



## 70 Is the New 65

JOHN MAULDIN | February 17, 2016

As some of us know far too well, forecasting the future with any precision is extremely difficult. There's at least one exception to the rule, though. Population trends show themselves decades and even centuries in advance. If we know how many people were born in a given year, we can extrapolate what the population will look like far in the future.

On the other hand, demographic forecasting still requires assumptions. At what age will people start having children, and how many will they have? How will new medical advances affect life spans? When will people start working, stop working, and enter retirement? Small changes in any of those assumptions can quickly affect population numbers.

Today's *Outside the Box* wrestles with that last question. In the United States we allowed the federal government to set 65 as the retirement age by making Social Security available to most workers at that point in their lives. The retirement age is going up to 67 for the younger members of the Baby Boom generation, but even that may be too "young" to retire in the future.

We Baby Boomers were never big on conformity. Voluntarily or not, a large number of us fully intend to stay in the workforce to age 70 and beyond. If 70 is the new 65, we will see significant changes in the ways people spend their money and the kinds of investments they want.

Matthew Tracey and Joachim Fels of PIMCO outline some of the possibilities in this report. I found it very interesting, and I think you will, too.

Speaking of things changing, the weather in Texas has been nothing like anything in the past. It is mid-February and I'm having to turn the air conditioner on at night. The forecasters tell us it's going to get into the 80s on Friday. Talking with my long-term Texas friends, none of us can remember weather like this. Cooler than normal summers, milder than normal winters. I guess it's a good thing it's not like this every year, because then we'd have a wave of tax refugees showing up from California. Then again, this is Texas. If we wait a bit I'm sure we'll get our usual ice storms and other nasty stuff. Winter is coming. Maybe.

I am struggling to keep up with the research my 20-some teams are developing for the chapters of *The Age of Transformation*. Thankfully I have a small team helping me review the research, which is on top of the research I'm doing for the five or so chapters that I'm personally writing. Plus, there's my regular reading for doing the weekly letters and so forth. It is forcing me to sort through the pile of items in my inbox as to what is must-read, what can wait, and what I just don't have time for. I really am learning to depend on people to make sure the things that I must read get on my radar screen.

I'm going to go ahead and hit the send button, as I have to prepare for an interview with CNBC Asia on Japan and related topics. You have a great week, and I hope that wherever you are, your weather is as good as ours.

Your marveling at the speed of things changing analyst,



John Mauldin, Editor  
*Outside the Box*

## 70 Is the New 65: Demographics Still Support 'Lower Rates for Longer'

By Matthew Tracey and Joachim Fels  
[PIMCO.com](http://PIMCO.com), February, 2016

*The so-called demographic cliff remains at least a decade away; meanwhile, global demographics should continue fueling the savings glut.*

Is global aging about to end the savings glut? Some observers think so. More and more baby boomers are reaching retirement age, and they will soon not only save less but also start to dump their accumulated assets to fund retirement ... or so the story goes. If this were true, the consequences for interest rates would be profound. The real long-term equilibrium interest rate, which has been on a secular downtrend for decades partly due to strong working-age cohorts saving hard for retirement, would start to rise – and what we here at PIMCO call The New Neutral might soon be history.

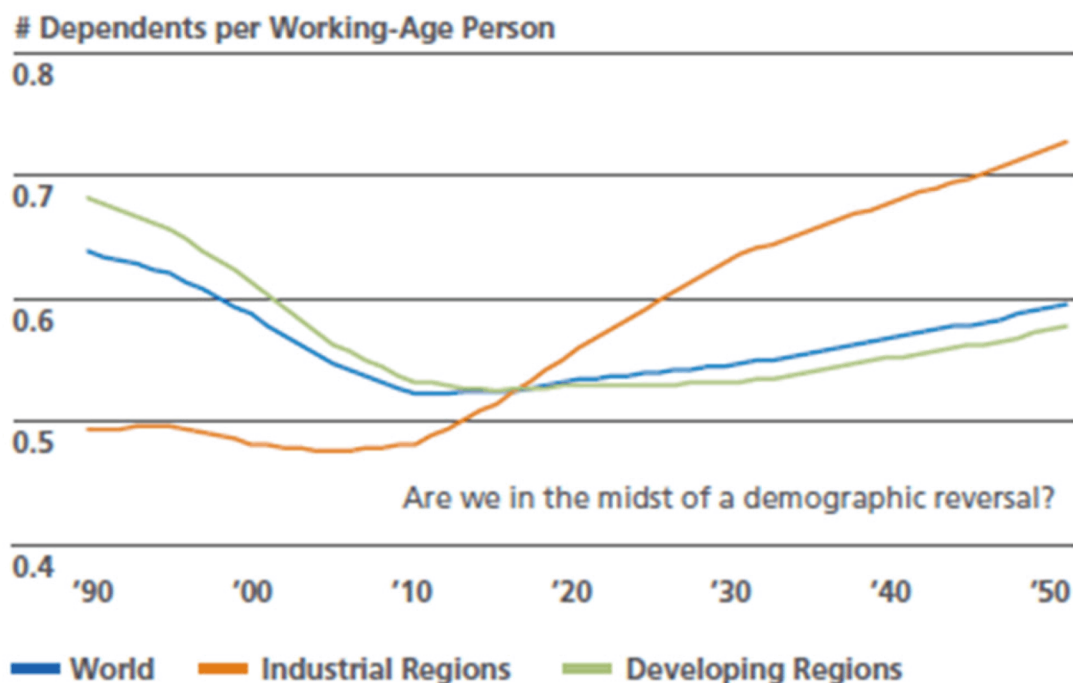
We strongly disagree with that thesis of an imminent demographics-induced savings drought. Rather, we have argued in recent work that the global excess supply of saving over investment, which has been largely responsible for the secular decline in equilibrium interest rates, is not only here to stay but likely to increase further in the coming years for a host of reasons *including* demographics (see PIMCO *Macro Perspectives*, “[No End to the Savings Glut](#),” September 2015). As a consequence, we continue to expect the fundamental forces of elevated desired saving to keep the equilibrium real rate depressed and to limit the extent to which other (cyclical) factors can drive up market interest rates.

However, given the popularity of the thesis that demographics will soon end the savings glut, we undertook a deep dive into the data to investigate the link among demographics, saving behavior and the demand for fixed income assets – with some surprising results. Here's what we found.

## A 'demographic reversal?' Not so fast!

People of the world, we're getting old. It's a well-known fact that, after decades of decline, the global dependency ratio – traditionally defined as the ratio of individuals younger than 15 and older than 64 to the working-age population aged 15-64 – is now rising (see Figure 1).

**Figure 1: Traditional “dependency ratio” (# of dependents <15 and 65+ per working-age person aged 15-64)**



Source: Haver Analytics (UN World Population Prospects) as of October 2015. Industrial and developing regions follow UN definitions.

Some financial market observers argue that this demographic trend reversal will begin to drive interest rates higher, and soon. Why? First, a declining share of high-saving workers and a rising share of dissaving elderly will (the argument goes) erode the demand for saving – and drive interest rates higher via the savings-investment equilibrium. Second, these observers argue, a rapidly growing share of retirees will have to consume (i.e., sell down) their financial asset holdings to fund spending in retirement, and these drawdowns will create selling pressure in financial markets that pushes asset prices down and interest rates up.

*Our core thesis in a nutshell: Yes, global aging may someday drive U.S. interest rates structurally higher. But “someday” remains at least a decade away – for two reasons. First, we proffer that global saving will remain stronger than many expect, supporting a low global neutral interest rate. (As investors, we care about the neutral rate because it anchors fixed income yields in the market.) Second, U.S. demographic demand for fixed income assets should remain robust until at least 2025 – and in the meantime should continue to put downward pressure on market yields, all else equal. Combine a low global “anchor” and strong domestic fixed income demand, and what do you get? Lower rates for longer in the U.S.*

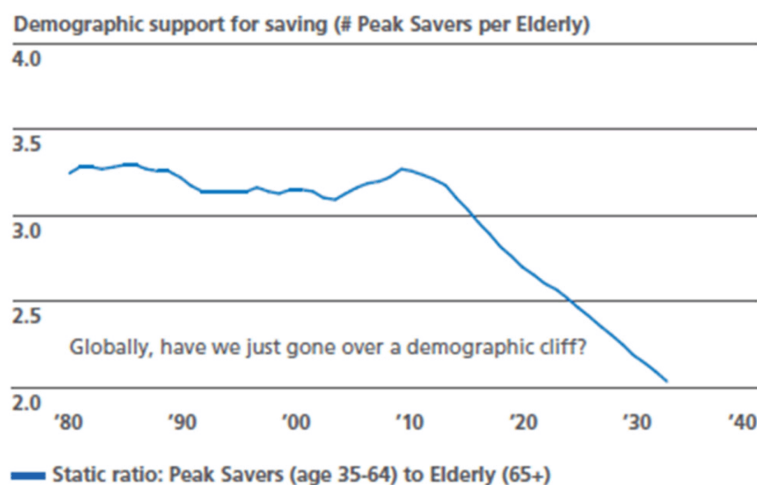
## Continuing robust demographic demand for saving

Remember the link between saving and interest rates: In the savings-investment equilibrium, rising demand for saving pushes down the equilibrium (or neutral, or natural) rate of interest, all else equal, and vice-versa. Our task, then, is to assess how demographic changes affect aggregate saving. We find that the traditional “dependency ratio,” used in many other studies on this topic, is flawed. We suggest two modifications to address those flaws. First, the young, considered “dependents,” contribute very little to global saving and dissaving in dollar terms (they’re “non-savers”). We therefore prefer to focus on the ratio of “Peak Savers” (mature adult workers who earn and save a lot) to “Elderly” (who save less as they age and ultimately consume their savings in retirement). Let’s preliminarily define “Peak Savers” as individuals aged 35 to 64, for two reasons:

- People 35–64 have generally exhibited much higher savings rates than people in younger and older age groups;
- People 35–64 earn considerably more income than people younger and older – so for any given savings rate, this age group’s saving behavior will have an outsized effect on saving and investment flows in dollar terms.

Let’s preliminarily define “Elderly” as everyone 65 and older (the traditional definition). Thus, the global Peak Savers versus Elderly ratio in Figure 2 reflects a *static* 35–64 Peak Saver cohort – and reveals what *appears* to be a demographic cliff in about year 2010. Those who argue that demographic support for saving will fall sharply in the coming years typically will try to prove their point using a ratio like this one.

**Figure 2: Global “Peak Savers” versus Elderly ratio (excludes “non-savers” aged 0-34)**



Source: Haver Analytics (UN World Population Prospects) as of October 2015  
Includes North America, EU, China, Japan, South Korea, India, Brazil, Mexico, Australia, Russia and Indonesia, each weighted by current U.S. dollar GDP. These countries/regions drive the lion’s share of global saving due to their large contribution to global GDP and/or large population. We exclude populous Africa, despite its very young and growing Peak Saver population, because the monetary value of African saving flows likely will remain immaterial for years. Africa remains a significant long-run right-tail risk to global saving demand.

But we ask: Is it sensible to define the Peak Saver and Elderly groups by the same *static* age ranges over long periods of time? Put differently: Might working and saving behavior evolve over time, warranting a *dynamically modified* dependency ratio? Seniors' ability to work (and save) later in life should continue to rise; in our increasingly services-based "knowledge economy," jobs are becoming less physically demanding and often require more experience, while advances in health technology boost functional age in life's later stages. Seniors' willingness (and incentives) to work longer also should rise along with their ability.

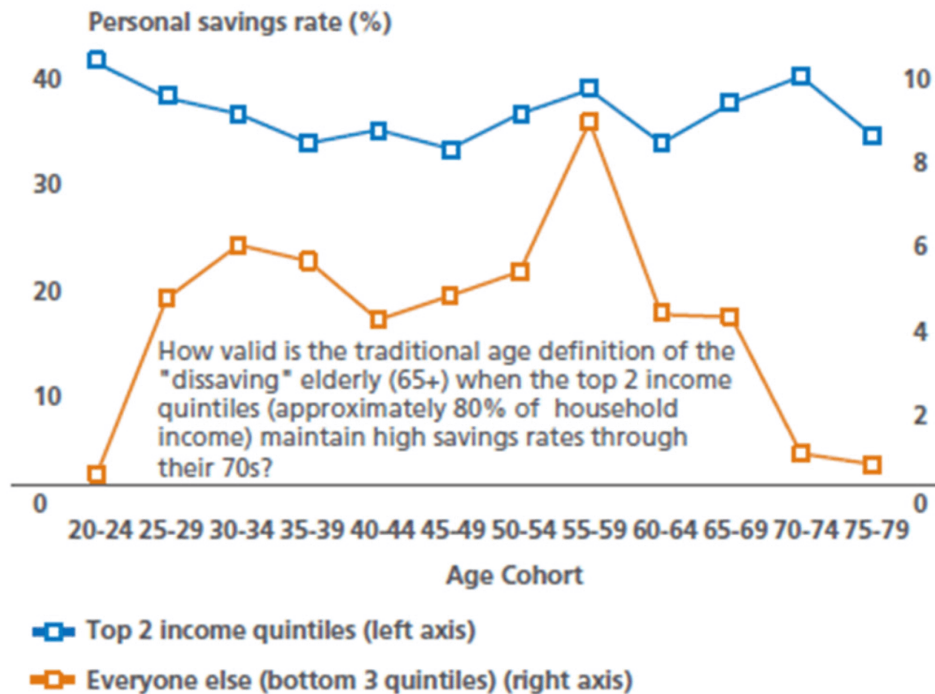
True, the retirement age, globally, has not kept pace with rising longevity. But policymakers are slowly catching on. In the U.S., the Social Security full-benefit retirement age is increasing to 67 and will go higher still – a government incentive telling people to stay in the workforce. Meanwhile, years of low interest rates have left impending retirees playing catch-up in retirement saving. More generally, around the world, longer lives must ultimately be supported by longer *working* lives. Anything less will prove unsustainable. Our colleague Jim Moore summed up the state of affairs (in the U.S.) in a PIMCO *Viewpoint* from 2012: "Work a little longer. Save a little more. Get by with a little less."<sup>1</sup>

We think this insight applies abroad as well. In fact, global trends already underway support our argument that people will work later and later in life. In many economically important geographies – notably the U.S., eurozone, UK and Japan – senior (age 65+) labor force participation has been trending higher. And China is contemplating steadily raising its retirement age in the coming years.

However, what matters most for global saving demand are those who earn the most income. Consider the U.S. as an example. Top-income-quintile households control nearly two-thirds of U.S. household income, three-quarters of household wealth and more than 80% of household financial assets. Apart from the major social ramifications of wide (and widening) income and wealth inequality, the implications for aggregate saving are critical: Rather obviously, high earners' working and saving behavior has an outsized effect on global saving in dollar terms. If the highest earners are working (and saving) later in life, we should pay attention. Witness the dramatic rise in labor force participation within the top income quintile (Figure 3): Over 60% of top-quintile individuals in the 65–74 age group are employed or seeking work, a 19-percentage-point increase in participation over the 15 years through 2013.<sup>2</sup> Moreover, participation among top-income-quintile seniors 75 and older has *more than doubled* over the same period.<sup>4,<sup>sup</sup>></sup>

What about seniors' late-life saving behavior? Consider the top *two* income quintiles, collectively accounting for about 80% of U.S. personal income. Based on 2014 data from the BLS's Consumer Expenditure Survey, these high earners exhibit no decline in savings rates as they enter retirement (due in part to a strong bequest motive and high conservatism). In Figure 4, note how high and consistent these top earners' savings rates remain even in their late 60s and 70s.

Figure 4: U.S. personal savings rate by age and income



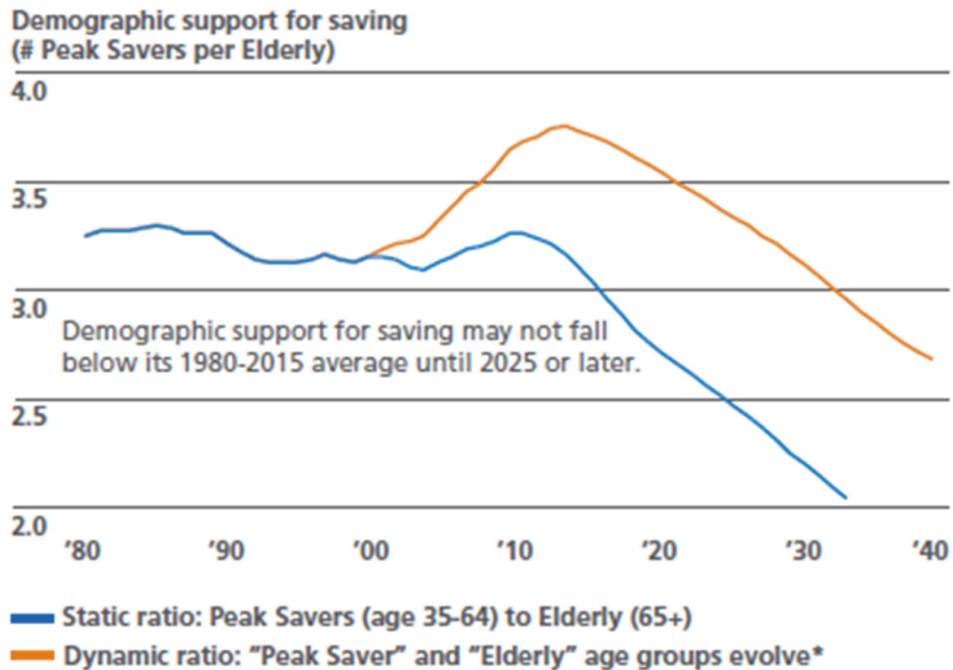
Source: BLS Consumer Expenditure Survey, 2014, and Federal Reserve Survey of Consumer Finances, 2013. PIMCO calculations.

(Aside: We find it curious that savings rates, based on the BLS’s Consumer Expenditure Survey, do not become negative for lower-income-quintile seniors even in their late 70s. We suspect that other data sources may show a negative savings rate for these elderly groups, likely due to methodological differences in data collection. Our focus here, however, is on age-related *trends* in saving behavior rather than savings *rates* themselves.)

To recap: The most impactful seniors are working (and saving) later in life as functional age and the duration of retirement both increase.<sup>3</sup> Therefore, our preferred measure of the demographic support for saving is a dynamic, not static, ratio that accounts for the trend toward longer working lives. Let’s revisit our Peak Savers versus Elderly ratio from Figure 2. In decades past, age 64 may well have been the sensible upper bound for the Peak Saver group. But what about the coming decades? In Figure 5, we have added a dynamic ratio (red line) that assumes seniors work roughly five years later in life in 2050 than they did in 2000. In other words, our age definition of “Peak Saver” evolves dynamically from 35–64 in 2000 to 35–69 by 2050, and consequently our definition of “Elderly” evolves dynamically from 65+ to 70+ over the same period.



**Figure 5: Global “Peak Savers” versus Elderly (excludes “non-savers” aged 0-34)**



Source: Haver Analytics (UN World Population Prospects) as of October 2015. Includes North America, EU, China, Japan, South Korea, India, Brazil, Mexico, Australia, Russia and Indonesia, each weighted by current U.S. dollar GDP. \*Assumes “Peak Saver” and “Elderly” groups defined traditionally (35-64 and 65+, respectively) starting 1960. Then, starting year 2000, age ranges evolve gradually over 50-year period to reach 35-69 and 70+, respectively, by 2050.

What a different picture the dynamic ratio paints! It suggests that demographic support for saving could well be as strong a decade from now as it has been in recent decades – and illustrates the extent to which traditional static ratios may be flawed.

We concede that our dynamic ratio forecast is only a guess as to what the future may look like if current trends persist. But there is some method to the madness. For example, the reason we start to phase the 65- to 69-year-olds into our Peak Saver group specifically in 2000 is that senior labor force participation began to rise rapidly in that year (after two stagnant decades). Our five-years-later-in-life-by-2050 employment assumption is slightly more arbitrary, but reasonable given that, globally, the largest increases in retirement age likely lie ahead of us. And our dynamic ratio does not account for the rising share of seniors 70+ who remain working, introducing an element of conservatism to our assumptions. So while our dynamic ratio embeds some simplifying assumptions, to be more scientific risks missing the forest for the trees. Almost regardless of the assumptions used, if you define a dependency ratio dynamically – based even loosely on observable trends – you are likely to paint a very different (and more accurate) picture of the future than you will paint using a static ratio.

What about the rest of the world? It appears we've made an argument about global demographics supported mainly with U.S. data. However, publicly available data for other economically significant regions does not permit as granular an analysis as we have shown for the U.S. We do have reason to believe similar trends are occurring outside the U.S.: Elderly labor force participation is rising in Europe, the UK and Japan, and some countries – including China – are contemplating raising the retirement age. In Japan, whose demographic cliff materialized many years ago, senior labor force participation has been trending higher, and as a result the labor force shrank only about 0.8% over the past decade even as the “working-age population” (aged 15 to 64) fell almost 9%. Patterns like this one are likely to repeat in other aging countries as societies adapt to meet their demographic challenges.

Bottom line: The people who move the needle most in saving demand, the highest earners, are the people working and saving later in life. This trend should be a tailwind for saving demand in the years to come that will push the global demographic cliff at least a decade into the future – and support a low global neutral interest rate, per the savings-investment equilibrium. *70 is the new 65!*

### **U.S. household (demographic) demand for fixed income assets: a decade-long tailwind for bonds**

We've just argued that demographics should help keep the global neutral rate low over the coming decade – which means that market yields in the U.S. should have a low “anchor.” But waves of baby boomers are retiring (albeit, as we have argued above, increasingly later), and many will eventually draw down (i.e., sell) their financial asset holdings to fund late-life consumption. Are we fast approaching the point when boomer drawdowns create selling pressure in fixed income markets that pushes interest rates higher? Or might U.S. aging (boomers included) actually bolster the (net) demand for bonds and help maintain a low ceiling for market yields?

Consider two key observations.

- First, as we should expect, investors generally de-risk away from equities and toward fixed income with age – most aggressively once they reach their 60s (and beyond).<sup>5</sup>
- Second, individual asset accumulation and drawdown patterns vary significantly by income level. In the U.S., individuals in the lowest income quintile tend to sell their limited financial assets beginning in their 50s and completely exhaust their assets by, or before, death (relying on social assistance to meet their basic needs in life's latest stages). Middle-income individuals tend to draw down financial assets beginning in their 60s but not at a rate that would deplete their assets before death. Individuals in the highest income quintile, however, are shown to have *rising* financial asset balances until roughly age 80 (after which they decline only very gradually). *In other words, for top-income-quintile individuals, portfolio drawdowns don't tend to begin until roughly age 80 (an important point).* The highest earners have historically been able to fund retirement consumption from *income* (generally employment income, investment portfolio income and annuitized income), “leaving their financial assets virtually untouched.”<sup>6</sup> *Here's the key: Top-income-quintile households own over 80% of U.S. household financial assets.* Consider how significantly this group's future asset accumulation and drawdown profile will impact financial markets!

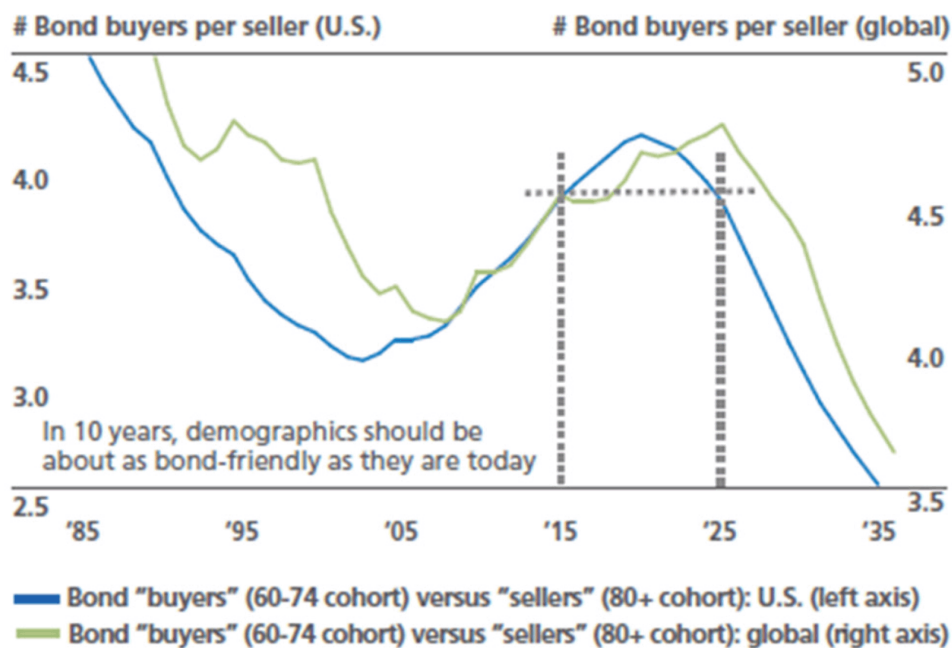


Back to our question about whether U.S. demographics will be a headwind or tailwind for bond flows in the years ahead. For starters, we assess when (demographics-driven) bond buying might peak relative to bond selling. We define “Bond Buyers” as individuals aged 60–74 and “Bond Sellers” as individuals 80 and older. These age definitions are somewhat arbitrary, but they’re based on the two previously introduced empirical observations about households in the top quintile of the U.S. income distribution (which hold over 80% of U.S. household financial assets):

1. Bond buying tends to peak during individuals’ 60s and early 70s (aggressive de-risking);
2. Bond selling tends to peak in the years after age 80 (as individuals sell down their financial assets to fund consumption in retirement).

Figure 6 shows the ratio of Bond Buyers to Bond Sellers, which we use to gauge when net demographic buying demand might theoretically peak. On this metric, U.S. demographic demand for bonds should continue to rise in the next five years or so before peaking and may still be as strong in 2025 as it is today. (Our age definitions are based on patterns observed among U.S. households, so we focus primarily on the blue U.S. line in the figure. We include a global version of the Buyers versus Sellers ratio as well – the green line – which reveals an even later potential peak in *global* demographic demand for bonds.<sup>7</sup>

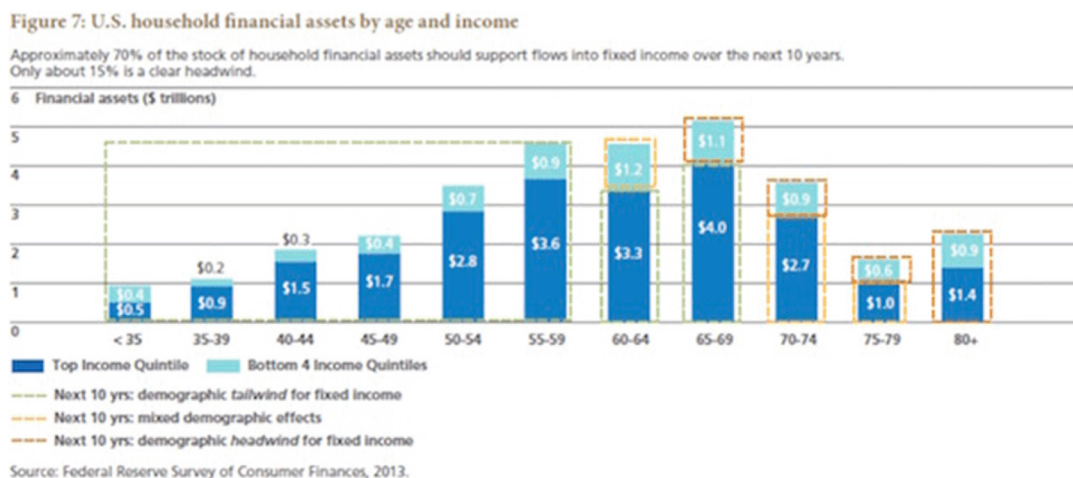
**Figure 6: Bond buyers versus bond sellers ratio (based on investing/drawdown behaviors of top U.S. income quintile, ~80% of U.S. household financial assets)**



Source: Haver Analytics (UN World Population Prospects) as of October 2015. Global ratio includes North America, EU, China, Japan, South Korea, India, Brazil, Mexico, Australia, Russia and Indonesia, each weighted by current U.S. dollar GDP.

Our interpretation of this Buyers versus Sellers ratio assumes that each buyer exerts about the same influence on markets as each seller, an assumption that may be conservative given high-earning sellers draw down their portfolios only very gradually, whereas buyers likely will be de-risking aggressively in their 60s and early 70s. We “stress test” this assumption and result with scenario analysis in the Appendix.

Next, we explore the demographics of U.S. financial asset ownership at a very high level. Figure 7 shows household financial asset holdings by both age and income.<sup>8</sup>



[Click to enlarge](#)

The lion’s share of the \$31 trillion in U.S. household financial assets<sup>9</sup> (\$21 trillion, or about 70%) is held within – or over the next 10 years will be held within – age cohorts that typically need to grow their fixed income allocation. This \$21 trillion, outlined in green in Figure 7, is expected to remain in an accumulation or de-risking phase and won’t enter a drawdown phase within the next decade (based on the age-related asset drawdown patterns we described earlier). This \$21 trillion will likely be a demographic *tailwind* for bonds over the next decade (especially for municipal bonds given high earners’ need for tax-free income). Conversely, only about \$5 trillion (approximately 15%) of household financial assets seems likely to be a headwind for bonds during this period (outlined in red).

One caveat: Many factors other than demographics influence investors’ asset allocation decisions – among them changes in valuations, evolving expectations about future asset returns, individual risk preferences, U.S. investor preference for domestic versus foreign assets, foreign investor preference for U.S. assets, and market disruptions that may trigger significant portfolio rebalancing. Our analysis here focuses only on demographic effects, holding all else equal.

Now let's go a level deeper. In the Appendix we model the potential demographics-related asset flows we might see over time from the gradual de-risking and drawdown of household financial assets. We analyze 10 unique scenarios in order to test a range of assumptions. Our "baseline" scenario reflects a set of assumptions about de-risking behavior and asset decumulation that we think is realistic (and possibly conservative) based on historical patterns. Our modeling suggests that U.S. demographics-driven fixed income inflows are likely to be almost as strong 10 years from now as we project them to be today – and that demographics may not be a material headwind for bonds until the 2030s. How can we explain these conclusions? In our analysis, for at least the next decade, de-risking flows and rebalancing flows into fixed income more than compensate for seniors' portfolio drawdowns. In stress testing our baseline assumptions we found it hard to come up with a plausible scenario in which U.S. demographics become a fixed income headwind within 10 years. Yet we found it easy to imagine realistic scenarios in which demographic demand for bonds remains robust for the next 15 years or more. Consider as an example the high-earning elderly, for whom longevity risk is rising rapidly as life-extending medical technologies proliferate. High earners, historically, have been overly cautious in recalibrating their spending to meet anticipated future needs – a finding that could warrant an even more gradual asset-drawdown trajectory for this next generation of retirees than we have modeled based on historical experience. See the Appendix for our assumptions, baseline scenario modeling and alternative scenarios.

A brief aside: Our focus here has been U.S. demographics and, implicitly, U.S. fixed income. However, U.S. demographics are likely to influence global fixed income markets given U.S. households account for over 40% of global household financial assets. For context, Western Europe and Asia each account for about 25%.<sup>10</sup>

Finally, a quick note on changes in the composition of household retirement savings. The shift from defined benefit (DB) to defined contribution (DC) plans in the U.S. persists, and in our estimation U.S. DB plans hold a lower allocation to bonds than a market-average glide path suggests is optimal for DC participants.<sup>11</sup> In aggregate, therefore, the continued shift toward DC may represent an additional tailwind for bonds in the coming years.

Bottom line on U.S. aging and the demand for bonds: Persistent demographic support for fixed income should, all else equal, drive net flows into bonds and help maintain low yields over the next decade.

## **'Speed read' and key conclusions**

Some financial market observers believe in the following dramatic scenario:

- We've just gone over a demographic cliff; globally, the ratio of high-saving adult workers to dissaving elderly is now declining. This demographic reversal will erode the demand for saving.
- The global savings glut will reverse as the demand for saving falls, pushing the global neutral interest rate higher.
- Baby boomers in the U.S. will compound the problem as they sell their financial assets (including bonds) to fund retirement consumption, driving U.S. fixed income yields higher.

In this note, we challenge traditional thinking about the timing of the feared “demographic cliff.” *A demographics-induced structural rise in U.S. interest rates remains at least a decade away:*

1. Global demand for saving will remain robust, supporting a low global neutral interest rate (the “anchor” for U.S. fixed income yields):
  - Traditional dependency ratios – which use fixed, static age definitions – are flawed because they fail to account for how the world is changing.
  - U.S. elderly, especially the highest earners, are working and saving later in life. High earners matter a lot because they drive the lion’s share of global saving. 70 is the new 65.
  - Similar trends can be observed in economically significant economies outside the U.S.
  - We argue for a dynamic, not static, ratio of mature adults to elderly that does account for how working and saving behaviors are changing. Our dynamic ratio suggests that demographic support for saving may be as strong over the next decade as it has been over the past several. Possibly stronger.
  - Strong saving demand should support a low global neutral interest rate in the coming years – and should continue fueling the global savings glut.
2. In financial markets, strong U.S. demographic demand for fixed income assets should – all else equal – help maintain low U.S. bond yields over the next decade:
  - The lion’s share of U.S. household financial assets is held within age cohorts that will need to grow their fixed income allocation over the next ten years.
  - Top-income-quintile households own over 80% of these assets, and high earners sell financial assets only very gradually in retirement to fund consumption.
  - For another decade or more, demographics should remain a net contributor to fixed income flows, as high earners’ de-risking into bonds should dominate bond outflows due to portfolio drawdowns.

Combine a low global neutral interest rate and strong domestic demand for bonds, and what do you get?  
*Lower rates for longer in the U.S.*

*The authors would like to thank PIMCO colleague Jim Moore for his contributions.*

## **Appendix: U.S. household financial assets and fixed income flows – scenario analysis**

This Appendix details the assumptions used in our baseline scenario for U.S. (demographics-driven) fixed income flows and offers a number of alternative scenarios.

### **Baseline scenario assumptions:**

- Financial asset portfolios consist of two asset types (for simplicity): “risk assets” (excluding fixed income) and fixed income.
  - Long-term annual risk asset return: 5% nominal.
  - Long-term annual fixed income return: 2.5% nominal.

- Investors de-risk their portfolios into fixed income over time according to a market-average glide path,<sup>12</sup> interpolated as necessary. (We conservatively assume that de-risking into fixed income ceases at age 75 and that investors’ asset allocations remain constant thereafter. This assumption is driven by a lack of available data on market-average glide path allocations for ages older than about 75.)
- Each year, top-income-quintile households re-optimize to draw down 50% of their financial assets by the end of their planning horizon, beginning at age 80 and ending at age 95. (50% may be a conservatively high drawdown percentage.)
- Each year, households in the bottom four income quintiles re-optimize to draw down 75% of their financial assets by the end of their planning horizon, beginning at age 65 and ending at age 90. (75% may be a conservatively high drawdown percentage.)
- Financial asset drawdowns occur proportionally across risk assets and fixed income. (This assumption is fair to conservative, given there is evidence that people draw down their riskiest assets first.<sup>13</sup>)
- Financial asset portfolios do not exist in perpetuity; mortality effects (based on the most recent mortality tables from the Society of Actuaries) lead to bequests that generate “re-risking” flows from fixed income into risk assets.<sup>14</sup>

#### Alternative scenarios:

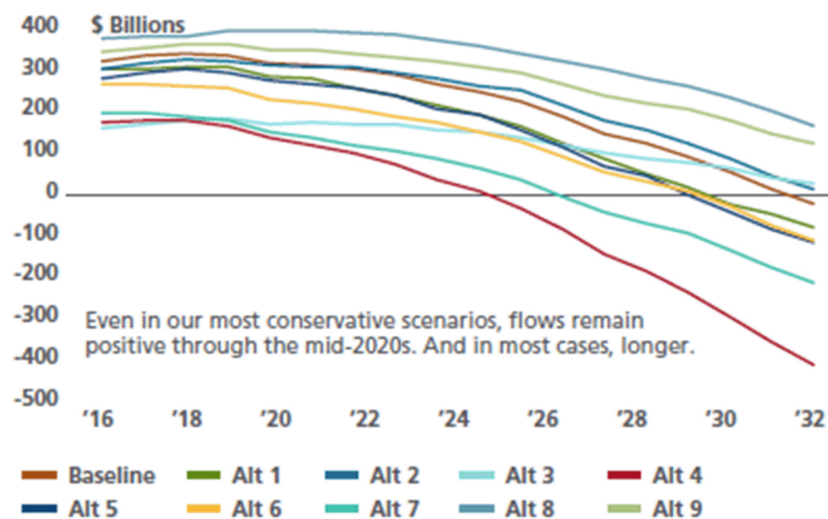
Each alternative scenario represents a modification relative to our baseline scenario.

- Alternative 1: De-risking into fixed income proves significantly *faster* than expected (ultimate fixed income allocation of 50% is reached 10 years earlier than baseline glide path suggests).
- Alternative 2: De-risking into fixed income proves significantly *slower* than expected (ultimate fixed income allocation of 50% is not reached until 10 years after baseline glide path suggests).
- Alternative 3: Seniors 50+ ultimately de-risk much less significantly than baseline glide path suggests (fixed income allocation reaches 15% at age 50, per glide path, but then flat-lines for 10 years before gradually increasing to a level only *half* that suggested by baseline glide path, i.e., a terminal allocation of 25% instead of 50%).
- Alternative 4: Annual fixed income returns equal annual risk asset returns, such that *market-return-driven* rebalancing flows no longer support fixed income (5% annual nominal return assumed for both asset types). (This scenario has a natural hedge property; if ex ante fixed income returns ever were expected to equal ex ante risk asset returns, the relative attractiveness of fixed income probably would increase on a risk-adjusted basis, likely triggering non-demographics-related reallocations into fixed income – which we have *not* modeled here.)
- Alternative 5: Top-income-quintile households re-optimize each year to ultimately draw down 75% of their financial assets by the end of their planning horizon, while households in the bottom four quintiles re-optimize to draw down 100% (for both groups, a far higher drawdown percentage than is likely).

- Alternative 6: Top-income-quintile households commence drawdowns a full decade earlier than history suggests is likely, i.e., at age 70 (if anything, as life expectancies and planning horizons lengthen, one might expect drawdowns to begin later).
- Alternative 7: A combination of alternatives 5 and 6 (i.e., a highly conservative mix of assumptions).
- Alternative 8: Households commence drawdowns five years later and lengthen their planning horizon by five years (optimistic, but plausible given rising longevity risk and rising labor force participation among the high-earning elderly).
- Alternative 9: Top-income-quintile households re-optimize to draw down 25% of their financial assets by the end of their planning horizon (instead of 50%), consistent with a high bequest motive and historical excess conservatism during retirement.

The chart below shows our estimate of future demographics-driven U.S. household fixed income flows by scenario. *These projections are NOT meant to be interpreted as forecasts of the actual dollar volume of flows*, in part because the \$31 trillion stock of household financial assets used to model these flows omits certain large asset pools (see our technical note further on). So focus on the trends depicted, not on the dollars.

### Estimated demographics-driven net U.S. household fixed income flows



Source: Federal Reserve Survey of Consumer Finances (2013) for asset data (\$31 trillion U.S. household financial assets) and NextCapital for glidepath allocations. PIMCO calculations and modeling.

As you can see in the chart, across almost all of our scenarios demographics remain a fixed income tailwind for the next 10 years, and in most scenarios longer. Note that this analysis may lean conservative in that we have modeled potential flows based only on the *existing* stock of financial assets. Yet every year, mature adult workers (especially the high income earners) will invest some portion of their savings in financial assets, including bonds, both inside and outside their retirement plans. These flows, all else equal, represent a tailwind for all financial assets that we haven't attempted to model.



Finally, a technical note on our primary source for U.S. household financial asset data: the Federal Reserve's 2013 Survey of Consumer Finances. To our knowledge, there are two primary sources for U.S. household balance sheet detail: the Federal Reserve's Survey of Consumer Finances ("SCF"), a triennial survey of a cross-section of U.S. households, and the U.S. national flow of funds accounts. We use the SCF, which is widely used in Federal Reserve analysis, academic research at major economic research centers, and private financial industry analysis and writings. The SCF is, to our knowledge, unparalleled in its demographic granularity across age groups, income quintiles and other key variables.

Significant differences are worth highlighting between the SCF and the household balance sheet data contained in the U.S. national accounts. Of note, the 2013 SCF excludes about \$19 trillion in DB pension entitlements and \$2.4 trillion in assets of nonprofit institutions. As a result of these and certain other omissions, the SCF identifies a materially lower total value for U.S. household financial assets than the national accounts identify. *The question, for us, is whether there is any reason to think that the omissions made by the SCF, notably DB pension entitlements, will bias our results.* We see no obvious bias. At a high level, DB pension plan asset allocations tend to be a function more of the level of interest rates and plan funding status than of the age profile of plan beneficiaries. Also, as we've argued in the body of our note, as the U.S. shifts from defined benefit to defined contribution schemes we may see additional support for fixed income given that DB plans seem to allocate less to bonds than a market-average glide path suggests is optimal for DC participants. For these reasons, we think using a source that excludes DB pension entitlements likely leads us – if anything – to *underestimate* demographics-related fixed income demand over the next decade.

See the recent research paper linked below, from the Federal Reserve, for a more detailed explanation of the differences between SCF data and data from the U.S. national flow of funds accounts, as well as a defense of the use of SCF data in economic research: <http://www.federalreserve.gov/econresdata/feds/2015/files/2015086pap.pdf>

## Works consulted

- Mercedes Aguirre and Brendan McFarland, "2014 Asset Allocations in *Fortune 1000* Pension Plans," Towers Watson, October 2015.
- Robert Arnott and Denis Chaves, "Demographic Changes, Financial Markets, and the Economy," *Financial Analysts Journal* Volume 68 Number 1, 2012.
- Charles Bean et al., "Low for Long? Causes and Consequences of Persistently Low Interest Rates," *Geneva Reports on the World Economy* 17, International Center for Monetary and Banking Studies, October 2015.
- Lisa Dettling et al., "Comparing Micro and Macro Sources for Household Accounts in the United States: Evidence from the Survey of Consumer Finances," *Finance and Economics Discussion Series* 2015-086, Washington: Board of Governors of the Federal Reserve System, 2015.
- "The Eurosystem Household Finance and Consumption Survey," *Statistical Paper Series* No 2, European Central Bank, April 2013.
- "2013 Survey of Consumer Finances (SCF)," Federal Reserve, September 2014.

- Michael Gapen, “Demand for safe havens to remain robust,” Barclays Equity Gilt Study, February 2013.
- Michael Gavin, “Population dynamics and the (soon-to-be-disappearing) global ‘savings glut,’” Barclays, February 2015.
- Charles Goodhart et al., “Could Demographics Reverse Three Multi-Decade Trends?” Morgan Stanley, September 2015.
- Dr. Michaela Grimm et al., “Allianz Global Wealth Report 2015,” Allianz SE, August 2015.
- Markus Lorenz et al., “Man and Machine in Industry 4.0: How Will Technology Transform the Industrial Workforce Through 2025?” Boston Consulting Group, September 2015.
- Dr. Susan Lund, “The Impact of Demographic Shifts on Financial Markets,” McKinsey Global Institute, June 2012.
- “Pension Markets in Focus,” The Organisation for Economic Co-operation and Development, 2015.
- James Poterba et al., “The Composition and Draw-Down of Wealth in Retirement,” NBER Working Paper 17536, October 2011.
- Karen Smith et al., “How Seniors Change Their Asset Holdings During Retirement,” Center for Retirement Research at Boston College Working Paper 2009-31, December 2009.

<sup>1</sup> PIMCO *Viewpoint* “What’s Your Number at the Zero Bound”, by Dr. James Moore, 2012.

<sup>2</sup> 2013 represents most current data available.

<sup>3</sup> Our argument would be even stronger if we could show that the personal savings rate among high-earning seniors in their late 60s and early 70s has been increasing over time (parallel to the rise in labor force participation). However, the BLS has advised us that a comparison between 2014 data and prior-year data may be misleading due to recent changes in survey methodology.

<sup>4</sup> From 2000 to 2050, our dynamic ratio – mechanically – is a weighted average of two individual static ratios (35–64 versus 65+ and, separately, 35–69 versus 70+); the weights change each year to reflect our assumption about rising longevity.

<sup>5</sup> See, for instance, “The Impact of Demographic Shifts on Financial Markets” (McKinsey Global Institute, 2012).

<sup>6</sup> “How Seniors Change Their Asset Holdings During Retirement” (Smith et al, 2009).

<sup>7</sup> Validity of *global* Buyers versus Sellers Ratio depends on the extent to which asset accumulation-drawdown patterns among the high-earning elderly outside the U.S. mirror the patterns observed among U.S. elderly. We have not explored this question empirically and include the global ratio only for interest and context.

<sup>8</sup> See Appendix for a technical note on our choice of the Federal Reserve’s Survey of Consumer Finances for U.S. household financial asset detail.

<sup>9</sup> U.S. household financial assets, as depicted in the Federal Reserve’s 2013 Survey of Consumer Finances, total \$31 trillion across all age groups.

<sup>10</sup> Source: Allianz Global Wealth Report, 2015.

<sup>11</sup> For color on U.S. DB pension plan asset allocations, see, for example, the OECD's "Pension Markets in Focus" (2015) and Towers Watson's "2014 Asset Allocations in *Fortune 1000* Pension Plans" (2015).

<sup>12</sup> Source: NextCapital.

<sup>13</sup> See "Demographic Changes, Financial Markets, and the Economy" (Arnott and Chaves / CFA Institute, 2012).

<sup>14</sup> For simplicity, we assume that anyone who dies younger than age 65 bequeaths assets to a spouse of comparable age (i.e., no change in asset allocation) while those who die at or after age 65 bequeath assets to someone (presumably children) 30 years younger (i.e., a generation earlier in risk tolerance). We recognize that not every elderly person bequeaths assets to a younger heir; some assets are passed on to charitable organizations and friends or other family members of comparable age, for instance. We assume, arbitrarily, that 50% of financial assets are passed to younger heirs. Our general results are not particularly sensitive to changes in these assumptions.

---

Copyright 2016 John Mauldin. All Rights Reserved.

### Share Your Thoughts on This Article

Post a Comment

Like *Outside the Box*? Then we think you'll love John's premium product, *Over My Shoulder*. Each week John Mauldin sends his *Over My Shoulder* subscribers the most interesting items that he personally cherry picks from the dozens of books, reports, and articles he reads each week as part of his research. [Learn more about \*Over My Shoulder\*](#)

---

*Outside the Box* is a free weekly economic e-letter by best-selling author and renowned financial expert, John Mauldin. You can learn more and get your free subscription by visiting <http://www.mauldineconomics.com>.

Please write to [subscribers@mauldineconomics.com](mailto:subscribers@mauldineconomics.com) to inform us of any reproductions, including when and where copy will be reproduced. You must keep the letter intact, from introduction to disclaimers. If you would like to quote brief portions only, please reference <http://www.mauldineconomics.com>.

To subscribe to John Mauldin's e-letter, please click here: <http://www.mauldineconomics.com/subscribe/>

To change your email address, please click here: <http://www.mauldineconomics.com/change-address>

If you would ALSO like changes applied to the Mauldin Circle e-letter, please include your old and new email address along with a note requesting the change for both e-letters and send your request to [compliance@2000wave.com](mailto:compliance@2000wave.com).

To unsubscribe, please refer to the bottom of the email.

*Outside the Box* and JohnMauldin.com is not an offering for any investment. It represents only the opinions of John Mauldin and those that he interviews. Any views expressed are provided for information purposes only and should not be construed in any way as an offer, an endorsement, or inducement to invest and is not in any way a testimony of, or associated with, Mauldin's other firms. John Mauldin is the Chairman of Mauldin Economics, LLC. He also is the President of Millennium Wave Advisors, LLC (MWA) which is an investment advisory firm registered with multiple states, President and registered representative of Millennium Wave Securities, LLC, (MWS) member FINRA, SIPC. MWS is also a Commodity Pool Operator (CPO) and a Commodity Trading Advisor (CTA) registered with the CFTC, as well as an Introducing Broker (IB) and NFA Member. Millennium Wave Investments is a dba of MWA LLC and MWS LLC. This message may contain information that is confidential or privileged and is intended only for the individual or entity named above and does not constitute an offer for or advice about any alternative investment product. Such advice can only be made when accompanied by a prospectus or similar offering document. Past performance is not indicative of future performance. Please make sure to review important disclosures at the end of each article. Mauldin companies may have a marketing relationship with products and services mentioned in this letter for a fee.

Note: Joining the Mauldin Circle is not an offering for any investment. It represents only the opinions of John Mauldin and Millennium Wave Investments. It is intended solely for investors who have registered with Millennium Wave Investments and its partners at [www.MauldinCircle.com](http://www.MauldinCircle.com) or directly related websites. The Mauldin Circle may send out material that is provided on a confidential basis, and subscribers to the Mauldin Circle are not to send this letter to anyone other than their professional investment counselors. Investors should discuss any investment with their personal investment counsel. John Mauldin is the President of Millennium Wave Advisors, LLC (MWA), which is an investment advisory firm registered with multiple states. John Mauldin is a registered representative of Millennium Wave Securities, LLC, (MWS), an FINRA registered broker-dealer. MWS is also a Commodity Pool Operator (CPO) and a Commodity Trading Advisor (CTA) registered with the CFTC, as well as an Introducing Broker (IB). Millennium Wave Investments is a dba of MWA LLC and MWS LLC. Millennium Wave Investments cooperates in the consulting on and marketing of private and non-private investment offerings with other independent firms such as Altegris Investments; Capital Management Group; Absolute Return Partners, LLP; Fynn Capital; Nicola Wealth Management; and Plexus Asset Management. Investment offerings recommended by Mauldin may pay a portion of their fees to these independent firms, who will share 1/3 of those fees with MWS and thus with Mauldin. Any views expressed herein are provided for information purposes only and should not be construed in any way as an offer, an endorsement, or inducement to invest with any CTA, fund, or program mentioned here or elsewhere. Before seeking any advisor's services or making an investment in a fund, investors must read and examine thoroughly the respective disclosure document or offering memorandum. Since these firms and Mauldin receive fees from the funds they recommend/market, they only recommend/market products with which they have been able to negotiate fee arrangements.

PAST RESULTS ARE NOT INDICATIVE OF FUTURE RESULTS. THERE IS RISK OF LOSS AS WELL AS THE OPPORTUNITY FOR GAIN WHEN INVESTING IN MANAGED FUNDS. WHEN CONSIDERING ALTERNATIVE INVESTMENTS, INCLUDING HEDGE FUNDS, YOU SHOULD CONSIDER VARIOUS RISKS INCLUDING THE FACT THAT SOME PRODUCTS: OFTEN ENGAGE IN LEVERAGING AND OTHER SPECULATIVE INVESTMENT PRACTICES THAT MAY INCREASE THE RISK OF INVESTMENT LOSS, CAN BE ILLIQUID, ARE NOT REQUIRED TO PROVIDE PERIODIC PRICING OR VALUATION INFORMATION TO INVESTORS, MAY INVOLVE COMPLEX TAX STRUCTURES AND DELAYS IN DISTRIBUTING IMPORTANT TAX INFORMATION, ARE NOT SUBJECT TO THE SAME REGULATORY REQUIREMENTS AS MUTUAL FUNDS, OFTEN CHARGE HIGH FEES, AND IN MANY CASES THE UNDERLYING INVESTMENTS ARE NOT TRANSPARENT AND ARE KNOWN ONLY TO THE INVESTMENT MANAGER. Alternative investment performance can be volatile. An investor could lose all or a substantial amount of his or her investment. Often, alternative investment fund and account managers have total trading authority over their funds or accounts; the use of a single advisor applying generally similar trading programs could mean lack of diversification and, consequently, higher risk. There is often no secondary market for an investor's interest in alternative investments, and none is expected to develop.

All material presented herein is believed to be reliable but we cannot attest to its accuracy. Opinions expressed in these reports may change without prior notice. John Mauldin and/or the staffs may or may not have investments in any funds cited above as well as economic interest. John Mauldin can be reached at 800-829-7273.