



BIAS *Global Navigator*

INVESTMENT MANAGERS

SECURITIES ANALYSTS

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The Internet of Things

By 2020, the “Internet of Things” will be larger than the “Internet of People”

According to recent data 2.9 billion people are connected to the Internet. These internet users make up almost 40 percent of the world’s population and contribute roughly all 50 petabytes of the internet’s data - a peta has 15 zeroes. In contrast, theorists of the “Internet of Things” suggest that only one percent of the devices that could be connected to the internet are currently connected. Researchers estimate that before 2020 there will be 30-50 billion devices

connected to the internet providing data without human input making the “Internet of Things” larger than the “Internet of People”.

People have limitations of time, attention and accuracy and, in short, are not very good at capturing data in the real world. This stimulated the idea that ‘things’ or ‘devices’ should be able to provide data without the need for people within the existing infrastructure of the internet. The data

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could then be used by individuals and companies to increase automation and greatly decrease inefficiencies.

It is Here

Since the idea was proposed some decades back, the "Internet of Things" has made significant head way. Different sectors in the public and private space realize the potential of such technology and many businesses have found practical applications.

For example:

- i. **Sparkled**, a Dutch start-up company, implants sensors in the ears of cattle which lets farmers monitor their health, track movements, and receive data to improve yield and efficiency.
- ii. **San Francisco's Public Utilities Commission** uses sensors to record data of every waste-water pump, their maintenance history and the likelihood of failure. This allows the company to make preventive repairs.
- iii. **The City of Barcelona**, in collaboration with **Cisco**, has worked to improve urban living by utilizing the concept. Sensors optimize the city's waste collection, inform commuters about public transport data and available parking spaces, and save cost on light management of public areas. Additionally, data provided by sensors around the city enables Barcelona to manage noise, environmental pollution and other hazards to make living more comfortable for residents.
- iv. **Google's** acquisition of **Nest Labs** for \$3.2 billion earlier this year gives an indication of utility in personal lives. The company's core product, the Nest Learning Thermostat, will record individuals living patterns and preempt the most comfortable environment for the household. Moreover, it will also connect with the user's car, home lighting, smoke detectors and other domestic devices to cut living costs while improving comfort and safety.

The Downside

While applications of the "Internet of Things" open many doors for optimization and efficiency, scholars and social observers have reservations. A common criticism to the idea of more data, such as names, addresses, health, and schedules, being available is the vulnerability to hackers and thieves potentially putting the user's privacy and possessions at risk. Joseph Steinberg, a cyber-security columnist for the Forbes magazine, wrote that internet connected devices can be used to spy on people and that computer controlled devices in automobiles, such as brakes, engines, and locks, have been shown to be vulnerable to attackers. In an anecdotal incident, former US Vice President Dick Cheney is said to have disabled the wireless feature of his defibrillator fearing terrorists would use it to kill him.

Powering wireless devices remains another challenge and devices would have to be self-sustaining for the concept to reach full potential. Imagine changing batteries for billions of devices as they run out.

The Right Direction

The Internet is positioned to make human lives better. It will create efficiencies in everyday life and reduce costs. And it will do this as the devices in our lives provide data and information about objects and persons that will be assessed and used to forecast, preempt and respond.

While the ideals of a fully automated and self-governing future may still be further out, consumers and companies have accepted technological change and the trend is moving in the right direction. At BIAS, we believe this offers an opportunity and we have invested in **Skyworks Solutions Inc.** which is positioned at the heart of this long term trend. The company manufactures radio frequency chips which operate within a complex architecture suited for high data transfer and wireless connectivity. 🚀

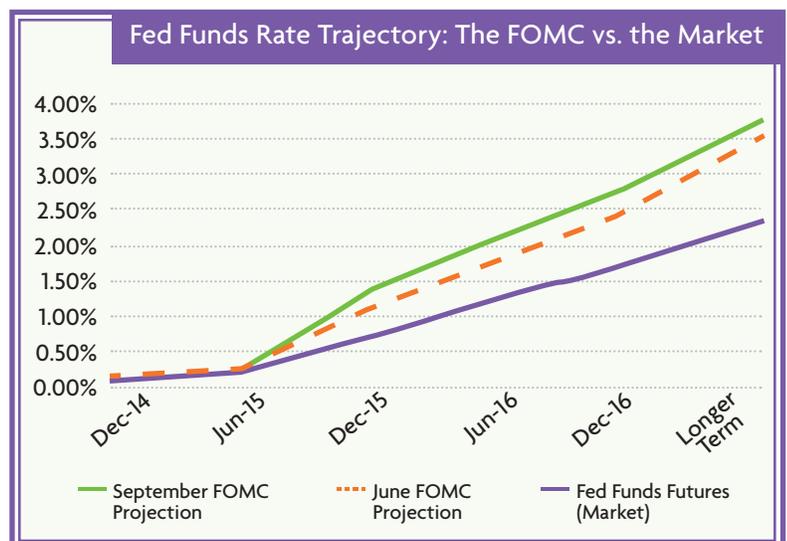
CONNECTING THE DOTS

Market participants spend immeasurable hours trying to read the proverbial monetary policy “tea leaves” – dissecting phrases in official press releases, combing speeches by Federal Reserve Governors for clues, and most recently, trying to make sense of the Federal Open Market Committee’s (FOMC’s) “dot plots,” to gauge the most likely path of future monetary policy.

Meanwhile, in an effort to provide the public with better “forward guidance” following each of the FOMC’s eight yearly meetings, the Federal Reserve releases official statements discussing the Committee’s decisions. In addition, the Fed hosts quarterly post-FOMC meeting press conferences, first introduced in 2011, and publishes a Survey of Economic Projections (SEP) comprising Committee participants’ forecasts of key economic variables such as GDP, inflation, and the unemployment rate.¹ The SEP also includes a two-panel figure illustrating each participant’s assessment of “appropriate monetary policy,” including a plot of dots meant to represent each member’s estimate of the federal funds rate target at the end of each of the next several years and in the longer run. The dots are anonymous and meant to be compatible with each FOMC member’s economic projections.

Perhaps we should not be surprised that in recent months, the “dot plots” have become a considerable source of confusion for market participants. Specifically, a marked divergence has emerged between the FOMC’s fed funds expected trajectory, illustrated by the “dot plots,” and the trajectory expected by the market as measured by the market clearing price of federal funds futures. As the figure below shows, the market is pricing in a lower path for the federal funds rate than the median FOMC projection, including a later liftoff date for the initial hike and a slower pace of monetary tightening.

What this ultimately means is that the market is still uncertain about the future path of policy and currently expects a more accommodative central bank than the FOMC’s “dot plots” suggest. The danger for financial markets from this divergence of views is a more volatile market adjustment. In other words, if the Fed’s forecasts are eventually realized while the divergence remains intact, bond yields will have to adjust accordingly which would result in a sharp decline in bond prices. By playing down the importance of the “dot plots” in her public statements, Fed Chair Janet Yellen is adding to the uncertainty surrounding Fed guidance and increasing the odds of an eventual “rate tantrum.” We, therefore, must proceed with caution in the near term and continue to keep our portfolios in shorter duration bonds which are less sensitive to volatile movements in price. 🚩



Sources: Bloomberg, Federal Reserve, and Cornerstone Macro.

¹ Gross Domestic Product (GDP) is defined as the monetary value of all the finished goods and services produced within a country’s borders in a specific time period.



BIAS GLOBAL PORTFOLIOS SPC

BIAS ASSET MANAGEMENT LTD

PERFORMANCE

as at 30th September 2014

Short Duration Income Fund		Performance	Q3/14	1-Year	2-Year (Annualized)	3-Year (Annualized)	Since Incept. (Annualized)
RISK:	LOW HIGH	Short Duration Fund	-0.20%	-0.02%	-0.42%	-0.09%	1.41%
<i>Benchmark: Citigroup 1-3yr Treas Index</i>		Benchmark	0.03%	0.48%	0.42%	0.46%	2.49%
<i>Inception Date: December 29, 2006</i>							
Global Balanced Fund		Performance	Q3/14	1-Year	2-Year (Annualized)	3-Year (Annualized)	Since Incept. (Annualized)
RISK:	LOW HIGH	Balanced Fund	-1.69%	5.05%	5.43%	6.86%	2.15%
<i>Benchmark: Blended Composite[†]</i>		Benchmark	-1.19%	7.24%	8.51%	9.71%	3.36%
<i>Inception Date: December 29, 2006</i>							
Global Dividend Income Fund		Performance	Q3/14	1-Year	2-Year (Annualized)	3-Year (Annualized)	Since Incept. (Annualized)
RISK:	LOW HIGH	Dividend Fund	-4.99%	2.03%	2.23%	—	2.23%
<i>Benchmark: S&P Global 1200 Index</i>		GDI Total Return	-4.54%	4.47%	4.75%	—	4.75%
<i>Inception Date: September 28, 2012</i>		Benchmark	-2.00%	11.55%	14.15%	—	14.15%
Global Equities Fund		Performance	Q3/14	1-Year	2-Year (Annualized)	3-Year (Annualized)	Since Incept. (Annualized)
RISK:	LOW HIGH	Equities Fund	-2.01%	7.04%	8.27%	9.19%	0.35%
<i>Benchmark: *S&P Global 1200 Index</i>		Benchmark	-2.00%	11.55%	14.15%	15.69%	2.18%
<i>Inception Date: December 29, 2006</i>							

Past Performance is not indicative of future results. Please note that the investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost; and that current performance may be lower or higher than the performance data quoted.

*Prior to April 1, 2012 benchmark was FTSE World Equity Index. † 60% S&P Global 1200 Index/ 20% Citigroup 1-3Yr Treas. Index/ 20% Citigroup 3-7 Yr Treas. Index

MANAGEMENT COMMENTARY

Equities Q3 2014

Global equity markets retreated after event driven risks failed to moderate and investors expected regional monetary policies to gradually start diverging. In the US, equity markets resumed their lead as corporate earnings improved and economic indicators suggested strength in the economic recovery. Europe underperformed as growth prospects were revised downwards, risks from Russia-Ukraine failed to moderate, and nationalist discussions were highlighted after the Scottish referendum in the UK.

Currencies Q3 2014

The US dollar rallied against all major currencies on speculation the Fed will increase interest rates in 2015 as economic indicators suggested strength in the economic recovery. The euro fell against the dollar as the ECB cut interest rates and unveiled unprecedented stimulus to avert deflation and spur growth. The Canadian dollar weakened on slowing economic growth and a dovish central bank.

Fixed Income Q3 2014

Yields on shorter maturity Treasuries rose on expectations the Fed will signal an increase in interest rates next year as the economy strengthens. At the same time, yields on longer maturity Treasuries fell on low inflation expectations, overseas demand for relatively better yielding US assets, and safe haven demand from geopolitical unrest. Strong demand for Treasuries resulted in their outperformance versus corporate debt in the quarter.



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Listed on the Cayman Islands Stock Exchange and the Bermuda Stock Exchange.

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