Our Perspective on Issues Affecting Global Financial Markets

Pg 1 DEFLATION: WE FEAR YOU NOT

Deflation fears grip the globe. One central banker called deflation the "ogre stalking the world economy." Should you be afraid? We say no. Deflation is more common than you think and far more desirable than you might imagine.

THE PERIODIC TABLE OF PRICES: HOW DO THEY CALCULATE CPI?

A pictorial glimpse into the categories and weights that underlie the Consumer Price Index (CPI). How does it accord with your spending habits?

WHAT THE 1929 DOOMSDAY CHART WON'T TELL YOU (AND WHY IT MATTERS)

A troubling chart floating around the internet portends a 1929-style stock market collapse. Will it happen? Perhaps, but not because this chart says so.

"SUPPOSE A MARTIAN VISITS EARTH...": ANSWERING THE MOST IMPORTANT MACRO QUESTION OF 2014

Two groups continue to battle over the answer to the most important macro question of 2014: how much slack is there in the US labor market? Who is right? How can we decide? Perhaps a Martian could help...

THE RISE OF THE GLOBAL ASSET MANAGEMENT INDUSTRY: TOO BIG TO FAIL, TOO?

While regulators fight the last war, other beasts lurk in the global financial system: big asset managers. But are they too big to fail? What are the consequences for asset markets? We inquire.

Deflation: We **Fear** You **Not**

o you like low prices? Relish discovering a bargain online or hidden on a store's shelf? Do you celebrate better, faster and cheaper electronic devices with each passing year? Wish your hard-earned dollar (or pound or yen or yuan) stretched further with each passing year?

Well, the world's most powerful central banks stand ready to prevent such a global economic disaster. Christine Lagarde, managing director at the International Monetary Fund, described the phenomenon of falling prices, known to economists as deflation, as an "ogre stalking the world economy." That's right: central bankers aim to fight deflation at every turn with every weapon in their formidable policy arsenals.

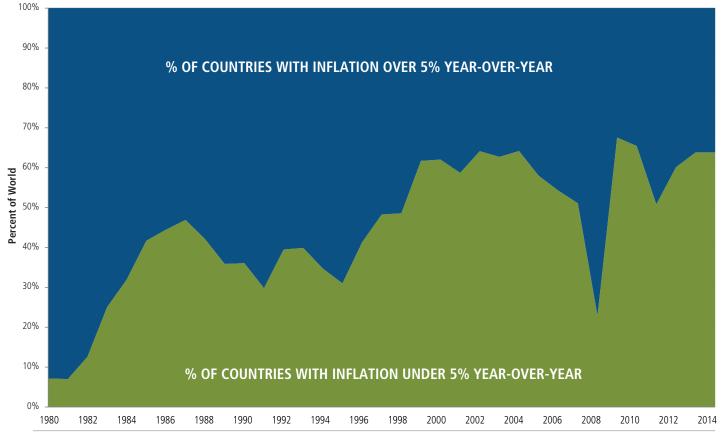
But deflation does not send shivers down our spines. We think deflation is misunderstood, particularly by economists and, by extension, investors who subject themselves to the vagaries and vicissitudes of economic advice. At worst, deflation is a symptom of other problems, not the disease. At best, it is a benign byproduct of rapid economic progress (yes, you read that right, progress). By first understanding what mainstream economics despises about deflation, we see that while today's theories cast them in a bad light, falling prices are not always bad—and historically have even signaled robust economic performance.

DEFLATION: WHAT'S THE THREAT?

What better way to understand the consensus opinion toward deflation than reading a Nobel Prize winner in Economics: Paul Krugman. Writing in the New York Times in 2010, he cited three reasons to worry.

The first charge is that falling prices curtail consumption and harm producers: "when people expect falling prices, they become less willing to spend, and in particular less willing to borrow." Intuitively, the argument makes sense. If you are in the market for a new washing

THE WORLD EXPERIENCED ANNUAL INFLATION OF LESS THAN 5%*



Source: IMF

^{*}Number of countries varies by year. Percentages include only those countries for which data exists

IN THE EURO AREA, LOW INFLATION PREVAILS ACROSS COUNTRIES AND PRICE INDEX COMPONENTS

	Last Month	Last Year	Last Two Years
# of Countries With Inflation <i>Below</i> 1% Year-Over-Year (of 15 total)	8	6	1
# of Price Index Components <i>Below</i> 1% Year-Over-Year (of 17 total)	11	9	5

Source: EuroStat, Payden Calculations

machine, but expect the price to fall in the future, you postpone the purchase until the price declines. Moreover, the loan you might have taken out to finance a car purchase makes little sense today if vehicle prices will be lower tomorrow. Expectations of future price declines supposedly delay purchases and slow economic growth.

Appealing though the logic may be, the world works differently. Take computers. Moore's Law says that chip processing capabilities double roughly every 18 months. Over the last four decades, as technology improved exponentially, the price of computing has plummeted. Since 1994, the cost of a personal computer fell 95%. In spite of the knowledge that prices would fall in the future, the prospects of better, faster, cheaper technology have continually brought buyers out in droves. After all, how many cell phones have you owned in the last decade?

What is more, a dollar spent on a "computer" today produces different results than a dollar spent on a "computer" in 1984. Mobile phones now pack more computing power than the entire operating system which piloted Apollo 11 to the moon and back in 1969.

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THAT RIGHT, PROGRESS).»

The second terrifying feature of deflation, Krugman asserts, is that falling prices "increase the real burden of debts." If 90 cents tomorrow buys you the same basket of goods and services as \$1 today (the horror!), then anyone who borrowed \$1 dollar will apparently have to work harder to pay off their debt, if wages and income follow prices lower. Borrowers must repay lenders with currency units that are worth more than the units they borrowed. This could, in theory, discourage borrowing and crimp economic activity.

In actuality, it is less the price level and more uncertainty about the price level that stifles investment. Throughout much of the 18th century deflation was a fact of life, yet loans were made and bonds were purchased. Financial market participants readily adjust if they anticipate and can plan for price changes—whether rising or falling. For the prepared borrower and lender, there is no difference between a rising 3% per annum inflation rate and a falling -3% deflation rate. That's right, no difference, other than we aren't accustomed to such year-on-year "wealth creation."

Third, Krugman complains that "it's a fact of life that it's hard to cut nominal wages." In a recession, the story goes, employers are reluctant to slash nominal wages and thereby forestall the adjustments necessary to heal the economy. The solution is to have the government unleash a surreptitious campaign to lower wages. How? By eroding the purchasing power of the unit in which workers are compensated—read, by creating inflation. With inflation during a recession, employers can pay employees less in real terms (as inflation erodes purchasing power) without lowering the nominal number written on the paycheck.

fig. 3 DEFLATION IS MORE COMMON THAN YOU THINK: A LOOK AT THE HISTORY OF FALLING PRICES ACROSS THE WORLD



Source: Michael D. Bordo and Andrew Filardo, "Deflation and Monetary Policy in Historical Perspective: Remembering The Past or Being Condemned to Repeat It?" Working Paper 10833. October 2004.

As you may have guessed, we aren't buying it. And by "it" we mean the sticky wage demon. Historical evidence suggests workers are much smarter than economists give them credit for: they adjust their expectations based on real wages (adjusted for inflation) and do not simply focus on nominal wages.² Japanese employees, for example, readily took pay cuts and maintained employment levels in the late 1990s and 2000s. Where "sticky wages" do live (or lurk rather) is in economic models employed by economists.

PERIODS OF DEFLATION IN HISTORY DEFY DOOM

The deflation worriers' case disintegrates in the face of history. Historically, deflation is common. Some instances of historical deflation represent cases of "bad deflation" (where actual currency hoarding caused a severe decline in the money supply), but the vast majority of deflation episodes in Western history were harmless.

In the 19th and early 20th centuries, deflation was a frequent occurrence (see Figure 3). In the United States, in 33 of the years between 1801-1879 the price level fell. In particular, from 1873-1896, prices in many countries across the world fell by 2% per year, but economic growth continued at 2-3% on average. How?

Productivity-induced growth fueled by the second industrial revolution and the connecting of railroads across North America and Europe provided gale force tailwinds. In the 20th century, the 1920s was an epoch of

good deflation. The blossoming of high tech industries like manufacturing, radios, telephones and refrigerators brought more, better goods, more cheaply, to U.S. consumers.

What changed in recent history? We are accustomed to inflation and rising prices (for many goods and services). So for most people born after 1950, deflation would indeed be a strange outlier. But let's not confuse strange with bad. On a long enough timeline, deflation is anything but an outlier.

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WHAT SHOULD WORRY US: BAD DEFLATION

Not all periods of falling prices are good, though. Bad deflation, as conceived by Milton Friedman, is a decline in the price level caused by a monetary disturbance which goes unchecked by central bankers.

The modern example of "bad" deflation, the one Mr. Friedman had in mind, is the Great Depression of 1929-1933. Real output plunged across most of the developed world, led by a 7.6% contraction in the U.S. between 1929 and 1933. In such an inclement economic environment, banks failed by the scores, depositors scrambled for currency, the money supply declined by 30% in the space of two years, and prices plunged.

Instances such as this, disturbing as they are, are surprisingly rare. Indeed, even Japan, the supposed incarnate warning against deflation has avoided such terrible circumstances. As former Bank of Japan Governor Shirakawa notes, Japanese CPI declined by a mere 4% over 15 years, and output has grown very modestly.

Japan also witnessed bank failures, the likes of which might have caused a grave contraction in the money supply. In 1997, Yamaichi Securities failed (Japan's "Lehman event"). Yamaichi held massive off-balance sheet losses and its assets of ¥3.7 trillion (\$30 billion) were comparable to those held on the balance sheet of Lehman Brothers in 2008. ³

Despite the bank failure, deflation did not suddenly spiral out of control. The lesson from Japan, then, is not that deflation devastates economies, but rather that even if a central bank can stave off a monetary disturbance, it has little impact on "real" factors in the economy. Faced with a shrinking population and structurally underutilized labor markets, the factors driving consumer goods price deflation in Japan are beyond the control of a central bank.

DON'T FEAR DEFLATION, DON'T FEAR PROGRESS

Financial writer Jim Grant recently opined that, "Deflation is a word for progress - and central banks seek to forestall progress." We think that critique is a bit too harsh. While deflation does represent progress, central banks misdiagnose deflationary pressures as signs of economic distress or even depression (Japan). However, it is important to distinguish between good periods of deflation, driven by productivity growth and supply shocks, and bad deflation, induced by monetary distress caused by financial crisis.

Failing to do so can have significant consequences. Never more so than today, as central bankers around the devel-

"CENTRAL BANKERS AROUND THE DEVELOPED WORLD DEBATE THE DANGER OF HISTORICALLY LOW LEVELS OF INFLATION."

oped world debate the danger of (and the appropriate policy response to) historically low levels of inflation. As you may have guessed by now, none want falling price levels. Janet Yellen recently opined, "a persistent bout of very low inflation carries other risks as well. With the federal funds rate currently near its lower limit, lower inflation translates into a higher real value for the federal funds rate, limiting the capacity of monetary policy to support the economy."⁴

In our present environment, the passionate dedication to preventing even a period of low inflation, let alone deflation, will prompt further unconventional policy measures from the world's central banks in the years ahead.

- 1 Christine Lagarde, managing director of the International Monetary Fund, in a speech Jan. 15, 2014, to the National Press Club in Washington, D.C.
- 2 Michael D. Bordo and Andrew Filardo, "Deflation and Monetary Policy in Historical Perspective: Remembering The Past or Being Condemned to Repeat It?" Working Paper 10833. October 2004.
- 3 Masaaki Shirakawa. "Is Inflation (or deflation) "always and everywhere" a monetary phenomenon? My intellectual journey in central banking." BIS Papers No. 77.
- 4 Janet Yellen. "Monetary Policy and the Economic Recovery." Speech at the Economic Club of New York. April 16, 2014.

What the 1929 Doomsday Chart Won't Tell You (And Why It Matters)

n the data-driven twenty-first century no form of evidence has come more into vogue than charting. Simple charts now teach us much of what we know about the world. Every set of data, from the median price of a home in one's neighborhood to the national unemployment rate, seems to end up in a chart.

As with any piece of evidence, the marketer, professor, or company touting a chart does so with motivation. It is not that the motivated presentation of evidence is a bad thing, but that the opportunities for distraction in data graphics are many. Where Plato once worried that poetry would make the citizens of Athens susceptible to wonderfully worded, but unreasonable tales, so too might we caution that the flash and flare of a finely lined chart often distracts from, rather than adds to, analytical thinking.

As a result, we recommend all charts be read antagonistically. Sound harsh? Just look at our cartoon of the Dow in 1928-29 versus the Dow today: few comparisons could be so spurious (See Illustration on next Page 5). Our mis-

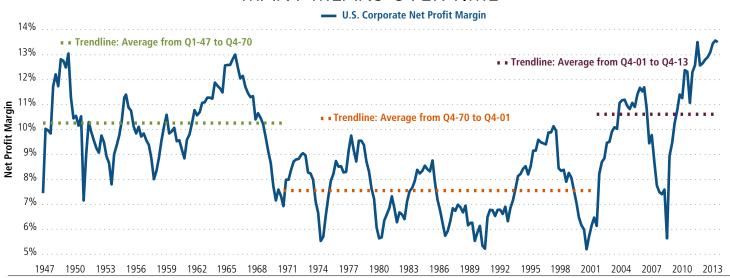
sion, then, is to make the case for distrusting (not discarding!) charts. We have planned a brief tour of the history of charting in economics and finance, complete with a farcical tutorial in how to make one's own "very scary chart" (see Page 5). Beware: scintillating graphics and uncritical data examination lead to dangerous conclusions.

THE DAWN OF CHARTING

Before algorithms, big data, and Excel, graphs and charts existed, but scarcely made financial headlines. Graphical analysis used to be the lone province of cartographers, of dedicated scientists, natural and political–certainly not the domain of computer wielding analysts. Unable to churn out dozens of charts daily, the progenitor of modern statistical graphing, William Playfair, busied himself in the late 1700s compiling *The Commercial and Political Atlas*, wherein he plotted the first recorded economic time series. ¹

Playfair ascribed his charting innovation to the difficulty of drawing conclusions from tables of data. The earnest Scottish political economist opined, "a man who has carefully investigated a printed table, finds, when done, that he has only a very faint and partial idea of what he has read; and that like a figure imprinted on sand, is soon totally erased and defaced."² Charts functioned initially as an improvement over reading data tables.

MHEN PROPERLY MEASURED, PROFIT MARGINS ARE VERY HIGH, BUT DO NOT NECESSARILY HAVE TO "MEAN REVERT." THERE HAVE BEEN MANY MEANS OVER TIME



But more important, Playfair stressed with regard to his economic studies, charts were useful in "not only facilitating, but rendering those studies more clear, and retained more easily in memory." Far from the confusion wrought by confusing contemporary charts, unless a graphic facilitates and clarifies a data set, it had better be left out.

« WE RECOMMEND ALL CHARTS BE READ ANTAGONISTICALLY »

HOW TO NAVIGATE THE WORLD OF CHARTS

With a better sense of the charting trajectory now firmly at hand, we proceed now to detail the major mistakes and missteps made in daily graphic analysis. Analytical missteps are the topic at hand, mind you, to the designers we leave the rest.

What to do in a world where charting more often serves to confuse rather than clarify. First, we must acknowledge the intellectual dangers that abound when reading charts, stemming chiefly from two roots: the cunning of the chartmaker and the psychological biases to which we all fall victim in our evaluation of "objective" data.

Treating the first concern, Edward Tufte reminds us: "Displays of evidence implicitly but powerfully define the scope of the relevant, as presented data are selected from a larger pool of material. Like magicians, chartmakers reveal what they choose to reveal. That selection of data—whether partisan, hurried, haphazard, uninformed, thoughtful, wise—can make all the difference, determining the scope of the evidence and thereby setting the analytic agenda that leads to a particular decision."

Approach any data (in chart form or otherwise) with skepticism. Just like artfully constructed paragraphs, glittering graphs arrive as evidence for someone's arguments. Thus, chart reading ought to be adversarial, controversial—be belligerent and cynical when reading charts.

We compiled a quick checklist for use when approaching charts, informed by the tricks and pitfalls we encounter most often. These simple rules should serve as a "sniff-test" to see if the chart presented is less genuine

and relevant than it appears (See Illustration on Page 5).

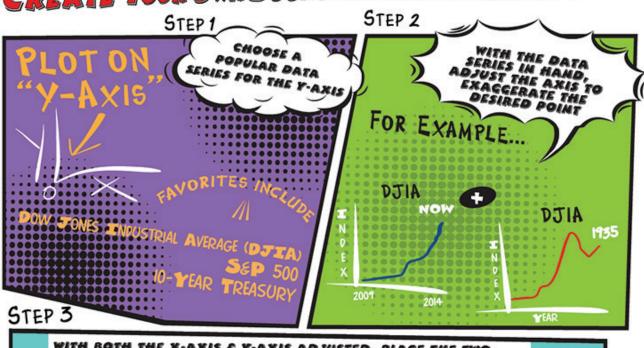
- First, examine the y-axis (vertical axis). Does it contain a narrow range of data? Carefully defined ranges can give the illusion of large increases when the magnitude has changed very little. Be suspicious.
- Second, if there are two time series of data, do they share the same y-axis, or do they have separate left and right axis? If the latter, be suspicious. Ensure that the series intuitively belong together or, at a minimum, make sure the analyst/journalist discusses the relationship in depth.
- Third, check the x-axis (horizontal axis) closely.
 How far back does the data extend? Why was a
 particular time period selected? If the time period is truncated, again, be suspicious. Especially
 if the point is to identify a strong correlation,
 question whether the relationship holds up in
 different eras.
- Fourth, does the data portray only a snapshot in time? Limited, point-in-time information may obscure or enhance the graphic's relevance. Without the benefit of a larger historical context, the reader or viewer cannot be certain if today's state of affairs is abnormal, normal, or wholly unremarkable. Good graphics use only the amount of information needed to convey the point, but enough to make sure the point appears in a sense-making frame of reference.

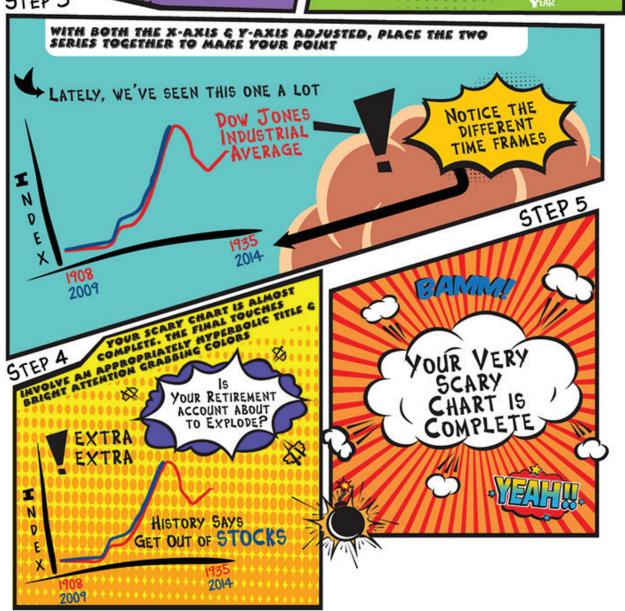
WHAT THE DATA DOESN'T SHOW

Improper evaluation of data can engender serious analytical blunders. Often what the data doesn't show proves far more important that what is on display. We now offer two examples of how popular, headline-making charts often conceal more than they reveal. Reasoning from these charts alone is dangerous and can lead to faulty decisions, even at the level of the Federal Reserve.

The first example, described at length at the Philosophical Economics blog, is of corporate profits as a percent of GDP (see figure 1 on Page 5). Ostensibly on display is the dollar amount of U.S. corporate profits expressed as a percentage of gross domestic product (GDP).³ For bond

HOW TO CREATE YOUR OWN DOOMSDAY CHART IN SEASY STEPS!







and equity investors, and anyone interested in gauging the health of the U.S. economy, data such as these may be worrisome, as the past 50 years demonstrate a strong trend to "revert to the mean." In other words, aberrant margins foretell a rough patch ahead for U.S. corporations.

Upon closer inspection though the comparison doesn't hold up. Indeed the numerator in the comparison (corporate profits) covers a different set of economic actors than the data set used in the denominator (GDP). Exposing here only the tip of the iceberg, the problem roots in the fact that corporate profits (as traditionally measured) are those profits earned by U.S. corporations, whether at home or abroad. Contrarily, GDP measures only domestic output. A comparison between the two is as accurate as that between apples and oranges.

So while this chart may grab headlines, investors making decisions on the assumption of "mean reverting profit margins" are in for a surprise. As we see in the correct chart, yes, profit margins are at record highs, but it is not as if the mean hasn't changed over the past 50 years (see figure 1 on Page 5). After massively high profit margins in the 1950s and 1960s, U.S. corporate profit margins fell, only to pick back up lately.

The second example is a favorite data series of the Federal Reserve, the central bank of the United States responsible for setting monetary policy. Since the historic recession in 2007-2009, the overnight policy interest rate in the U.S. has been pegged by the Fed at 0.0%-0.25%.

Supporting the policy is economic reasoning that the propensity of rational actors to borrow—and therefore spend—is higher when interest rates are lower, especially in interest sensitive sectors like housing and autos. Lower interest rates boost spending and drive recoveries.

And that's how the recent narrative has gone. In February 2013, then Fed Chairman Ben Bernanke cited "low auto loan rates [as] one of the reasons why car sales are up." Good as it sounds, and good as the chart looks, the foundations of the automotive sector recovery are shaky.

Census Bureau retail sales data shows a strong improvement in new automotive spending, especially when compared to non-auto spending since the recovery began in June 2009 (see figure 2 below). University of Chicago economists Atif Mian and Amir Sufi didn't stop at the headline improvement. Unearthing important loan data, they learned that much of the so-called auto recovery was borne on the back of "another debt-fueled spending spree."⁴

After contracting by more than \$50 billion in 2009, auto loans have posted increases of \$59.8 billion in 2012 and \$66.4 billion in 2013. Not only has the outstanding amount of loans increased, but the length of car loans has consistently extended in the past 3 years. As in any credit cycle, lending standards relax as time wears on. Last month J.D. Power reported that 33.1% of auto loans had lives of 6 years or longer. That, combined with record levels of financing belie the apparently positive headline chart of rising auto sales.

SINCE JUNE 2009, U.S. AUTOMOTIVE SALES HAVE OUTPACED REGULAR RETAIL SALES BY A WIDE MARGIN



Source: Census Bureau

HUMAN BIAS

The final reason to approach charts antagonistically is the difficulty we have as humans overcoming our own biases. Recent research suggests that even with scientifically sound data, observers of charts or papers dealing in quantitative evidence struggle to overcome the cultural and political filters through which such data passes. Professor Dan Kahan of Yale Law School relates, "cultural cognition also causes people to interpret new evidence in a biased way that reinforces their predispositions. As a result, groups with opposing values often become more polarized, not less, when exposed to scientifically sound information." Even those subjects with high mathematical aptitude (an apparent ability to work through data) were extremely biased in their reasoning when political or cultural conclusions were to be made.

Human biases abound, Daniel Kahneman reminds us in his 2011 classic, *Thinking Fast and Slow*. Charting information vastly improves the quality and level of understanding slower thinking humans glean from large datasets. Unlike number crunching computers, but like the programmers responsible for writing their software, humans operate always behind the veil of cognitive biases. No matter how clean and clear we think our eyes are, Friedrich Hayek reminds us that "there is no such thing as a valueless fact." "Never before have so many people made so much of data with so little understanding," Winston Churchill might be usefully updated.

- 1 Tufte, Edward. The Visual Display of Quantitative Information. Cheshire, Connecticut: Graphics Press, 2001. Pg. 32.
- 2 Ibid.
- 3 philosophicaleconomics.wordpress.com. 30 March 2014
- 4 houseofdebt.org. 31 March 2014

The absence of inflation is a thorn in the side of central bankers around the globe. But many investors scoff at such a notion. Lack of inflation? How do they measure inflation anyway? Are they just making it up? Have they seen rents? Gasoline prices? Or food at my favorite restaurant?

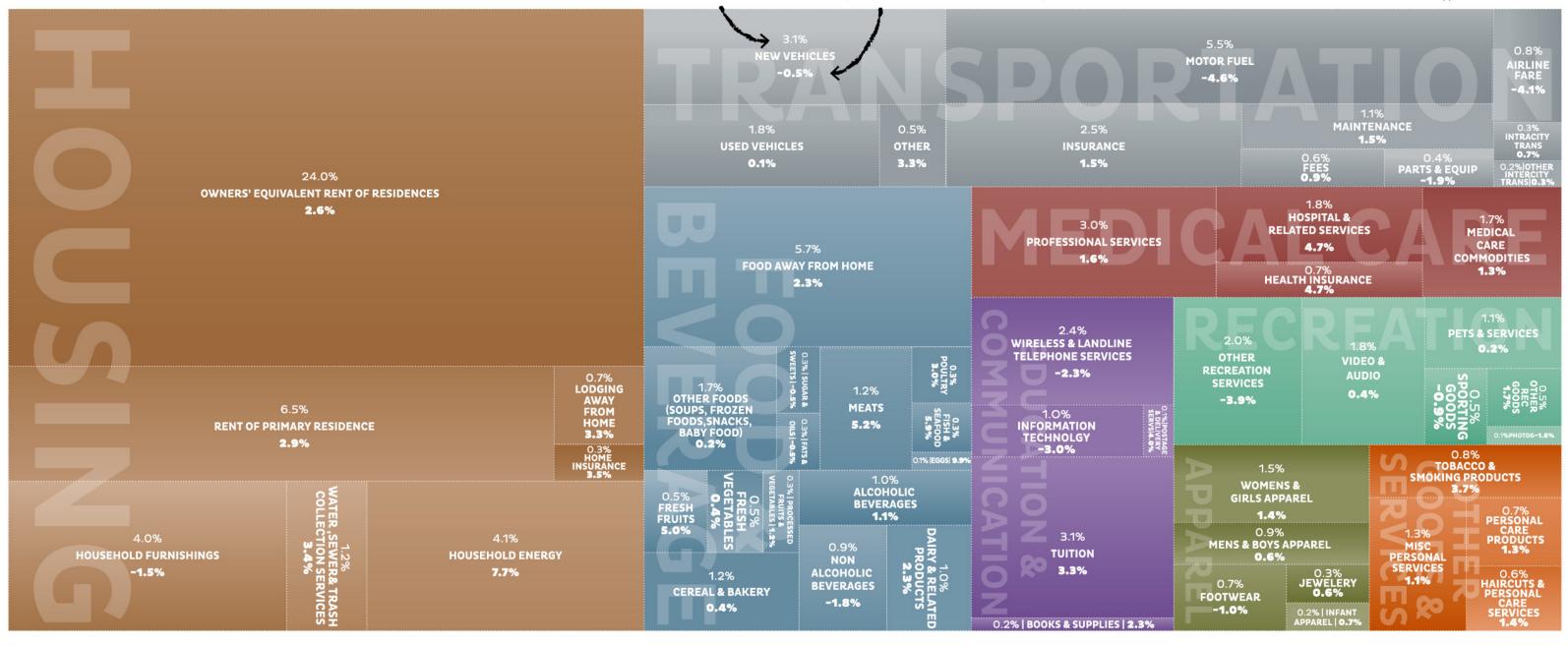
Now, as the BLS counsels, a "national average reflects all the ups and downs of millions of individual price experiences. It seldom mirrors a particular consumer's experience." Just as the average price of cheese

may look very different at your local grocery store than the national average, household income (and the percent of income households spend on different goods and services) varies as well. However, research from the Federal Reserve Bank of Chicago suggests that since 1983, the poorest households have only experienced 0.06% greater annual inflation on average each month. In general, the "inflation" experiences of [various] socio-economic and demographic groups are very similar."

THE COMPONENTS OF THE CONSUMER PRICE INDEX

WHAT'S THE WEIGHT OF EACH ITEM?*

HOW MUCH HAS EACH COMPONENT CHANGED IN THE LAST YEAR?



EIGHT MAJOR SPENDING CATEGORIES (SUM TO 100%)

HOUSING

WEIGHT
41.0%

1-YR % CHANGE
2.8%

TRANSPORTATION

WEIGHT
16.8%

1-YR % CHANGE

FOOD & BEVERAGE

WEIGHT
15.3%

1-YR % CHANGE
1.7%

MEDICAL CARE
WEIGHT
7.2%
1-YR % CHANGE
1.1%

EDUCATION & COMM
WEIGHT
6.8%
1-YR % CHANGE
2.2%

RECREATION
WEIGHT
6.0%
1-YR % CHANGE
0.3%

APPAREL
WEIGHT
3.6%
1-YR % CHANGE
0.5%

OTHER GOODS & SERV

WEIGHT
3.4%

1-YR % CHANGE
1.9%

"Suppose a Martian Visits Earth...": Answering The Most Important Macro Question of 2014

Economists generally come down on one of two sides: the first group (let's call them "hawks") argue that there is a lot less slack than most people imagine, and point to the decline in the unemployment rate over the past year from 7.8% to 6.7% as evidence. The second group (let's call them "doves") suggests that our focus should not be the unemployment rate per se, but instead on the large pool of underworked or underutilized labor in the U.S. economy–glaring evidence of extra, unused capacity.

On one side strength, on the other slack. How can two thoughtful groups of analysts arrive at such opposing conclusions from the same set of facts? Which side has it right? Richard Feynman, the Nobel-prize winning physicist from CalTech, once relayed a story from his youth on how his father taught him to think about the world:

He would say, 'Supposing we were Martians, and we came down from Mars to this Earth, and we would look at it from the outside.' I can't explain exactly what he meant, but there is a way of looking at something anew, as if you were seeing it for the first time, and asking questions about it as if you were different.¹

« DESPITE RECENT
IMPROVEMENTS IN THE
JOBS SITUATION, FEWER
AMERICAN WORKERS ARE
EMPLOYED TODAY THAN
WERE EMPLOYED IN 2007:
THIS, DESPITE THE FACT THE
POPULATION HAS GROWN
BY OVER 14 MILLION IN THE
SAME TIME PERIOD. »

WAGE GROWTH WILL DETERMINE WHO WINS THE BATTLE OF HAWKS VERSUS DOVES

Average Hourly Earnings, Year-Over-Year Change



IF THE ENTIRE POPULATION OF THE U.S. WAS 100 PEOPLE...



59 PEOPLE WOULD HAVE JOBS...

37 PEOPLE WOULD BE OUT OF THE LABOR FORCE...

2 WOULD BE OUT OF THE LABOR FORCE BUT WANTING A JOB NOW...



These Are Part of the 37 people Who Would Be Out of the Labor Force

3 WOULD BE WORKING PART-TIME FOR ECONOMIC REASONS...





These Are Part of the 59 People Who Have Jobs

4 PEOPLE WOULD BE UNEMPLOYED...



How to make sense of the labor market? Perhaps Feynman can help. "Let's look at it like a Martian would look at it."

THE U.S. LABOR MARKET FROM A MARTIAN'S POINT OF VIEW

In our imagining, to appraise the health of the U.S. labor market, a Martian would begin by gathering up and counting all able-bodied workers. After all, the Earth, a floating speck in a vast universe, needs to mobilize all available resources to produce sustenance for its denizens.

So what would a Martian see? As of early 2014, the Martian ambassador to the U.S. would have to count a population of 247 million "working age" people.² The Martian would assume that in a healthy economic system, most of the members of the working-age population should be, well, working.

But they aren't. In fact, despite recent improvements in the jobs situation, fewer American workers are employed today than were employed in 2007: this, despite the fact the population has grown by over 14 million in the same time period. A growing population and a shrinking number of people at work does not signify economic vitality.

SIMPLIFY, SIMPLIFY

Our Martian friend might simplify further and imagine the 2014 U.S. working age population was composed of only 100 people (see Illustration on previous page). If so, 59 people would be working, fewer than the 63 working in 2007. What about the rest? Well, 37 would be "out of the labor force" (a worker who has not sought work in the last month). Some of those who are out of the labor force prefer to go to school, stay at home to care for loved ones or have retired. But not all. Some of those folks want a job "right now" but can't find one. In fact, more people fall into that category than at any time in recent history.

Worse, of the "unemployed" in our example, 2 out of 4 have been unemployed for longer than three months. And even among the employed, 2 worked part-time, unable to find a full-time position.

What would the Martian think of this? The Martian would conclude that the Earth (or at least the U.S.) must be endowed with tremendous productivity-enhancing

technologies. That is, we produce so much output, we are so wealthy, we can afford to maintain an army of non-working people. To a degree, of course, this is precisely the case. Over the past 30 years per capita GDP growth in the U.S. has averaged 4.2% annually.

However, this does not explain the last 10 years or so. Productivity growth over this time period has slowed and remained low compared to historical levels. We think an objective Martian would conclude: all is not well with the U.S. labor market and little progress had been made over a comparatively long period of time.

WHY DOES IT MATTER?

Here's why it matters: if the labor market is tighter than many think (the Fed included), price pressures could be right around the corner. Indeed, some financial market economists and strategists seem to care less about the trials and tribulations of the unemployed and more about burgeoning wage growth and consumer price inflation.

To a Martian though this would seem absurd. Inflation, by a wide variety of measures and not just ones created by a government, is at historically low levels. Wage growth, too, is lackluster. The space-born visitor would wonder why, in the face of a tragic, once-in-a-generation employment problem, so many choose to focus instead on non-existent inflation and incipient wage gains. Our wise Martian visitor would counsel policymakers to wait and see how wage growth develops before jumping to conclusions about the state of the labor market.

« CREATIVE DESTRUCTION IN THE MARKETPLACE DRIVES NET JOB CREATION. NEW, YOUNG FIRMS ACCOUNTED FOR 70% OF JOB CREATION IN THE U.S. OVER THE LAST 30 YEARS. »

"REAL FACTORS" MATTER FOR THE UNEMPLOYMENT RATE

None of the above, though suggests the Martian will be an advocate of ongoing unconventional policies, such as quantitative easing. That's because the Martian would notice out of one eye that net, new job growth has been very consistent over the past three or four years, with the U.S. economy adding roughly 180,000 jobs per

Payden&Rygel

month. Out of the other eye, our observant Martian friend might glimpse a bloated Fed balance sheet and wonder what, exactly, all the asset purchases had done to change the pace of the labor market recovery?

In tandem with the Martian, we would conclude that there is little point to fretting over phantom inflation and that monetary policy has had little to do with incremental improvements in the jobs market. Real economic improvements, not monetary magic, will solve the labor market puzzle. But what might the unintended consequences of large scale asset purchase programs (LSAPs) be? Perhaps the Doves erred in their inflation worries but we should not take this to mean all the effects of LSAPs are benign.

ORGANIZED UNITS DRIVE JOB GROWTH

Organizing workers to increase output, not bond-buying, is the key to full employment in the long run. Not through the wise guidance of policy wonks in DC does this spontaneous organization occur, but through the birth and death of millions of firms attempting to find the right combination to produce something of value. Humans stream daily into vast office parks, buildings and factories, focus on specific tasks, and cooperatively produce goods and services for their fellow beings. Corporations, businesses, mom-and-pop shops-all types of organized units provide the glue to keep employment together.

Silicon Valley starts-up are hot news topics today, but their glamor obscures an insight into the nature of job creation: firms must be born and they must die. Creative destruction in the marketplace drives net job creation. New, young firms accounted for 70% of job creation in the U.S. over the last 30 years.

Every once in a while, a Martian might observe a spate of firm failures. Typically, a cluster of entrepreneurial errors causes the problems: for example, too many homebuilders organized to produce single-family homes in 2007 or too many "dot com" firms organized to churn out websites in 2000. The causes differ but all seem to stem from collective errors in production.

From the Martian perspective, there'd be little sense in continuing to employ workers in industries beset by errors. Difficult as it may be, it is better to redeploy those workers elsewhere in more productive activities than preserve employment for employment's sake. But this process requires time and new investment.

WHO WINS: HAWKS OR DOVES?

In the end, it's unlikely that an objective space visitor will officiate the dispute between the Hawks and Doves on the U.S. labor market situation. What's more likely is that, absent an acceleration in nominal wage growth back toward 4% per year (see Figure 1 on Page 13) and inflation measures at or above 2% per year, central bankers—whether Hawks and Doves—will decide more progress needs to be made on the labor market front before shifting gears on monetary policy.

- 1 "Take the World From a Different Point of View." An interview with Richard Feynman by Yorkshire Television, 1973.
- 2 Signifies a person who is not in the military, prison or too young to work (under 16 years of age)

The Rise of the Global Asset Management Industry: TOO Big TO Fail, TOO?

ere's a quiz: in which industry do the top ten companies hold 28% of the total assets?

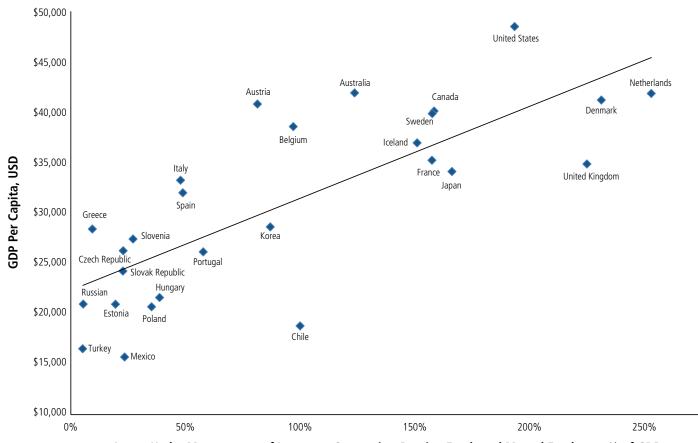
If you answered "the too big to fail banks" you'd be wrong. It's the big asset managers. The 10 largest banks on earth hold 22.4% of all bank assets while the top 10 asset managers hold 28.3% of global assets under management.¹ It is towards these 10 mega managers, with assets under management ranging from \$1.2 to \$3.8 trillion, that regulators, academics and investors have turned a more discerning eye.

Unlike the big banks, these giant asset managers are buy-and-hold, long-term investors who are unlikely to cause or exacerbate problems in the financial system. At least that's the theory.

"HOW SIMILAR ARE LARGE
ASSET MANAGERS TO THE
TOO BIG TO FAIL BANKS
WHICH BROUGHT THE
GLOBAL FINANCIAL SYSTEM
TO THE BRINK OF COLLAPSE
IN 2008? »

Until recently, investors, academics, and practitioners alike drew a sharp distinction between the dangers posed by banks (financial intermediaries who issue liabilities, such as deposits, used as currency economywide) and asset management firms (entities which hold assets on behalf of end-users like pension funds). Now, however, with asset managers such powerful players, we wonder: how similar are large asset managers to the too big to fail banks which brought the global finan-

fig.1 RISING WEALTH TIDE LIFTS ASSET MANAGERS' BOATS



Assets Under Management of Insurance Companies, Pension Funds and Mutual Funds as a % of GDP

cial system to the brink of collapse in 2008? We examine the market environment and incentive structures in the asset management industry, concluding that while the threats they pose may not be dire, the area deserves careful study.

HOW BIG IS BIG?

Assets held by and managed on behalf of clients (from pension funds to retail households) now measure \$87 trillion on a global basis. That sum compares to about one year of the sum total of world economic output.

These two facts may not be a coincidence. The spectacular rise in global gross domestic product (GDP) sits at the heart of the story of such a large asset pool (See Figure 1 on previous page). Rising wealth leads to increased savings stored in the form of financial assets (e.g., stocks and bonds). As the world continues to grow, populate and save, the asset management business will thrive for the simple reason that savings need to be looked after. Today, emerging market countries account for 50% of global output but only 20% of global financial assets. In the coming two decades we expect vast increases in emerging markets' share of asset ownership.

The rise in global savings is indeed one of the reasons behind the inexorable decline in global interest rates over the last 30 years, labeled by some as a mystery. "Safe assets" like developed market sovereign bonds have benefitted enormously from the growing pool of saved money looking for a safe, liquid, and decently profitable financial home.

"TODAY, EMERGING MARKET COUNTRIES ACCOUNT FOR 50% OF GLOBAL OUTPUT BUT ONLY 20% OF GLOBAL FINANCIAL ASSETS. »

In the U.S. alone, total assets under management (AUM) accounted for more than 230% of GDP at the end of 2013 (see Figure 3 on Page 20). Included in this measure are the assets held by and on behalf of insurance companies, pension funds, mutual funds, ETFs and money market funds. U.S. dollar-denominated asset markets are among the deepest and most liquid in the world. For savers, liquidity and relative price stability are extraordinarily appealing.

COMPOSITION SHIFT: THE SEARCH FOR YIELD AND THE QUEST FOR COST

Unsurprisingly, global savers have not been content to amass multi-trillion dollar portfolios of just low yielding government securities. As financial markets matured over time, alternative asset classes, including high-yield, emerging market funds, index mutual funds and ETFs, saw spectacular growth. Don't believe us? Data reveal that emerging markets (EM) and high-yield fund assets have grown by 40% per year since 2008.

Other curious characters now populate the investing landscape, filling a role occupied by banks in years past. Recognizing this is vital. Passive or tracking strategy assets jumped to \$8 trillion in 2012 from just \$2 trillion in 2003, with ETFs (a type of passive strategy we've written about before) now totaling more than \$2 trillion.

Meanwhile, mutual funds holdings of government securities and large cap equities have fallen. Institutional investors, in particular, appear to have shunned equities. Data gleaned from large U.K. investors typify this trend. Looking at the assets holdings on the balance sheets of U.K. life insurers, the "de-equitization" over the recent past is stark (See Figure 2 on Page 19).

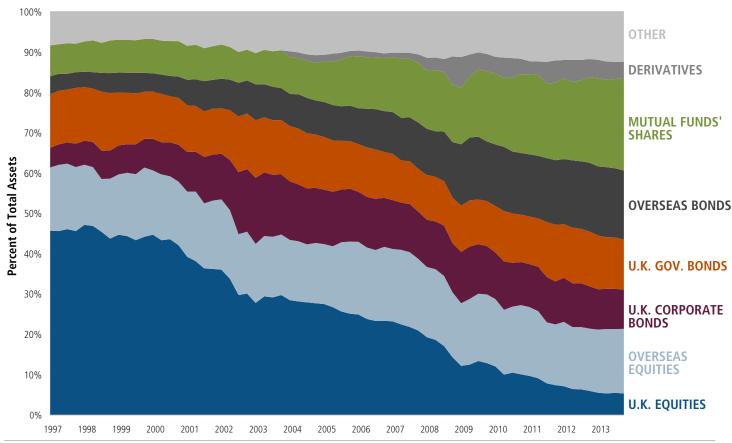
TOO BIG TO FAIL OR NOT, SIDE EFFECTS NONETHELESS

Given their size and the shift in the composition of asset holdings, many now wonder, what could go wrong? Are asset managers, to steal the oft-used phrase, "too big to fail?" On the face of it the answer is no. Unlike their financial market brethren, the banks, which are subject to occasional "runs" on their short-dated liabilities ("deposits"), asset managers appear impervious to runs.

But, the absence of checkings and savings accounts at large asset managers does not preclude other, less well-advertised, problems. While these entities may be bankruptcy remote, they are not without investors. And the threat of poor (relative) performance functions as a universal incentive across the fund management industryan incentive which often promotes herding behavior.

Chief among the consequences of large asset managers' actions is the possibility of fire sales. If a large portion of the asset management industry has purchased one asset class consistently for a long period of time, and if that asset class at some moment becomes suddenly unfavorable, then to avoid underperforming their peers, man-

fewer equities and more bonds! Asset allocation of U.K. INSURANCE COMPANIES & PENSION FUNDS



Source: Office of National Statistics, Haldane, Andrew (2014). "The Age of Asset Management?"

agers will sell the undesirable assets, often at unattractive prices (think of mortgage-backed securities during the 2008 financial crisis).

"UNLIKE THEIR FINANCIAL MARKET BRETHREN, THE BANKS, WHICH ARE SUBJECT TO OCCASIONAL "RUNS" ON THEIR SHORT-DATED LIABILITIES ("DEPOSITS"), ASSET MANAGERS APPEAR IMPERVIOUS TO RUNS."

Collective selling into markets with few buyers ("thin markets") drives prices precipitously lower. While it is not, strictly speaking, a bank run, widespread portfolio adjustments would impact the global financial system and global economies as capital flees to safer shores. The consequences will stem less from the first order effects (selling, liquidity, leverage, etc.) and more from the second order, larger scale effects.

If the bonds were corporate, the cost of borrowing could temporarily sky-rocket for companies, inhibiting investment and hiring. If the bonds were sovereign, then the elevated cost of sovereign borrowing could drive up tax rates or spark austerity measures to calm investor nerves. These scenarios may not be traditional textbook bank runs, but macroeconomic turbulence could still result.

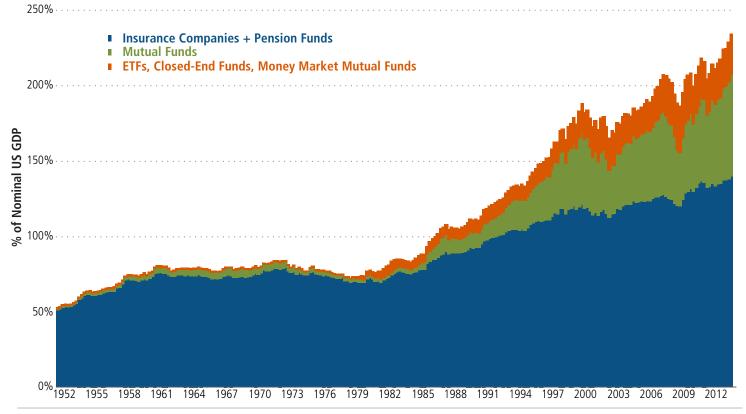
Another neglected problem is the prevalence of benchmarking performance to an index. Manager adherence to a common index creates herd-like capital movement within the financial system and promotes a pro-cyclical tendency in asset price movements.

Market structures or incentives that promote harmonized buying and selling trends across various investment managers also cause asset markets to become more correlated and therefore more exposed to violent shifts in investor sentiment. One such market "tantrum" may have occurred in the summer of 2013 as asset managers suddenly shifted out of U.S. Treasury securities and in-

^{*}Bonds include money market instruments, medium and long term bonds. The split of overseas bonds by issuer is not available.

[&]quot;Other" includes currency, deposits, loans, other accounts revivable and insurance technical reserves. Derivatives data begin in 2004, but prior to 1997 are included in corporate bonds

fig.3 ASSETS UNDER MANAGEMENT ARE MORE THAN 2 TIMES GDP IN THE U.S.



Source: Federal Reserve and Haldane, Andrew (2014). "Age of Asset Management?"

duced swift changes in asset prices, as the interest rates on longer-term fixed-income securities across a range of sectors and regions moved in response. The subsequent impact on price performance encouraged further shifts in portfolio allocations by large but unlevered investors.²

« MANAGER ADHERENCE TO A COMMON INDEX CREATES HERD-LIKE CAPITAL MOVEMENT WITHIN THE FINANCIAL SYSTEM AND PROMOTES A PRO-CYCLICAL TENDENCY IN ASSET PRICE MOVEMENTS. »

A highly-concentrated pool of managers shepherding clients into similar strategies in the name of quarterly performance check-ups: what could go wrong? Recent data compiled by professors at the University of Chicago shows the extent to which correlated asset movements now exist. In our post-crisis, central bank obsessed world, data shows that the same asset classes which sold off most violently last June in the "taper tantrum" rallied most fervently in the "taper head fake" of September.³

FIGHTING THE LAST BATTLE

Regulators seem keen to reign in leverage metrics in the banking system. They may succeed in turning banks into highly regulated utility-like entities. But such actions do not necessarily extinguish risk or banish asset price fluctuations from the global financial system. Instead, it is likely that the topography of global asset management will continue to evolve, and as it does, the locus of risk will move and change.

- 1 Andrew Haldane. "The Age of Asset Management?" Speech at At the London Business School, London 4 April 2014.
- 2 Michael Feroli, Anil K Kashyap, Kermit Schoenholtz, and Hyun Song Shin. "Market Tantrums and Monetary Policy." Conference Draft presented at the 2014 U.S. Monetary Policy Forum, February 2014.
- 3 Atif Mian and Amir Sufi. "Who Bears 'Federal Reserve Risk'". House of Debt. April 9, 2014.



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California Municipal Income Fund Tax Exempt Bond Fund

US FIXED INCOME

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Core Bond Fund
Corporate Bond Fund
GNMA Fund
High Income Fund
Limited Maturity Fund
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US Government Fund

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EOUITY

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