the road, so hang on tight and keep your focus on the destination!

Two Seemingly Unrelated Developments

by Nathan Polackwich, CFA

Two things happened in the last few months that seem unrelated but together point to an opportunity.

1. Fringe Bubbles Popping – When I wrote about BitCoin last quarter it was trading around $16,000. As I write this it's now down to $8,000. I still expect it to ultimately hit zero, as it doesn't accomplish a single thing more effectively – including transaction speed and cost, anonymity, power consumption, etc. – than existing technologies and currencies.
Not surprisingly, interest in BitCoin has plummeted right along with its price. Here's a telling chart showing the trend in Google searches for "BitCoin" over the last year.

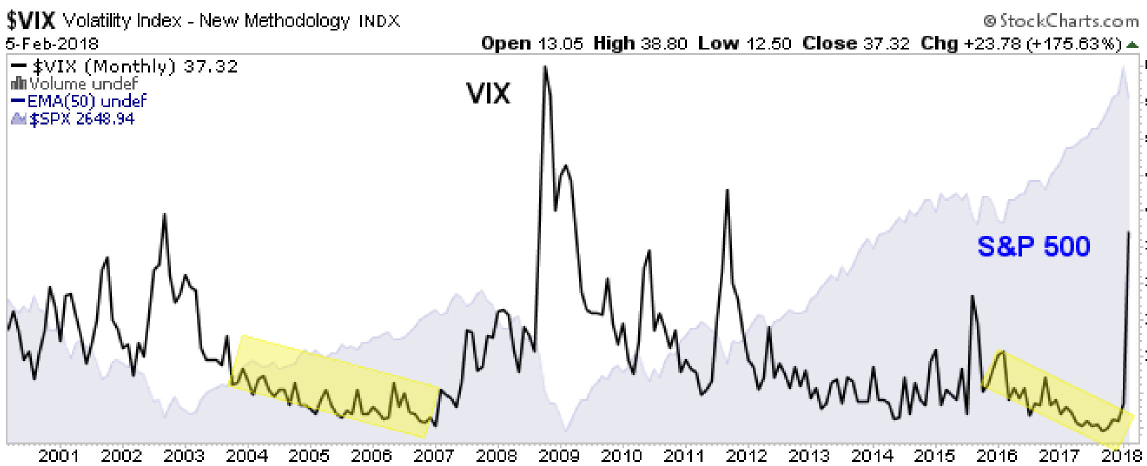


BitCoin is a fringe[1] bubble. While it has no direct relationship with the stock market, it does give us insight into overall financial market sentiment and what the economist John Maynard Keynes called investors' "animal spirits."

[1] This term seems to have been coined by the investment manager John Hussman in a recent market commentary.

In addition to BitCoin, the first quarter of 2018 witnessed the bursting of another fringe bubble –the Chicago Board Options Exchange S&P 500 Volatility Index, or "VIX.". The VIX is actually a direct measure of investors' animal spirits, which is why it's also called the "Fear Index." Through trading options on the VIX, speculators can bet on whether stock market volatility will rise or fall going forward. Specifically, the VIX tells us how much stock market volatility investors expect over the next year. A VIX of 10, for instance, implies that investors think the stock market will fluctuate +/ – 10% within one standard deviation (about 68% of the time). Thus, a high VIX suggests investors view the market as risky (more fear), while a low VIX indicates an expectation of less market turbulence (less fear).

Since the end of 2016, the VIX had been trending down and by the end of 2017 was plumbing historic depths signifying extreme investor complacency about risk – note the similarity to 2004-2007 in the chart below. In fact, the falling VIX had become such a one-way bet that news articles appeared describing how amateur investors – such as a former logistics manager at a Target store – had made millions betting on its continued descent. Of course, as if on cue, the VIX blew up in early February 2018 when it spiked over 35.



Since the bubble burst (inflicting severe losses on many speculators, including the aforementioned Target manager) the VIX has recovered somewhat but remains almost double its lows.

The popping of fringe bubbles such as BitCoin and the VIX is often a signal – like canaries in a coal mine – that the tide of investor enthusiasm toward high risk may soon ebb. In fact, such an event has often preceded major changes in the trading environment. Recent examples include 1) the meltdown of subprime housing mortgage bonds in early/mid 2007 that former Fed Chairman Ben Bernanke infamously told Congress was "contained", and 2) the popping of the Internet stock bubble in early 2000, roughly six months before the overall stock market began heading south in earnest.

This is not to say that history will repeat itself and that we're on the cusp of a new and major bear market. Bursting fringe bubbles may simply be foreshadowing a shift towards less risky stocks and bonds. Or it may be that investors' penchant for high risk has only been momentarily chastened. Notably, investors' sacred (and relatively unprofitable) cows like Netflix and Amazon, though off their highs, continue to lead the stock market by a wide margin. So while some fringe bubbles appear to have been punctured, others remain fully inflated.

2. Higher Rates Hit Dividend Stocks – Investors tend to assume that higher interest rates are bad news for stocks, and particularly high dividend stocks, as they're considered to be in competition with bonds for investor dollars. Is this fear justified? For the most part, no. Over the long-term there's no correlation between interest rates and higher dividend stock returns. Why? Take a look at the basic stock valuation equation below:

Stock Price = Cash Flow / (Discount Rate – Growth Rate)

I'll try to keep this as brief and painless as possible. For U.S. stock investors we have …

Cash Flow = Dividend

Discount Rate = Long-term Treasury Yield plus a risk premium to account for a stock's higher risk

Growth Rate = Long-term Dividend Growth Rate

All right, let's say we have a stock that

1. Pays a $1 dividend
2. Grows 3% a year
3. Has a discount rate of 7%

In this case our stock is worth $25 [$1 / (7%-3%)].

So what happens if interest rates rise 3 percentage points? This would cause our discount rate to rise to 10%, and would, all else constant, annihilate the value of our stock to just $14 [$1 / (10%-3%)]. This is why many stock investors are terrified of higher interest rates.

But in truth investors usually have nothing to fear (except, perhaps, fear itself). Why not? Because interest rates don't typically rise for no reason – rather they go up because investors expect higher inflation. So a 3% rise in interest rates would likely be accompanied by a 3% rise in inflation, and that means our company's business will likely grow 3% faster than it otherwise would have. So in practice a 3% rise in interest rates really shouldn't impact our stock's estimated value of $25 [$1 billion / (10% - 6%)].

Now, while it's true that high dividend stocks' performance is unaffected over the long-term by higher rates, they do tend to fall sharply short term as investors initially panic. But given that this underperformance has historically proven temporary, we should view such a sell-off as an opportunity to add to the stocks of solid, higher yielding companies at a discount.

The Connection – So bursting fringe bubbles like BitCoin and the VIX are potentially signaling an increase in investor risk aversion. This is happening at the same time that higher dividend (typically less risky) stocks have taken a temporary hit from rising rates. It seems to us that if investors will soon seek a safer place for their investment dollars, higher yielding stocks could directly benefit. That they're now as cheap as they've been in years makes them even more compelling, in our view.

Warren Buffett once said, "What's nice about investing is you *don't have to swing* at pitches. You can watch pitches come in one inch above or one inch below your navel, and you *don't have to swing*. No umpire is going to call you out." We think that, at least when it comes to the stocks of quality, higher dividend companies, it's time to swing away as the market has delivered the ball right over the heart of the plate.

Analog Devices: *Converting Analog Signals into Real World Profits*

By: Christopher Brown

Electric Vehicles (EV) may seem new, but they were among the earliest automobiles holding many vehicle land speed and distance records in the early 1900s. In fact, at the dawn of the U.S. auto industry in the late 1800s, electric vehicles actually outsold all other types of cars. But, ultimately, thanks to the abundance of cheap fossil fuels, electric ignitions (vs. hand cranking to start gas engines), mufflers, and improved roads outside urban areas that enabled longer trips better suited to gas powered engines, electric vehicles fell from favor.

Today, due to technological developments and a focus on renewable energy, electric vehicles are experiencing a resurgence and are forecast to comprise more than half of new car sales by 2040, according to Bloomberg New Energy Finance. Last year global EV sales increased 58% to 1.23 million units and are expected to rise another 54% this year to 1.9 million units.

One of the biggest benefactors of this rapid growth is the analog semiconductor chip industry. While traditional vehicles have steadily added electronic content such as sensors, active safety systems, and advanced infotainment, hybrid and electric autos require two to three times the amount of electronic (and therefore semiconductor) content. A similar trend in increased chip content is also unfolding in many industrial applications, where factory automation and robots are becoming the norm.

To take advantage of these secular growth trends, the PASI stock portfolio recently initiated a position in Analog Devices, Inc. (ADI). With $5.2 billion in sales and over 125,000 customers, ADI is a world leading analog, mixed signal, and digital signal processing chipmaker with products in virtually all types of electronic equipment. These chips convert *analog* real-world signals, such as sound, temperature, light, motion, and pressure into *digital* signals that can be processed.

ADI's advanced "Drive 360" portfolio includes products for protective safety such as air bag sensors, gyroscopes for stability control, and predictive safety products such as RADAR and LIDAR (light detection and ranging, helping autonomous vehicles see and feel the world around them). ADI's RADAR is used extensively in applications such as collision warning and mitigation, blind-spot monitoring, and lane-change assistance. In fact, approximately 50 percent of all recently produced RADAR modules are from ADI.

Another promising technology is the firm's battery management system (BMS). Electric vehicles require sophisticated battery management systems which address several functions such as charging, discharging, and protecting the individual batteries from damage. ADI's BMS solution can increase the driving range of EVs by over 25 miles and extend the battery life of EVs by more than 10 years.
ADI is also at the forefront of another promising trend, Factory Automation. The Company has a long heritage in the industry with tens of thousands of customers and the #1 or #2 position in many applications. In addition to selling chips for the control room that runs the factory floor, ADI also sells chips to robotic equipment makers. And newer robots require more than twice the content of traditional robotics, adding things such as vibration detectors, Ethernet, and wireless connectivity among other sensors.

ADI maintains a strong competitive advantage from its proprietary chip designs and switching costs that make it difficult to swap out analog chips for a rival's offerings. Analog chips usually make up a tiny portion of a product's total cost but are an important part of the product (air bag sensors), so design wins are based on performance rather than price. Moreover, manufacturers tend to stick with the chip for the life of the device due to the redesign costs of putting in a competing chip that might not be compatible with the rest of the product. Analog's customers are very unlikely to choose an inferior chip just to save $0.50 on a piece of equipment that costs thousands of dollars.

The Company also has a history of concentrating on end markets where product lives are measured in decades, as opposed to the short life cycles associated with consumer devices like PCs or handsets. ADI is well-diversified and not overly reliant on any single customer or end market, and roughly half its sales come from chips introduced over 10 years ago. The analog chip market is more stable than the broader (digital) semiconductor industry, which is burdened by rapid technological change and wild swings in market share. Longer product lives result in lower ongoing R&D and capital expenditure investments, which helps ADI maintain pricing power and healthy returns on capital for shareholders.

At $92.80, the shares trade at very reasonable price/earnings ratio of 16.7X consensus 2018 EPS, in line with the S&P 500 P/E and below Analog's average P/E ratio of around 23.7X over the past five years. The Company currently pays a 2.1% dividend which has grown 10% a year for the past decade.

With the $15.8 billion acquisition of major competitor Linear Technology in March 2017, ADI has further solidified its competitive position and looks to exploit over $1 billion in revenue and cost synergies in the coming years. Overall, we think the combination of a reasonable valuation and secular tailwinds like electric vehicles and industrial automation/robotics makes ADI's stock one of the market's most interesting opportunities at present. We feel confident ADI can convert these positive signals into profits for shareholders.

Disclosure

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