No Driver Needed

Looking at the map below, it is quite amazing how reliant the American economy is on truck drivers. According to the American Trucker Association, there are 3.5 million professional truck drivers in the U.S. An additional 5.2 million people are employed within the truck-driving industry and do not even drive trucks. That’s 8.7 million trucking-related jobs. In fact according to NPR "Planet Money" the most common job in 29 of 50 U.S. states is truck driving.

A Map of the Most Common Job in Each U.S. State

Why so many truck drivers?

Driving a truck has been one of the most stable occupations in the U.S. for many years. The reason is truck drivers have been immune to two of the biggest threats affecting the U.S. job market: globalization and automation. Truckers cannot be outsourced. A worker in India or China can't drive a truck in Illinois, and robots can't drive trucks (yet)!

In addition to being one of America’s most pervasive jobs, truck drivers are relatively well-paid. They earn a middle class income of approximately $40,000 per year. While clearly not Wall Street pay standards, truck drivers earn more than approximately 50% of American wage earners (including those of married households). That’s not a bad living wage for most drivers who do not have a college education. In many ways, the trucking industry has offset many of the factory jobs that have been outsourced over the past few decades.
Driving off a Sharp Cliff

And things look really positive in the near term. The industry experts expect to see 20% more truck driving jobs by 2020. Stronger demand for truckers will ultimately lead to higher wages. This is a good thing.

The only thing that could put a damper on this would be if the demand for truck drivers were to say… drive off a sharp cliff.

That sharp cliff is a self-driving truck!

In fact on May 6, 2015, the first self-driving truck hit the American road in the state of Nevada. Meet ‘Freightliner Inspiration’ the first ‘licensed’ autonomous commercial vehicle to operate on open highways in the United States.

Freightliner Inspiration

Daddy, What ‘Was’ a Truck Driver?

The Wall Street Journal recently published an article titled “Daddy, What Was a Truck Driver?” In it they predicted that the future of commercial trucking lies in self-driving trucks.

The technology already exists to enable trucks to drive themselves, and more and more players are entering the game. As such, the technology will only get better. Higher quality and safety is assured. Driverless vehicles are coming, and they are coming fast.

And the benefits are significant.
Lower Cost

One of the things that drive up the cost of drivers is the simple fact that **long-haul trucking** is a grueling and taxing job. Today there are approximately 1.6 million long haul drivers. Many drivers spend five or six days a week on the road. Despite being highly paid, long haul trucking has an extraordinarily high turnover rate of approximately 100% annually.

Obviously, machines won’t care about long, boring and stressful driving conditions. An autonomous truck can roll on 24/7. Routes will take less time to complete. Trucking companies will need fewer trucks to ship goods.

And of course, there would be no salary, no payroll tax, no health-care benefits etc. Even if the costs of automating a truck were an additional $500,000, most owners would leap at the chance to replace truck drivers (a full-time driver with benefits will cost in excess of $65,000 a year) with software.

Safety

Accidents will decline. Robot trucks will kill far fewer people, if any, because machines don’t get tired. They don’t get distracted looking at phones instead of the road. Robots don’t drink alcohol or take drugs. They won’t drive recklessly to get to a destination faster, etc. Most experts expect that insurance costs could drop dramatically.

Google released a comprehensive safety report on its self-driving cars since 2009 and the results overwhelmingly suggest that **robots are better than humans at driving**. During the combined two million miles these cars were on the road, Google’s cars got into only 12 minor accidents, none of which were the fault of a robot.

Just recently, a Google driverless car completed its first coast-to-coast trip covering 3,400 miles and touching 15 cities. The trek started at the Golden Gate Bridge and ended in midtown Manhattan. And no accidents!

Tesla founder **Elon Musk**, thinks the government will eventually outlaw human driving altogether. It’s just too dangerous.

There are huge savings to be found, huge profits to be created. What the market wants, the market gets. Competition will make sure of it. As soon as one company makes the push the others have to follow or their ongoing operating expenses will be higher. Capitalists have the wheel now. There is no turning the wheel before driving off this cliff.

Basically, the only real barrier to the immediate adoption of self-driven trucks is purely legal and political in nature, not technical or economic. With self-driving vehicles currently only road legal in a few states, many more states need to follow suit unless autonomous vehicles are made legal at the national level. And Sergey Brin of Google has estimated this could happen **as soon as 2017**.
Yes, there are still many issues that need to be dealt with and we won’t see highways dotted with driverless trucks in the near term. But the economics and the improved safety suggest that over the long term the industry will migrate to autonomous vehicles.

And so it goes. Trucks will be driverless. This is the beginning of end of the paid driver industry.

Not Just Trucks

According to Morgan Stanley, complete autonomous capability will be here by 2022, followed by massive market penetration by 2026. The cars we know and love today would entirely become extinct in another 20 years thereafter.

Consider the following:

- Navigant Research: “By 2035, sales of autonomous vehicles will reach 95.4 million annually, representing 75% of all light-duty vehicle sales.”

- IHS Automotive: “There should be nearly 54 million self-driving cars in use globally by 2035.”

- ABI Research: “Half of new vehicles shipping in North America to have driverless, robotic capabilities by 2032.”
Nissan: “In 2020 we’re talking more autonomous driving capability. It’s going to be an evolutionary process and 2020 will be the first year to truly see some of these capabilities start to be introduced in the vehicle.”

**Changing Attitudes:** As boomers age, many would prefer not to drive. The thrill is gone. Some won’t drive at night because of night-vision problems. Others are nerve-wracked over traffic. Some others would rather play cards, read or take a nap.

And Millennials do not have a love affair with cars. Access, not ownership is the mantra of Millennials.

It would appear that many aging boomers and millennials would not be against being driven around town by robots. In fact, research confirms that 60% of U.S. adults surveyed stated that they would ride in an autonomous car, and nearly 32% said they would not continue to drive once an autonomous car was available instead.

A report from Business Insider Intelligence forecasts there will be 10 million self-driving cars on the road by 2020.

**Uber and Taxis**

But no one is more excited about autonomous cars than Uber. Currently, drivers take home at least 75% of every fare. Thus it is not surprising that CEO Travis Kalanick recently stated that Uber will eventually replace all of its drivers with self-driving cars.

Uber CEO Travis Kalanick stated recently: “The reason Uber could be expensive is because you’re not just paying for the car – you’re paying for the other dude in the car,” Kalanick said.
“When there's no other dude in the car, the cost of taking an Uber anywhere becomes cheaper than owning a vehicle. So the magic there is, you basically bring the cost below the cost of ownership for everybody, and then car ownership goes away.” When asked about what he would tell the Uber drivers who will someday be replaced, Kalanick said that day is “inevitable.”

A Columbia University study suggested that with a fleet of just 9,000 autonomous cars, Uber could replace every taxi cab in New York City – passengers would wait an average of 36 seconds for a ride that costs about $0.50 per mile. Such convenience and low cost will make car ownership out of the question.

Autonomous, on-demand taxis will quickly become the dominant form of transportation. The transition is already beginning to happen. Elon Musk, Tesla Motor’s CEO, says that their 2015 models will be able to self-drive 90% of the time. Both Google and Tesla predict that fully-autonomous cars – what Musk describes as “true autonomous driving where you could literally get in the car, go to sleep and wake up at your destination” – will be available to the public by 2020. Mercedes Benz, Ford, GM and others are not far behind.

**Car Sharing**

Morgan Stanley’s research shows that cars are driven just 5% of the time. In other words, the average car sits idle in the driveway or garage for 23 out of 24 hours a day. This is a gross waste of resources considering that the average cost of car ownership is nearly $9,000 per year.

Is it any wonder that ride sharing services like Uber and car sharing services like Zipcar are quickly gaining popularity as an alternative to car ownership?

The car purchasers of the future will not be you and me – cars will be purchased and operated by car sharing companies. And if the owners get their way, they will be driven by computers.

Like it or not, driverless trucks and cars are coming.

**Disruptive Technology**

As close as 2025 – that is in a mere 10 years – autonomous cars will begin disrupting our economy in ways we can’t even yet imagine. PricewaterhouseCoopers predicts that the number of vehicles on the road will be reduced by 99%, estimating that the fleet will fall from 245 million to just 2.4 million vehicles. What will happen to the auto industry?

They will cause unprecedented job loss. The Bureau of Labor Statistics lists approximately one million people employed in motor vehicles and parts manufacturing, and an additional three million in the dealer and maintenance network. Truck, bus, delivery and taxi drivers account for nearly six million professional driving jobs. Virtually all of these 10 million jobs could be eliminated within 10-15 years, and this list is by no means exhaustive. Where will these people go?
If driverless cars replace taxi and bus drivers, a large swath of American jobs may disappear. If driverless cars can be summoned by a user using an Uber-like app, then there would be no need for that user to own their own car, let alone multiple cars. The driverless car will pick you up; drop you off, and then move on to the next person. A fleet of driverless cars could be shared by many needing rides. The auto industry as we know it would change dramatically.

But it’s not all gloom and doom. Despite the job loss and destruction of industries, eliminating the needs for car ownership will yield over $1 trillion in additional disposable income. That’s a lot of income. New jobs will be created. Throughout history that has always been the case. Horses gave way to cars, hand picking cotton to the cotton gin, candles to electricity, passenger trains to planes, etc. The internet created tens of millions of jobs. We just don’t know when, where and what the jobs will be.

Also on the positive side of the ledger, Morgan Stanley estimates that a 90% reduction in crashes would save nearly 30,000 lives and prevent two million injuries annually.

We live in amazing times!

The Never Ending Greek Saga

The 1992 Maastricht Treaty created the European Union (EU) and led a few years later to the euro currency. When the euro was created, I was managing a currency fund and went on record saying monetary union without fiscal union is a recipe for disaster. And it has been. Leaders have been wrestling with its fundamental flaw almost from the beginning. The EU has no way to enforce fiscal standards on its member nations. The member nations likewise have no way to devalue the currency in their own favor. This can’t go on forever – and it won’t.

At the beginning of last week, there was short-lived optimism that the Greek government was at least talking to its key creditors (the Troika): the International Monetary Fund (IMF), the European Commission, and the European Central Bank. But by week’s end, the negotiations had broken down. German Chancellor Angela Merkel said that she urged Greek Prime Minister Alexis Tsipras to accept an “extraordinarily generous” offer from the creditors. Tsipras’ reaction: Greece wouldn’t give in to “blackmail and ultimatums.”

With a crucial meeting set for Saturday to stave off default on a key June 30 payment due to the IMF, the consensus seemed to be that yet another 11th hour and 59th minute deal would emerge. The saga took another turn. On Friday, Tsipras stunned the Troika and his peers in Europe with the biggest shocker of all – a referendum announcement, aka the Greek "nuclear option. At this point, there is no turning back, and the Greeks – of which 80% want to stay in the euro even as 80% want an end to austerity – will get to choose their own fate. Whatever choice they make, they will now only have only themselves to blame.
The Never Ending Greek Debt Crisis

The Bottom Line: Greece now owes 180% of GDP. Even at low rates, it is impossible for Greece to pay those loans back without somehow engineering 3-5% growth. Meanwhile, growth has cratered and has plunged 25% over the past five years. Austerity is not working. The country is growing older because the younger are emigrating. Fewer people to pay taxes and more people needing pensions is not a recipe for growth.

Simply lending Greece more money to pay back their debt, thereby piling on an even greater burden for future generations, does kick the can down the road for the time being; but it does not solve the fundamental problem that Greece simply can’t pay. EVER! More money for more reform will not work.

There are no winners. The current impasse is a consequence of trying to implement a one-size-fits-all monetary policy onto a very disparate group of countries and economies, which has led to an intractable situation.

So, heading into halftime for 2015, Europe is at an impasse with Greece saddled with debts it can’t pay and its creditors unwilling to hand over more cash without reforms. What if Greek officials are preparing for a default? That could lead to capital controls, the shuttering of banks, and even an exit from the euro zone, and in turn, a global financial crisis the likes of which hasn’t been seen since the failure of Lehman Brothers in September 2008.
Weekly Relative Value

Market Outlook and Portfolio Strategy

As we mentioned last week, we don't think the Fed provided much additional clarity on the timing of the first lift-off. The futures market continues to have its doubts over any rate increase this year, with the market pushing out expectations to December.

Meanwhile, fixed income assets have struggled in May with practically all domestic debt asset classes posting negative total returns. The on the 10-year has risen by 15 basis points, while the curve has steepened by 12 basis points on a twos versus 30s perspective. Since the market seems to be taking its cues from the risk on- risk off trade at the moment, a 2.25%-2.45% range on the 10-year seems appropriate until we get additional catalyst to move the market demonstrably.

Despite the recent uptick in interest rates as of late, I remain constructive on bonds longer term. The reason is because long term interest rates are a function of strong economic growth, which continues to elude us. As expected, after printing at -0.7% in the first revision to Q1 GDP, the final revised GDP print for the March 31-ended quarter came in at -0.2%, confirming the third negative GDP quarter in one recovery cycle since 2011 (all of which have come in the first quarter of the year – the first time this has happened since the 1950s).

Despite annual hopes of stronger economic growth, it has yet to materialize. The all-important consumers, which make up two-thirds of GDP, remain cramped by somewhat stagnant wage growth consumed by spiraling healthcare costs.

“Spending on healthcare (insurance and services) has increased $232 billion over the last twelve months. That increase accounts for a big ‘two-thirds’ of the $353 billion in consumer spending and one-third of the $666 billion growth in total GDP over the stretch.
And wage gains are being wiped out by rising health costs. ‘The increase in healthcare outlays over the last year is roughly equal to the $284 billion in wage gains for households during that time.’” – Stephanie Pomboy

Spending on rising healthcare costs, primarily premiums, does not boost economic growth. In fact, it deters it as it saps spending from other areas that actually do contribute to overall growth.

**Low for Long?**

The chart below is a history of long-term interest rates going back to 1857. The dashed black line is the median interest rate during the entire period. As I have highlighted previously in this space, there have been prior periods when long term interest rates remained exceptionally low for extended periods. In the current episode, rates have remained below the median level for only four years!

Yes, the 30 plus year bull market in bonds may be coming to an end. Bond price appreciation may be limited from current levels. However, just take a look at Japan and you can start guessing about how long the bear market in bonds will likely remain in hibernation.

In terms of relative value, please click [here](#) for the Weekly Relative Value Analysis.
Last, but not least, on behalf of Balance Sheet Solutions, I would like to wish everyone a safe and Happy 4th of July!

More Information

**Tom Slefinger**, Senior Vice President, Fixed Income Institutional Sales, and a Registered Representative of ISI, has more than 30 years of fixed income portfolio management experience. He has developed and successfully managed various high profile domestic and global fixed income mutual funds. Tom has extensive expertise in trading and managing virtually all types of domestic and foreign fixed income securities, foreign exchange and derivatives in institutional environments.

At Balance Sheet Solutions, Tom is responsible for developing and managing operations associated with institutional fixed income sales. In addition to providing strategic direction, Tom is heavily involved in analyzing portfolios, developing investment portfolio strategies and identifying appropriate sectors and securities with the ultimate goal of optimizing investment portfolio performance at the credit union level. He can be reached at tom.slefinger@balancesheetsolutions.org or (800) 782-2431, ext. 2753.

Information contained herein is prepared by ISI Registered Representatives for general circulation and is distributed for general information only. This information does not consider the specific investment objectives, financial situations or particular needs of any specific individual or organization that may receive this report. Neither the information nor any opinion expressed constitutes an offer, or an invitation to make an offer, to buy or sell any securities. All opinions, prices, and yields contained herein are subject to change without notice. Investors should understand that statements regarding future prospects might not be realized. Please contact Balance Sheet Solutions to discuss your specific situation and objectives.