Angeles
INVESTMENT ADVISORS

Commentary
First Quarter 2015

Funambulism

Sports have been an integral part of human existence since, well, the beginning. Drawings in the Lascaux caves in France from more than 17,000 years ago (see below) depict swimming, running and wrestling. Sports are featured in the relics of the ancient Sumerians and Egyptians and, of course, the ancient Greeks gave us the Olympic Games.

It's not clear why sports became such an essential human activity. Certainly, sporting contests helped to develop the physical skills necessary for survival. But the element of spectacle, entertainment, is uniquely human. Over time, it is this aspect of sports, its drama and diversion, that linked inextricably sports and humans.

Some sports—boxing, wrestling, football, etc.— pit humans against each other directly. In other sports, the contest involves the elements: skiing, swimming, golf, for example. Still other sports are strictly contests of human against nature. These are pure spectacles.

Jean François Gravelet was born to the spectacular. At the age of six, he was sent to study at the renowned École de Gymnase in Lyon. He barely grew over five feet tall, but with his flowing blond hair and extraordinary athletic talent, Jean François became noticed throughout France. America, and its riches, soon beckoned.

Gravelet became one of the most famous men in the world in his time, a favorite of presidents and kings, seen and adored by millions. His exploits are nearly impossible to believe, and his unique talent particularly relevant to us as we survey the investment landscape today.

Equities began the year with gains, but for the first time in a year and a half, it was the US market that lagged the rest of world, even as the dollar continued to gain against most currencies. Europe was especially strong, in euro terms, led by a 30% surge by Denmark and 20% gains in Italy

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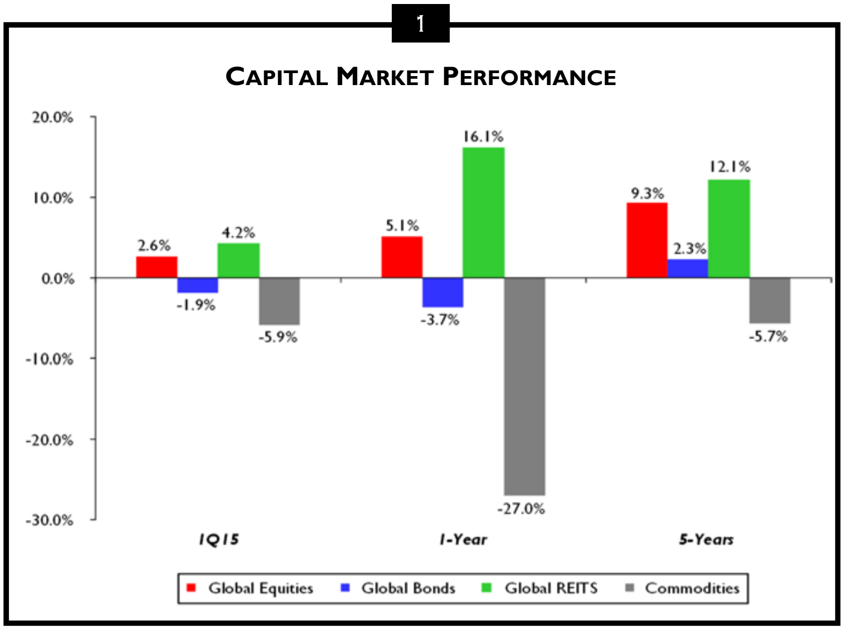
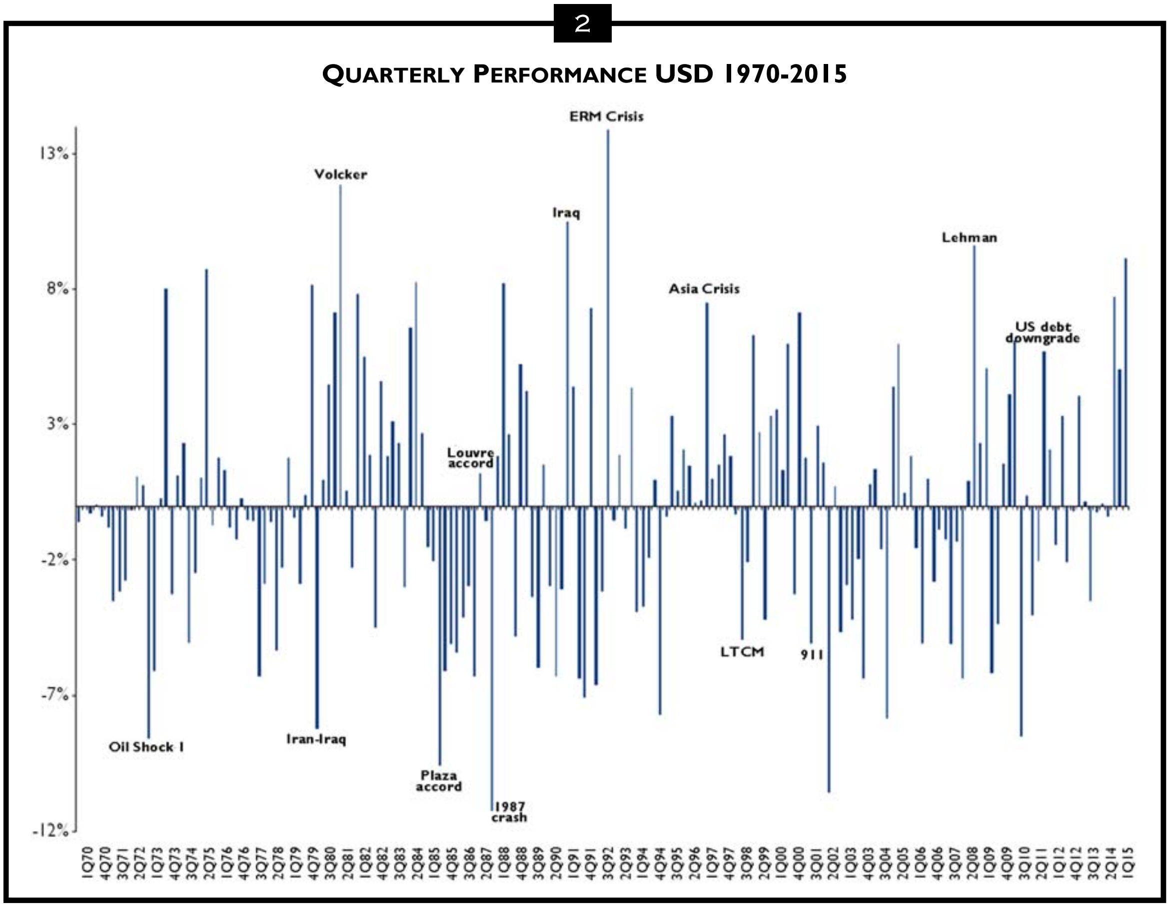


"Who would pay for the privilege of lending money?"

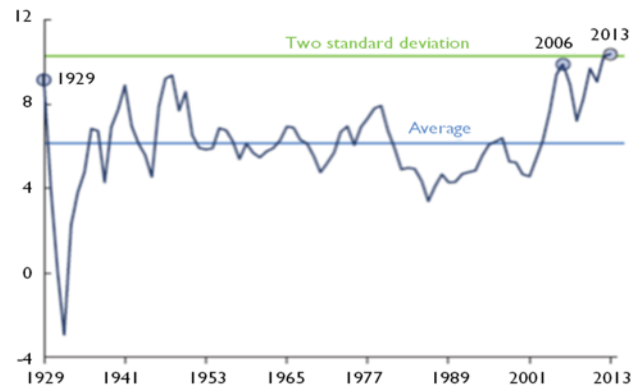
2



Courtesy: Bank of America

3

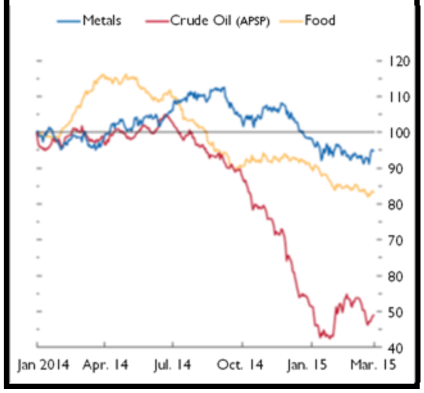
CORPORATE PROFITS AFTER TAX DIVIDED BY NOMINAL GNP (PERCENT)



Source: Bureau of Economic Analysis, OFR analysis

4

COMMODITY PRICE INDICES (JANUARY 1, 2014 = 100)



Source: Bloomberg, L.P.; and IMF, Primary Commodity Price System. Note: Metals index is a weighted index of aluminum, copper, lead, nickel, tin and zinc. Food index is a weighted index of barley, corn, wheat, rice, soybean meal, soybeans, soybean oil, swine, palm oil, poultry, and sugar. Data are through March 25, 2015. APSP—average petroleum spot price—average of U.K. Brent, Dubai and West Texas Intermediate, equally weighted.

and Portugal (discount them by 10% in USD terms). Greece and Serbia were the big losers in the quarter, each off more than 25%. Surprising strength was seen in Russia (+19%) and Argentina (+25%). Over the past year, Greece has sunk the most (down 65%), which makes sense, while Argentina has turned in the best performance in the world, up 68% (which doesn't).[1]

The US dollar soared 9%, among its strongest quarters since floating exchange rates began 45 years ago (Chart 2, page 2). The 23% surge over the past year has been good for American tourists, but the five previous gains of this magnitude were each time followed by a decline in US corporate profits. With valuations rich and profits at record levels (Chart 3), the impact of the strong dollar on US equities bears watching.

Just as equities and the dollar have posted a string of quarterly gains, commodities and global bonds have moved lower. Oil paced the broad commodity decline over the past year, but metals and food have also dropped (Chart 4). Breakfast should be more affordable as coffee and sugar each dropped about 20% to start the year.[2]

Global bonds declined for the third straight quarter, a function of a strong dollar and sparse yield. Real (i.e., after inflation) yields on cash in the US are the lowest in our peacetime history,[3] and globally, more than two-thirds of government bonds carry negative real yields, including 10% (more than $2 trillion) that have negative real *and* nominal yields. Who would pay for the privilege of lending money? Central bankers, who, with their policies of quantitative easing, are buying virtually every new bond issued by their governments.

"Spring blossoms, at least economic ones, have been absent in Europe for more than a few seasons, but buds have begun to appear."

Spring blossoms, at least economic ones, have been absent in Europe for more than a few seasons, but buds have begun to appear. Monetary easing and the weakening currency are leading a surge

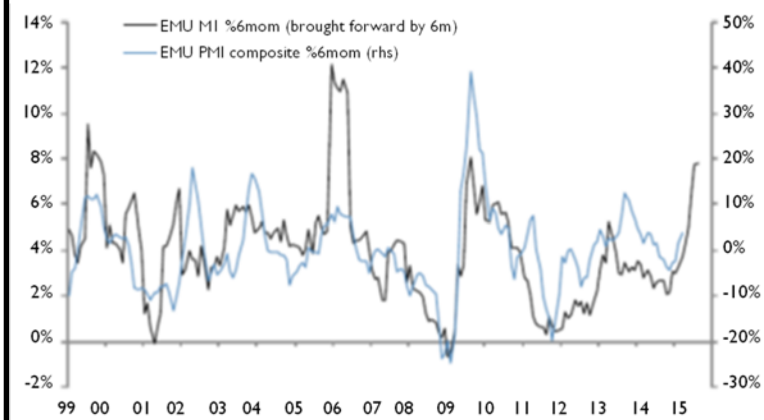
1 We are looking for the hedge fund with that pair trade.

2 Although we have yet to see those lower costs passed through at Starbucks.

3 Little comfort, but wartime was worse for bond investors. The Treasury required banks to buy its bonds during the Civil War, incented banks to buy war bonds during the First World War, and imposed by fiat a cap of 0.375% on T-bills and 2.5% on Treasury bonds during World War Two. With high inflation during these war periods, real cash yields were considerably negative in each of these periods, in excess of -5%.

5

EUROZONE M1 GROWTH VS. PMI, 1999-2015



Source: ECB, Market

Courtesy J.P. Morgan

"History never lurks far below the surface of the present."

in manufacturing (Chart 5). Retail sales are rising, following along with credit growth and consumer confidence. Europe's fiscal balance is, as a whole, stronger than the US' position, with slightly lower overall debt and a positive primary balance in its budget.

Of course, the good aggregate news masks some huge discrepancies and conflicts within the Eurozone. Most immediately, Greece is about to run out of cash in the coming weeks, and is negotiating for additional loans. Greece has already made huge strides toward balancing its budget, but its fellow Europeans, led by Germany, are demanding more austerity and structural reforms before granting any further cash.

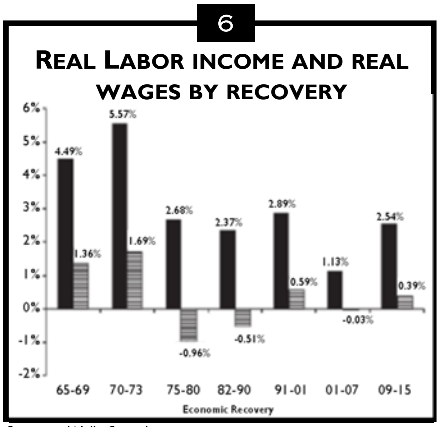
As we've discussed before, Europe's biggest challenges are primarily social and political. Looser money and a 50% plunge in oil prices have provided an immediate boost to the economy, but this is temporary economic gloss covering the façade of a cracking political foundation. Foreign policy is completely absent, as Russia invaded Ukraine with hardly a word of condemnation,[4] much less firm resistance, and Europe remains beholden to Russian energy. Refugees are pouring in from Africa and the Middle East, and Europe has no coherent policy on the immediate exigencies, or a record of successfully integrating migrant groups, who are thus becoming more isolated and alienated from their host communities, leading to rising tensions and political extremism.

History never lurks far below the surface of the present. For over a millennium, Europe has been small place, diverse and hostile. The European Union, an idea born from the ashes of the Second World War, was meant to constrain the politics that spawned centuries of military aggression even more than it was about fostering economic cooperation.

At the center of Europe, in every respect, is Germany; since Bismarck, the largest, most powerful country on the continent. Rebuilt in part with US largesse and protectionist policies demanded by the calculations of the Cold War, Germany soon resumed its historical economic dominance, but eschewed any political leadership of Europe. That worked (more or less) fine until the 2008 crisis, when the tide receded and the EU's inherent weaknesses were exposed. The currency union, through the German economic anchor, spread cheap money throughout the peripheral countries. Cheap money led, unsurprisingly, to a consumption binge, to the great benefit of (the mostly) German goods that flooded these markets. As domestic German growth was/is constrained by high savings and low wages, the German economy has become highly dependent on exports, which have grown to 50% of German GDP, most of which go to other European countries. And these countries can no longer afford to buy them, which puts Germany in a bind as much as its trading partners.

[4] There was a time when the seizing of sovereign territory by force was met by worldwide approbation and military response. The 1991 Gulf War comes to mind.

6



Courtesy: Wells Capital
Solid—Annualized real income growth (wages x hours worked adjusted by CPI) Striped—Annualized real wage growth

Germany could fill the role the US did in post-war Europe by offering subsidies to its partners and enacting favorable trade policies that encourage exports into Germany. This is unlikely to happen because it means killing the (export) engine of German growth.

Of course, it's a false premise for Germany. Export-led growth has come to an end. Its neighbors (many of them) are effectively bankrupt. The real question is whether Germany will assume political leadership in Europe, sacrificing for the greater European good. There are growing animosities between German contempt for profligate countries that don't share their (Germanic) virtues of thrift and diligence, and the resentment felt by nations under the economic dominance of Germany which they believe effectively caused and benefitted from their duress. Add in a long history of internecine hostilities in Europe, and the future of the European Union is very much in doubt.

Europe's recent economic bounce is welcomed, but it was spurred by temporary factors. Structural changes are necessary in the laws and regulations that inhibit entrepreneurship[5] and employment,[6] but mostly, attitudes will have to change to cede certain national sovereignties and embrace a regional future. The rise of radical political parties across Europe suggests political realities are moving in the opposite direction.

We see Europe's recent economic strength as temporary and its longer term prospects fraught with frailties. We see the opposite conditions in the US: temporary weakness that will give way to modest, but sustainable, growth.

Most of the economic data in the first quarter were disappointing. Retail sales fell at an annualized rate of 1.6%, and are up a mere 1.3% over the past year. Housing starts were weak in the quarter, slipping below a one million annualized rate, 2.5% below a year ago. The "natural"[7] rate of new annual housing construction is around 1.5 million units, so there's a long runway for housing over the next few years.

Inflation[8] fell at an annual rate of about 1% in the quarter, and is slightly negative (-0.1%) over the past year. All of this was due to a massive drop in energy prices. The "core"[9] rate of inflation rose 1.8% over the past year, and at a slightly higher rate in the first quarter. Expect inflation to move higher throughout the year.

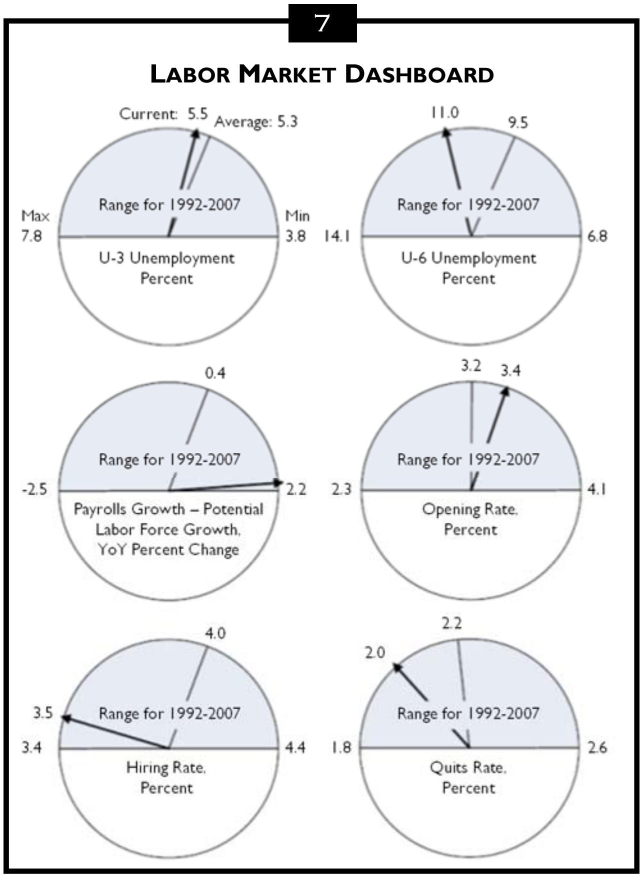
Employment gains were a little weaker this past quarter, averaging 197,000 new jobs per month, below the 261,000 average of the past year. The labor force participation rate fell back to 62.7%, the lowest since 1978. But the median duration of unemployment fell to 12.2 weeks, and total cash earnings[10] rose at an annual pace of 4.9% in the quarter and are up 4.8% over the past year.

Nominal wage growth in this recovery has been just 2% p.a., the weakest in the past 50 years.[11] But the very low rate of inflation masks real wage growth that has been as strong, or stronger, than any period in the past 40 years (Chart 6).

"...it's a false premise for Germany."

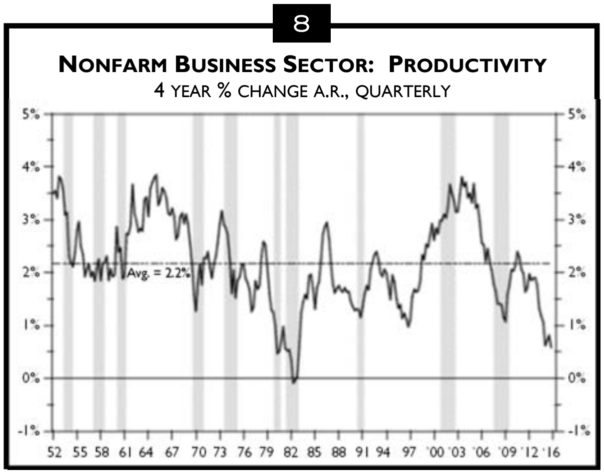
5 Ironically, a word of French origin.
6 Particularly among the young, where unemployment rates are as high as 50%.
7 Based on population growth and scrappage.
8 As measured by the Consumer Price Index (CPI).
9 That excludes the volatile food and energy prices.
10 The change in hourly earnings times the change in number of hours worked.
11 A consistent wage series was only available starting in 1964.

7



Note: We use 1992-2007 as a proxy for a full employment economy because the average unemployment rate over this period is roughly equal to the FOMC's current estimate of the structural rate.
Sources: Department of Labor, Congressional Budget Office, Special thanks to David Mericle.
Courtesy: Goldman Sachs

8



Courtesy: Bureau of Labor Statistics. Through Q4 2014

> *"The explanation for weakening productivity lies in less innovation."*

Wages should continue to climb as we approach full employment, which could come by the end of this year. By most measures, conditions in the labor market are close to the averages of the past 25 years (Chart 7).[12]

Productivity is the key to rising real incomes, indeed, the critical factor that determines our standard of living. It has been particularly weak in recent years, leading to concerns that we face a prolonged period of secular stagnation,[13] i.e., not just lower economic growth, but weaker *potential* growth as well.

The output of an economy is a function of the number of man-hours worked plus the amount produced per man-hour (productivity). Over time, productivity typically rises due to increased worker skills, such as education and experience, and improvements in equipment and processes. Over the past decade, worker skills have continued to improve and capital per hour worked has increased,[14] yet overall productivity growth has slowed considerably (Chart 8), and actually declined (-0.1%) in 2014. The explanation for weakening productivity lies in less innovation.

Innovation is captured in the concept of total factor productivity (TFP), which is measured as a residual of total productivity not explained by other factors. TFP accounts for the effects of research and development, better management practices, more productive firms displacing less productive ones, improved infrastructure, and other efficiency

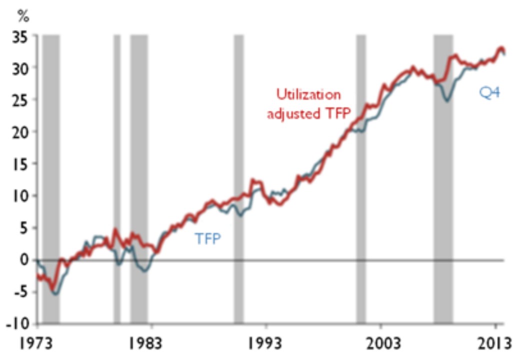
[12] U-6 is perhaps the weakest, and broadest, data point in the series.

[13] Larry Summers, i.a., is most closely associated with this notion.

[14] Capital growth has slowed since 2007, but so has hours worked, thus capital per hour worked has marginally risen.

9

Cumulative TFP growth since 1973



Note: Gray bars indicate NBER recession dates
Source: Federal Reserve Bank of San Francisco

gains. The growth rate of TFP slowed considerably beginning around 2005 (Chart 9).

The acceleration seen in TFP in the decade prior to 2005 was concentrated almost entirely in sectors that produced or used IT[15] intensively. More than half of the TFP gains in this period came from just 5% of the economy that was most IT-intensive. Likewise, the post-2005 decline was also concentrated in these industries, suggesting that the marginal benefits of IT adoption eventually diminished.

The "secular stagnation" argument is based largely on the proposition of much-reduced *potential* economic growth, due to the combination of deteriorating demographics and weak productivity gains. Add in the lingering effects of a debt bubble,[16] where credit-addicted consumers are expected to be repairing their balance sheets for years to come, these pundits see a future of chronically weak demand, which explains the disappointingly weak economic recovery of the past six years.

Every one of our government policies has been directed at addressing this diagnosis of weak aggregate demand. We paid drivers to swap their used cars for new ones, instituted mortgage holidays and debt forgiveness, extended unemployment benefits from six months to two years, redistributed income to higher marginal consumers[17] and, of course, brought interest rates to record lows, punishing savers and helping debtors.

The central thesis, that we need policies to boost consumption, is a puzzle. If consumers borrowed too much and consumed so much that it caused the world financial system to collapse, encouraging more consumption now seems illogical.[18]

"The central thesis, that we need policies to boost consumption, is a puzzle."

Remember the equation that output equals hours worked plus productivity gains. The growth in both the labor force and productivity has been especially weak, so it is no coincidence that the economic recovery has been especially sluggish. The working age population[19] grew just 0.73% p.a. in the past five years, less than half the average of the last 50 years. Weak productivity gains coincide with low private capital expenditures and a decline of public sector investment[20] to a post-WW2 low.

We have spent trillions of dollars through countless fiscal and monetary initiatives in an effort to spark aggregate demand, but we have not enacted a single policy[21] to encourage investment. There have been no tax cuts, no new investment tax credits, and little government spending on

[15] Information technology.
[16] As documented by Carmen Reinhart and Kenneth Rogoff, in particular, so persuasively.
[17] Through higher marginal taxes on the wealthy and by raising the minimum wage, for example.
[18] I'm being polite.
[19] Not the number of people with jobs or looking for jobs, just the absolute number of potential workers.
[20] As a percentage of GDP.
[21] At least, none of material impact, although I doubt there have been any of even immaterial effect.

infrastructure or basic research. Policies that continue to target higher consumption and ignore the necessary investments in both the private and public sectors that will be needed to raise productivity will relegate our economy to mediocrity.[22]

Among our highest priorities should be a permanently higher commitment to basic research. Scientific research is often dismissed as having no apparent value, but this is a very myopic view. Radio waves were discovered by Heinrich Hertz in the 1880s, long before radio became a pervasive household item in the 1920s. James Watson and Francis Crick uncovered the double helix of DNA in 1953, and we didn't map the human genome till 50 years later. William Shockley of Bell Labs was one of the inventors of the transistor in 1947. He started Shockley Semiconductor in Palo Alto, which spawned Fairchild Semiconductor, where Bob Noyce and Gordon Moore met and then left to start Intel, which led to the integrated circuit in 1958[23] and the personal computer in the 1980s.

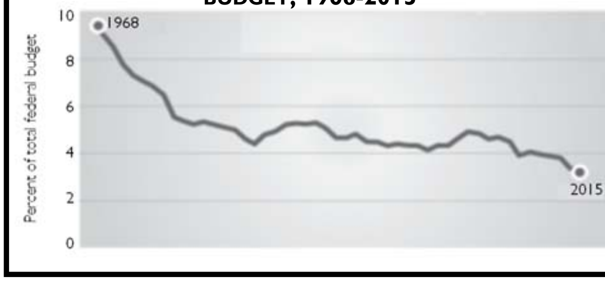
"Among our highest priorities should be a permanently higher commitment to basic research."

In the 1970s, President Nixon's "War on Cancer" and it has been since derided as an obvious failure, as cancer is still obviously with us, yet 19 new anti-cancer therapies were approved in the past two years, and exciting advances in immuno-oncology are upon us. The oil crises of the 1970s spurred research in new technologies that led eventually to directional drilling and hydraulic fracturing, among others, that have doubled domestic energy production in just the past few years.

The value of basic research may not be immediately apparent, but it would contradict all of history to diminish its importance to our civilization. Last year saw the first landing on a comet, which has already provided insight to the formation of Earth. A new fundamental particle, the Higgs boson, was discovered, filling in our understanding of the origins of the Universe. The world's fastest supercomputer was built in 2014, and new discoveries in plant biology are leading to more efficient agriculture techniques.

10

FEDERAL R&D / OUTLAYS AS SHARE OF TOTAL FEDERAL BUDGET, 1968-2015



Courtesy: MIT

These first two accomplishments of 2014 were achieved by European teams; the latter two by Chinese scientists. In 1968, the US government spent close to 10% of its budget on research. That has fallen to just over 3% today (Chart 10). More depressing is that what little we are doing is being undermined by political squabbling. The budget sequester in 2013 disrupted funding for research, even halting experiments in the middle of trials.[24] In a survey last year of 11,000 recipients of NIH and NSF grants,[25] nearly half reported that they had to abandon a critical experiment, and three-quarters fired or failed to hire graduate students and fellows because of the funding uncertainty caused by dysfunctional politics. The long-term impact on future scientists and their research is incalculable.[26]

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[22] Again, I'm being polite. Our present course of targeting consumption and discouraging investment is ineffectual and likely counterproductive.

[23] Along with Jack Kilby of Texas Instruments, who was awarded the Nobel Prize in Physics in 2000.

[24] A personal friend told me she was instructed by the National Institutes of Health, who were funding her medical research project, to bar anyone from entering her lab or even discussing the trials among colleagues during the sequester.

[25] NIH=National Institutes of Health; NSF=National Science Foundation; survey conducted by the *Chronicle of Higher Education*.

[26] *The Future Postponed*, released by MIT in April 2015, is the source of many of these data. I commend all to read it.

Funambulism comes from the Latin *funis* (rope) and *ambulare* (to walk). It may be obvious, but the key to staying on a rope[27] is to maintain one's center of mass directly over one's base of support. With one foot in front of the other, lateral support is greatly diminished, which is why most rope walkers (funambulists) hold a long pole. This distributes mass away from the pivot point, increasing the moment of inertia and reducing angular acceleration. The pole can also be used to correct any sway by applying opposite torque on the body.

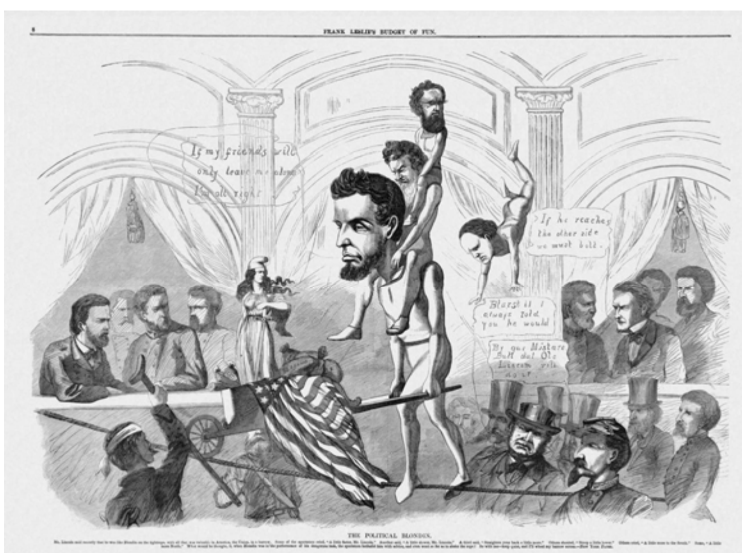
Jean François Gravelet was brought to America by Ringling Brothers under the stage name of Charles Blondin.[28] In his travels with the circus, he passed Niagara Falls, and became determined to walk across it.

On 30 June 1859, 25,000 people lined both sides of the falls to see if it could be done. Blondin tied one end of the rope around an oak tree on the American side, but finding a secure place on the Canadian side proved difficult. Blondin's solution was to rappel down 200 feet, secure the main rope on an outcropping, then climb back up. The process took all day, but by 5pm he had returned to the American side and began to walk across with a 50-lb., 26-foot ash pole. Half way through, he sat down, dropped a line to the *Maid of the Mist* below him, and hauled up a bottle of wine, which he promptly drank. He rested on the Canadian side for 20 minutes, returning with a Daguerreotype camera on his back. Half way through, he tied his balancing pole to the rope, set-up the camera, and snapped a picture of the American crowd. He announced he would perform this again on July 4th without a balancing pole.

This time, Blondin flipped himself over midway through, and walked backwards to Canada. For the return, he wore a sack over his head so he couldn't see. He did it again a few weeks later, with President Millard Fillmore in attendance, this time pushing a wheelbarrow. A few weeks after that, he back flipped across the falls. He crossed with his manager, Harry Colcord, on his back. He crossed at night, and he crossed with his body shackled. He crossed with a table and chair and picnic basket, but the chair fell into the water as he tried to sit on it, so he sat on the rope ate some cake washed down with Champagne. He even toted a stove and utensils on his back, stopped in the middle to start a fire, cook an omelet, which he lowered to passengers in the boat below. In all, he crossed Niagara Falls about 300 times and walked an estimated 10,000 miles on a rope. Lincoln was a great admirer, and was pleased to see cartoonists link his political struggles to Blondin's exploits (see below). Blondin died in 1897, at the age of 73, from complications of diabetes.

"Lincoln was a great admirer..."

Blondin certainly understood spectacle. His performances astonished audiences by building suspense with each step, pushing the limits of what seemed impossible with each act.

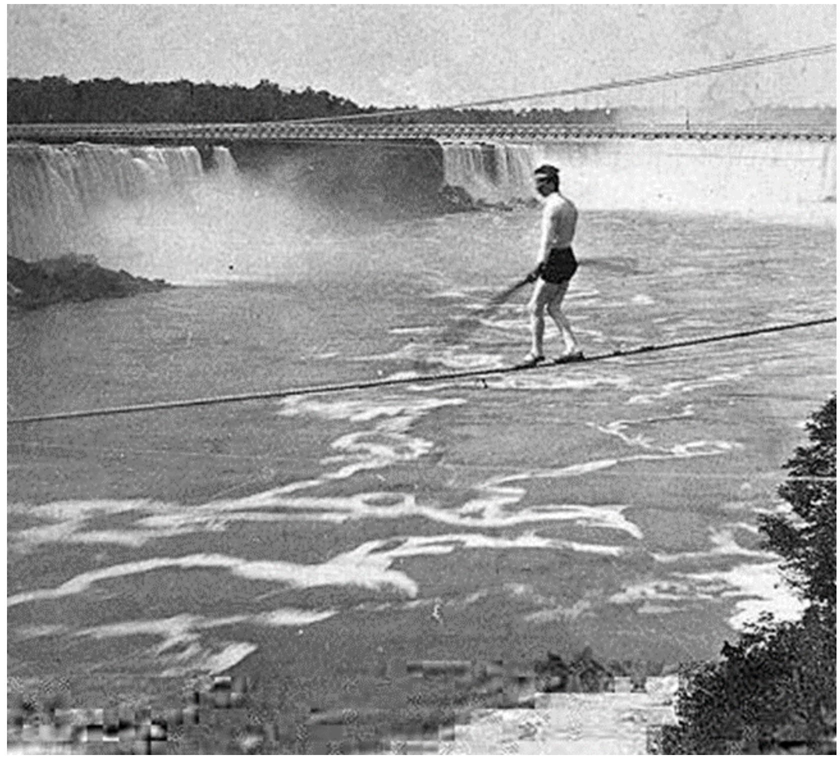


27 Or even just standing on solid ground, for that matter.

28 A reference to his blond hair

He was lauded by millions for his feats, which seem incredulous, even today. But his fame, his fortune, his admiration all came from a singular, extraordinary ability to maintain a focus on his balance, whatever the conditions or circumstances.

Investors, too, can face hostile and counter-vailing winds that distract focus and seek to sway our balance. None of us possess Charles Blondin's innate talent to stay on a three-inch wide rope in all circumstances and in every condition. But his incredible life reminds us we should try.



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Michael A. Rosen
Principal & Chief Investment Officer
April 2015

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