JUGLAR

The current consensus is broadly this:

A) The economy is in recovery mode and headed for 3% growth;

B) Because unemployment is so low – the much discussed "full employment" level – both wages and inflation must rise;

C) The Trump really is over or delayed depending on who is talking their book;

D) The Fed must keep raising overnight interest rates so that they can lower them when the next recession arrives;

E) Some, D. Rosenberg among them, see a recession as the predictable outcome of Fed rate hikes;

F) Globalization is under attack and that will hurt the U.S. economy;

G) The U.S. must have about 2% inflation to grow;

H) The business cycle exist and will continue;

I) Stocks are overvalued at 23 times earnings;

J) Bonds are equally overvalued for failure to recognize pending inflation;

K) Emerging markets are the place to invest as they have greater growth potential;

L) Fundamentals in the American consumer world will improve as wage increases begin;

M) Global growth is in synchrony after 6 years of false starts;

N) Positive surprises are more likely than negative and Q2 will be a rebound quarter, not a repeat of the weak Q1. (This just reported: no, wrong)

It should be no surprise to regular readers that I believe traditional economic theory is approaching worthless. There was a time when this nation, benefitting from a young, work oriented population, grew consistently. We benefitted from both good demographics and the onset of consumer-focused manufacturing.

In time, the focus on the consumer spawned an ever-growing list of new products and technological advances that further fueled their consumption by lowering cost and increasing functionality. Many of my past Quarterly Outlooks explored this period of change and how it seemed to be changing yet again. Aware that it had apparently slowed I wrote of how we apparently were making decisions, how we interact under stress situations and how we may be facing a totally new economic environment. Dubbed the New Economy, it failed nonetheless to pick up some significant factors beyond demographic change and lizard-brain induced behavior. Over time it became apparent, to me at least, that

1) The Federal Reserve had one tool, interest rates, and after 8 or so years we all knew, (even if they didn't) that it was an ineffective tool;
2) There was a growing awareness that major changes, in taxation, regulations and social programs were overdue and;
3) Of late my view about how we measure ourselves is faulty. In the following few pages I'd like to develop this last thought a bit more.

It's not how we are interpreting economic data of late, it's the data itself that is misleading. Take "business cycles" for one example. Most economists, both academic and business, still subscribe to the idea of these cycles. There is little difference among analysts about how they look, work and behave. In fact, though, there are at least four significantly different ones:

- KITCHIN – a cycle driven by the build-up, run down and rebalancing of inventory. These cycles, lasting 3 to 5 years, reflect our manufacturing roots. This is the most common current model.

- JUGLAR – a cycle of 7 to 11 years that reflects what is spent on fixed investments – plants, tools and such – and notes how both long funding lead times and usefulness rise and fall. This one currently reflects years of cheap money and ensuing over investment—worldwide.

- KUZNETS – this cycle was last seen clearly after World War II when massive investments were made in our infrastructure and it tends to run 15 to 20 years.

- KONDRATIEV – often called a wave, this cycle is thought to be 40 to 60 years in length and prior to be the current time reflected technological change. With the rapid advancements in technology I suspect KONDRATIEV waves now also have a significant demographic component.

Which do you prefer? Which is your local economist following? I doubt very few have moved past the classical Kitchin inventory cycle. Oh, they pay lip service to "just in time" inventory management and all that but the reality is we are closer to a

KONDRATIEV wave than most can deal with. For now, though, I see it more as JUGLAR.

The profit margin of U.S. companies hit a low of about 6% back in 2001. By 2014 an interim peak of 15% was hit. In spite of the collapse in energy company profitability the current profit margin of 12% is well above the post war average. (Goldman Sachs)

In dollars, all U.S. companies booked Q1 <u>after tax</u> profits of $1.74 trillion. The record, $1.77 trillion, was in 2014.

The contradiction is clear: how can profits be touching records when the data says productivity – output per worker, is at business cycle lows? With unemployment flirting with a flat 4% and 23 million folks sitting home, how can profits continue to rise?

The same way they arrived at current levels: Technology. **It will continue to attack worker bargaining power, continue to foster deflation and continue to reward the Symbols Club.** JUGLAR this time includes spending on software and artificial intelligence (AI) and far less on traditional "plant and equipment". That is not being fully accounted for much less widely appreciated.

Research from Peter Klenow at Stanford further shows that the statistical techniques used by the Bureau of Labor Statistics (BLS) are regularly <u>understating</u> our overall GDP growth rate and, by inclusion, productivity, by some ½ of 1%. Recent 2% quarters were likely 2.5%, 1.5% quarters more like 2%. [I use the most conservative interpretation; the understatement is larger at times]

It gets better. Martin Feldstein notes that both real growth and real productivity are further understated because the same BLS is <u>overstating</u> inflation. He faults how the BLS assesses the inflation impact of new products replacing old. The data is mind numbing but compelling. His point? <u>Another</u> ½ of 1% or more to add to both productivity and GDP growth. How? From unmeasured AI, for one reason. We may well be at 3% growth now, possibly higher.

I've noted in my Weekly that ours is now a service based economy. Numbers vary but at 80% we are clearly not the post war manufacturing economy on which most economists cut their teeth, including me.

What is also important is that there is a very low correlation between service sectors. What may impact restaurants doesn't necessarily impact your CPA. Some grow, some shrink but inter-service links are weak so although growth may slow in some service sectors, overall growth in services, persists.

Ironically, there is little impact on inflation. In general the service sector is easier to enter (and fail) than manufacturing where long lead times and significant spending on hard capital is a requisite. It is this, particularly, that points to a reason not to raise rates. The Fed argues it must raise rates to (also) prevent inflation from taking root. I think not given the foregoing. We are watching the Fed and many economists react to what they see as an historic business cycle model. Of course there is a cycle in housing, autos and the like but it is increasingly peripheral to the New Service Economy, not the cause. **Put another way, in my view the service economy is the major cycle and it drives minor cycles in housing and autos.**

A case can be made that this widely dispersed near spontaneous service economy cannot be "controlled" by Fed actions. In the old manufacturing economy with its long lead times, large loan requirements and heavy bank involvement, movement in rates had a significant impact. Many now point out that an asset bubble, a sizeable growth in credit to an ever larger group of smaller firms is, ultimately, a threat and could lead to a credit collapse. I would posit that low rates continue and that will reduce the risks creditors would see from higher rates and the decline in lending that would usually follow a jump up in rates.

And what of stocks in the low rate world>

There are, to my way of thinking, 3 elements to consider for the moment:
- Valuations
- The daily blast of "news"
- Economic risks

Many feel current valuations are excessive. In particular, technology stocks are seen as an echo of the dot-com bubble we all remember. Yes, it is far harder to value a technology company than it is to value a General Electric or a Kraft Foods. Rapid change, new entrants and low cost software make technology a polar opposite to the capital spending cycle we see in industrial stocks.

It is equally important to point out that unlike the dot.com bubble, most tech firms today have legitimate earnings. While there may be a great deal of mob behavior around tech stocks prices, creating sharp rises and equally sharp collapses, this does not impact earnings to any great degree. That said I think a drop will tend to spawn its own recovery, not a bear trend. In short, fundamentals once again matter more. (Woody Brock, many others)

Future earnings are what valuations today are supposed to reflect. The higher the level of current interest rates and inflation, the less future earnings are worth. This discounting maxim has its roots in all of finance: a dollar tomorrow is worth less in proportion to tomorrow's inflation.

Of late future earnings are being discounted very little thanks to very low rates and very low inflation. With current market price to earnings ratios of 23 or so, many point to the historic ratio of 15 and propose stocks are over-valued. Problem is, that 15 times earnings history occurred when the discount rate was better than 4%. Had it been 1.5%, as today, the average price to earnings ratio of the 20th Century would be higher than the 23 times we see today. It is also worth noting that these higher ratios appear in industries that not only did not exist for most of the post war period but grow significantly faster than the legendary "Industrial America" to which we keep comparing them. Current price-earnings ratios are in most cases entirely rational, to my mind.

The daily blast of news is our second factor to consider, In the 80's and 90's it was believed the prime daily driver of stock prices was news about fundamentals such as earnings, interest rates and the state of the economy. Robert Shiller of Yale University has demonstrated that these fundamentals explained 20%, at most, of observed market volatility. [He wrote "risk" but I prefer "volatility" as "risk" means "loss" in any other context.]

The rest of market volatility, Shiller explained by Behavioral Economics: "the additional risk [volatility!] stems from various forms of irrational behavior that cause markets to overshoot/undershoot the news." Much of this, says Woody Brock, originates in the psychological biases people exhibit when interpreting the news and making decisions e.g. "framing bias" – what <u>you</u> have in your history that causes you to interpret what is often uninterpretable. Of course the greater the number of investors with the same framing bias, the greater the volatility. It need not be irrational, it requires only group think, large group reactions. Sadly it occurs daily and muddies the water of actual company performance. See prior comments about our lizard brain at work, especially around the real need to belong to a group.

It is worth repeating, I think, a point made in Weekly #372: the rising number of brokerage firms switching to fee-based compensation instead of trading based compensation is helping reduce the size of the crowd jumping on the momentary news. I would suggest individual investors who day trade are being outperformed by we long term investors.

Economic risks on the other hand – risks of loss – do have an influence first on earnings and ultimately stock prices. Woody Brock [Strategic Economic Decisions] has observed a "dramatic decline of risk in economic life".

He cites four events for this reduction:

1) The end of the Inventory Cycle. Woody notes the long supply chains in principal industries and their heavy interdependence. Coke and iron made cars, steel industry supply became a variable as did rubber, glass, etc. This high inter-industry correlation means that if Ford, for example, slowed production it was reflected back up the supply chain and the business cycle was amplified. Over the years, "variable production", "just in time inventory" and software that analyzed a steady stream of data for managers greatly reduced cyclicality. When you see this across many industries it is easy to see the classical business cycle has been dampened significantly. My version of this has been "muddle" – mini recessions followed by mini recoveries. A note to the mathematically inclined is at the end of this paper.

2) The rise of the Service Sector. I have written extensively about its key elements:
   a) Very stable demand
   b) No meaningful inventory cycle and, if any, often predictable
   c) Little major impact on GDP from mass layoffs, etc.
   d) Low correlation between service sectors

This is a world much different than the classical business cycle world of Industrial America. We all, as Woody says, go on visiting our doctor, eating out, repairing computers and preparing tax forms.

3) Reduced Global Linkages. Woody notes that not only are service businesses weakly correlated, the linkage to major global economies such as China or Germany are even weaker. So much of the service sector is local. In any case there are two generic links with the rest of the globe: capital flows and trade goods flow with some (few) services. Capital flows greatly exceed, in dollars, the trade flow of goods. In brief out GDP is more and more a local, service based economy.

4) Much as we object to the abuse, we are awash in income stabilizing policies. They include unemployment insurance and disability payments. They barely existed prior to the mid-30's and have grown exponentially since. Additional stability comes from making economic data and such an important input to the act of governing this nation. See how we can easily get off the track with old data and older models? Nonetheless we now pay more attention to data.

These four points have transformed economic history. The significant drop in the volatility of both nominal and real GDP, in household income, in consumption and in fixed investment has reduced what Woody calls "Main Street" risk.

For the mathematically inclined, here are the standard deviations for 5 critical measures. The data is from Woody Brock and the BEA.

	1930-1939	1940-1949	2000-2009	2010-2016
1) Nominal GDP	13	10	2.5	>1
2) Real GDP	8.5	9	2	>1
3) Household Income	12.5	9.5	3	1.5
4) Consumption	11	5	2.5	1
5) Non-Residential Fixed Investment	27	25	8	4

The original data showed all decades; my interest is the pre- and post-World War II periods and the run up to the 2007-2008 collapse. In any case the trend is fairly clear: less and less data volatility as we migrated to a different business cycle. Key to this point is the fact that most text books in Economics and most economists, including Friedman, Samuelson, Keynes et. al. are grounded in the data 1930 to 1950. That period was consistent and worthy of debate as to who or what was driving the cycles then. This is now.

<u>FINAL THOUGHTS</u>

- I haven't even touched on the gig economy, crowd funding or very disruptive new services such as Uber. They reflect, however, continuation of the service economy and the rising risk of capital loss in the established car, food, drug, housing, fuel et.al. industries.

- Debates about Fed activity are less and less relevant.

- Although anecdotal, one broker told me his office clears out at 4:00 on down days in the market. The thinking is, "hey, the customers are in index funds so nothing I can say or do matters---I still get paid."

- Data demonstrates that my simple "muddle" economy is a fact: micro rally, micro decline driven by a non-correlated service sector.

- Our link to other nations is increasingly for capital flows, rarely reported, versus goods flows, endlessly reported as a trade deficit/surplus. Global synchrony is interesting but not necessary for us.

- I believe we are not measuring what we should and how we interpret what we have is poorly done.

- Trained as a fiscal economist, raised in the industrial Midwest and ultimately a semi-monetarist, I now find it's mostly wrong. I'll admit it – but won't hold my breath for 95% of the business economists, bank economists and academics to join me.

- I had expected renewed economic growth in 2017. I made two mistakes – it was already here in late 2016 when you credit the KLENOW and FELDSTEIN work that clarifies our understating of productivity and overall economic growth.

- The second mistake was not paying closer attention to the assumptions being made by writers claiming overvaluations in stocks. Said earlier and said again: current price to earnings ratios are, in most cases entirely rational. Factors that used to add to sell-offs in the market are much reduced. Main Street risk is less.

- If KLENOW and FELDSTEIN are correct and real growth and productivity is some 2% higher, that argues there has been <u>no</u> growth slowdown and no productivity slowdown. Proof is in corporate profits. Tough economy, no?

- Near zero inflation can persist and with the uncorrelated service sector as the driver of growth, rate hikes from the Fed will have minor influence. This – the risk of rate hikes, is likely my third mistake – it just won't be as important as I have believed.

- Woody to close:

  …the classical business cycle no longer exists. …shocks will cause recessions from time to time but they do not constitute a "cycle". Because so few analysts understand today's random walk behavior of growth, …there is considerable confusion…interpreting quarterly data..

  "this being true, investors look in vain for a growth narrative that does not exist"

  With all of this to digest may I also respectfully ask you to re-read the first page?

June 2017