

The Pit and the Pendulum

Anirban Basu

I am an economist, so please hold any further applause. I've been asked to talk to you about the economy, and that's what I aim to do. The theme of my presentation is horror, although the outlook is not necessarily horrible, but that is the theme. "The Pit and the Pendulum" is a short story written by Edgar Allen Poe. It was first published in 1842 and was subsequently turned into a movie in 1961 which, among other things, starred Vincent Price. It was not the most noteworthy film of that year as that year also produced *Breakfast at Tiffany's*, *The Guns of Navarone*, and *West Side Story*. But in any case, I digress.

I will begin first with a primer on the global economy. I'll then quickly taper into national economic data. I'll then spend a significant amount of time talking about various regions across the United States. This presentation will focus mainly upon the United States, but I'll always try to make points about global capital markets and the global economy generally as I go through it.

We hear a lot of bad news from various parts of the world economy, but the fact of the matter is the global economy continues to manifest forward progress. According to the World Bank, last year the global economy expanded 2.6 percent in real, meaning inflation adjusted, terms. The forecast for the current year for the global economy is 3 percent. Granted that is not a spectacular performance. In a typical year, the global economy expands closer to 4 percent. Nonetheless, there is forward momentum, in some societies more than in others.

Here is a listing of the 20 fastest and 20 slowest growing economies on the planet from last year. [visual] These

data come from the International Monetary Fund. The left-hand columns are populated with the most rapidly growing economies from 2014. The right-hand columns with the slowest. You might ask the question, "Anirban, what was the fastest growing economy on the planet last year?" It was a two-way tie between Turkmenistan and Ethiopia. The Ethiopians have a large agricultural story—oil seed, flowers, coffee plantations, and other agricultural products. As for the Turkmen, with a population of 5.2 million, it's not a large country, large agricultural base for that country, but they also have hefty oil and natural gas reserves. And you should not allow the fact that today all prices are below \$60 a barrel, according to West Texas Intermediate. You should not allow that to persuade you that the demand for inputs in production is declining globally; it is just not true. Today the world is home to between 7.2 and 7.3 billion people. By the year 2050, the world will be home to roughly 9.3 billion people. In fact, the demand for productive inputs is rising constantly. You'll notice that many of the nations in the left-hand column are natural resource intensive. Countries such as Mozambique and Tanzania are major producers of bauxite, an input into aluminum. Many of them are natural resource intensive.

You'll also notice a country here at number 16. It's tied with Cambodia and Rwanda, St. Kitts and Nevis. So why is that growing rapidly? More wealthy people are putting their money there. Because it's hard to hide your money now in Switzerland, more people are moving their money to various parts of the world, and St. Kitts and Nevis is one of those destinations.



Anirban Basu

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The right-hand column also shows the slowest growing economies on the planet. The slowest growing economy last year was Libya. The second slowest growing was Ukraine. Unrest is simply not good for economic growth. You'll also notice in that right-hand column many European societies. Now you'll also notice that the United States is in neither column. The United States is represented on this chart. [visual]

These data also come from the International Monetary Fund. However, these data are forward looking. Whereas the previous slide was looking back at 2014, this slide is showing you outlooks for 2015 for various parts of the world's economy. We can divide the world in many different ways. One of the ways to do that is by dividing the world between the advanced economies of the world, which populate the top half of this slide, and the emerging/developing countries of the world, which populate the bottom half of this slide.

In the aggregate, the advancing economies this year are expected to grow a bit more than 2 percent. You can see the ongoing weakness expected in Europe. Things are getting better in Europe, not in Greece necessarily, but in the balance of the euro area there are signs of improvement. However, the outlook for the current year for economic growth in the euro area is just 1.5 percent, 1.6 percent in Germany, 1.2 percent in France, and less than one percent in Italy. The outlook in Canada is for 2.2 percent growth, and the outlook for the United States of America is 3.1 percent.

We'll talk a lot about the United States this morning, and we'll talk about whether or not that's a realistic forecast. This country has not expanded at more than 3 percent in any given year since 2005. That year the US economy expanded 3.4 percent. If this makes you mad just to grow 3 percent in terms of gross domestic product here, remember it will be the first time in a decade.

We'll talk much more about the US economy in a moment, but that gives you some sense of a quite positive outlook regarding the economy of the United States this year.

The balance of the world, the emerging/developing countries of the world, have some interesting stories. The outlook for the Chinese, the worst growth rate in 20 years, which is still impressive by global standards, is 6.8 percent but slower than we have seen in recent decades. The outlook for the Indians by contrast is 7.5 percent growth, among the best outlooks we've seen for India in many years. Last year the Indians elected a new prime minister, Narendra Modi, who is very pro business, and the outlook for the Indians has been improving ever since he arrived in New Delhi. You'll see that

the Brazilian economy is not expected to grow this year, and the Russian economy is expected to shrink significantly this year and, of course, they deserve that.

Let's take a step back here and focus a little bit more on the US economy. We have just completed June 15. The US recession ended officially on June 15, 2009. That means that in this country we have now completed six full years of economic expansion. That means the current recovery in America is lengthier than the average post-World War II recovery, which lasted 4.5 years. Despite that track record of economic growth, not a lot of Americans are delighted by US economic performance. In fact, some people believe that the US economy is still in recession. A recent survey by NBC News, and of course they have no credibility since they gave us Brian Williams, indicated that 57 percent of Americans think we're still in a recession. Other news agencies find that the proportion is closer to 50 percent.

Why is there so much discontent in America when the economy has grown for six consecutive years? One of the reasons is that the gains from economic expansion in America have been concentrated in the hands of a relatively few. If you look at what's really come back since the financial crisis took full hold of this economy in 2008, September 15, 2008, with the failure of Lehman Brothers on that Monday morning, you can look at what's really come back; it's corporate profits and stock prices.

I'll give you a statistic. In 2013 (we don't have the same statistic for 2014), corporate profits in America equaled 10 percent of gross domestic products. That was an all-time record. The previous record was achieved in 2012 and before that in 1929. It is rare for corporations to be this profitable. Many of them became incredibly efficient during the period of the economic downturn. They have not invested a lot of money. They have retained tremendous cash flow and have continued to be profitable in part because the cost of capital is so low. Interest rates are so low, for instance.

So corporate profits have surged, and so have stock prices. I know yesterday was not a good day for US equity markets, and yet as we wake up this morning, the Dow Jones is at 17,791.17. The S&P 500 is at 2,084.43. The NASDAQ is 5,029.97. I don't know if you follow the markets very much; I presume you do. These are near still record highs. Near record highs, not record highs, but near. If you or your customers had invested one dollar in US equity markets in March 2009, they would have roughly three dollars today. On March 9, 2009, the Dow Jones was sitting in at 6,469.95. We're close to 18,000 this

morning. If you add in dividend income, people have basically tripled their money.

What hasn't come back robustly? Home prices are still below their prerecession peak in much of the country. Income growth in real terms, meaning inflation-adjusted terms, has been soft. And the number of jobs supported by the US economy is not much greater than the number of jobs supported by the US economy prerecession, meaning in late 2007 at the eve of the recession.

That, of course, is where the middle class lives: Jobs. Income. Housing. Only 47 percent of American families own stock. So for 53 percent of American families, this boom in the stock market doesn't mean much to them, other than they feel that they're falling behind. No wonder then that a lot of people feel they have not fully recovered. In fact, they have not.

Here's another way of looking at the situation. One of the complaints about the US economic expansion has been that labor force participation rates have been declining, even as the economy has expanded; more and more Americans are choosing not to work. Last month the US labor force participation rate was 62.9 percent, roughly a 35-year low. However, the data I'm showing you here do not pertain to people who have left the US labor market or refused to contemplate entering the US labor force. These data pertain to the most engaged people in the US labor market, the full time US worker.

What I'm graphing here is median weekly earnings. I've adjusted for inflation. What you notice is a couple of things. One, median weekly earnings for the full time US worker have not returned to their prerecession peak. And number two, median weekly earnings through the first quarter of 2015 were almost precisely what they were through the first quarter of 2002, 13 years ago. So when you adjust for inflation, the full time US worker has made very little progress. Hence, there is a lot of discontent.

That said, we are starting to see some wage pressures building in the economy. Here I'm showing you two lines. [visual] The line on top, the white card line, shows you the year-over-year cost increases for employee benefits including, for instance, health insurance for employees. You'll notice that though the increase in benefit costs is not as significant as it was a decade ago when health care costs were surging in this country, we are starting to see some upward pressure on benefit costs. The lower line, the bottom line, the line in orange, that's wages and salaries. Even though wage and salary growth is only 2.3 percent on a year-over-year basis,

that's the best performance in America in the last six years. We are starting to see some wage inflation in America. This is important for those of you who manage money because, of course, more inflation means higher interest rates, and higher interest rates have all kinds of implications for various asset prices including, for instance, bonds and stocks, but also real estate.

We are now starting to see some real shortages in the US labor market meaning that employers are not able to find certain types of workers, for instance, truck drivers. There's a shortage now of 30,000 truck drivers in the United States of America. To put a trucker on the road right now costs about 8 percent more than it did just one year ago. There are not enough construction workers in America, so we're starting to see construction worker wage inflation. Again, why do I mention this? There's good news to this, of course. It means people are earning more money, and they're able to spend more money. But from the perspective of interest rates, this is not particularly good news. I'll talk more about interest rates as I go through the presentation. In any case, this is a sign of economic progress.

One can view the fact of US economic expansion through many different lenses. I'll show you this map. [visual] This map is produced by Moody's <https://www.economy.com>, an economic consultancy out of the Philadelphia metropolitan area. This map tries to give you some sense of the hierarchy of performance across the 50 US states. The data that powered this map runs through March 2015. If you come back in time with me, back to May 2009, all 50 state economies were in recession and, for purposes of this map, that means all 50 state economies were in red. That period represented the first time that all 50 states were in recession together since 1973, the year of the first Arab oil embargo.

Today, no state economy is in red. No one is in recession in America. No state is in orange, meaning no state is at risk of recession. Every state economy has forward momentum. There are two colors on the map: blue and green. I'm from Maryland. My state is in blue but so too is much of the country. California, Florida, so on and so forth are in blue. These states are recovering. What does that mean? These states have not fully recovered from the great recession. The long keys I mentioned—home prices, unemployment rates, other metrics of economic performance—these states are not back to a level of economic performance that they enjoyed in late 2007.

The states in green, by contrast, are expanding. What does this mean? These states have fully recovered from the great

recession, so these state economies have never been bigger. The state that stands first in terms of economic expansion in recent years is North Dakota. Why North Dakota, a state of slightly more than 700,000 people? Because of the Bakken shale formation and oil production. In 2012, North Dakota began producing more oil than even the state of Alaska. That state has been booming.

Not every state in the country produces oil, of course, but it still manages to be a national economic story. In 2012, the American field produced 6.5 million barrels of oil per day. One year later, it produced 7.5 million barrels of oil per day. Last year it produced 8.7 million barrels of oil per day. Now you know that oil prices have fallen, over \$100 a barrel last summer, and today it's around \$60 a barrel. So you would think that output would have fallen. Last month it produced 9.6 million barrels of oil per day. Yes, the rig count is down, but the rigs that remain in place have become even more productive.

You can see that many of the states in green are the natural resource intensive states of our country. And no surprise, just as you observe globally, that nations such as Uzbekistan, Turkmenistan, Sierra Leone, Mozambique, and Tanzania, natural resource intensive societies, are among the fastest growing countries, you see the same thing in America. North Dakota is our Turkmenistan is what I like to say. So the next time you go to Minot or Williston or Fargo or Bismarck or Grand Forks, I urge you to tell the North Dakotans you see there that they are our Turkmenistan, just to see what the wrong end of a pitchfork might feel like. In any case, it's not just North Dakota obviously.

Colorado is another natural resource intensive state. In 2013, Colorado was number one in marijuana production, number six in natural gas production, and number nine in oil production. When those people were not completely baked, they produced 63.2 million barrels of oil in Colorado that year, an all-time record for that state.

That pales in comparison to Texas, however, which produced one billion barrels of oil per year in recent years. Texas is also number one in natural gas, and, of course, America is the number one producer of natural gas in the world. Americans have become very pessimistic about the nation's outlook, but America will soon be the number one producer in oil, number one in natural gas, number one in innovation, and has rapid population growth. It's a nation now of 321 million people—rapid population growth.

Of course, the most populace society on the planet today is China with roughly 1.3 to 1.4 billion people, but that

population won't change very much between now and 2050. India is a different dynamic. The Indians today are home to between 1.2 and 1.3 billion people. By the year 2050, it will be between 1.6 and 1.7 billion people. South Asia, of course, is the world's population center. India is home to the second largest population in the world today. Pakistan is sixth; Bangladesh is eighth. Indonesia, I know there is some Indonesia representation in the audience, with 255 million people, is also rapidly growing. That is an economy that will grow 5 percent this year.

That part of the world is quite dynamic. Natural resources play some role in that but not as much. It's more about intellectual capital, and we'll talk about industrial production and other things as we go forward in the presentation.

Another way of looking at recovery is through tax collections. All things being equal, economies that are recovering should see more tax collections. Why? Because when an economy is growing, there are more transactions, and because there are more transactions, there are more taxable events. The recession was so deep in America that even after several years of economic expansion, many states are collecting less in taxes than they were before the recession. So here the states in blue are collecting more in taxes at the state level than they were prerecession. [visual] North Dakota, of course, is one. North Dakota's economy has been booming. That state government collects more than twice the level of taxes than it did prerecession. Again, that's the Bakken shale formation and the impact on that state's economy.

You'll notice, however, the impact of politics on this. There are really two ways to increase tax collections. One is, of course, bigger economy, but the other way is to raise tax rates. In places like Illinois, Massachusetts, Maryland, all states in blue, that's exactly what happened. You'll notice that in states with Republican governors looking to be president of the United States, they did not raise taxes, and tax collections have not rebounded to prerecession levels: Jeb Bush, governor of Florida, Governor Scott Walker in Wisconsin, Chris Christie in New Jersey, and Bobby Jindal who happens to be the governor of this state, Louisiana—all Republicans, all thinking about running for president or actually are running for president. Governor Bush announced yesterday that he is going to be a candidate for 2016. Politics plays a role here. The point is again as I mentioned, recovery has been incomplete and erratic.

One of the things you'll notice here is industrial production. Industrial production in America represents the output of the nation's factories, mines, and power plants. Back in

the 1920s, this was the primary way that Americans measured the performance of their economy. We don't look at this variable nearly as much as we used to, but it's an important one. Notice the surge in US industrial production since mid-2009. This is a nation often characterized as being postindustrial. This is a nation that is often characterized as being a nation of consumers, but increasingly the Americans can claim to be a nation of producers. One of the reasons for this, of course, is that the Americans are able to offer the cheapest natural gas in the industrialized world, which has made manufacturing more attractive in the society.

Last year Airbus, the European airplane manufacturer, could have put its newest plant anywhere in the world. Where did they choose? Mobile, Alabama. General Electric recently brought several hundred jobs back from China to Louisville, Kentucky, to a plant slated for closure. Several years ago, Caterpillar, a construction and mining equipment manufacturer, announced that instead of producing mini excavators in Japan, they would bring that work to Victoria, Texas, and Athens, Georgia. Industrial production has been rising ever since, but notice the last few months. The last few months have been weaker, and we have seen this repeatedly during the US economic expansion. Good quarter, bad quarter, good quarter, bad quarter. There has been inconsistency in growth.

Take gross domestic products, the broadest measure of US economic performance, as another example. You can see how deep the recession was. [visual] In fact, I'm showing you here three recessions. I'm showing you the early 1990s recession toward the left of the slide. That recession took place when George Bush senior was in office and probably led to his loss in 1992 to Bill Clinton. Then I'm showing you the recession of the early 2000s. That was a mild recession. Look how deep the recession of 2007-2009 was. Really deep recession. But the bounce back, the recovery, has been soft.

The US economic expansion has basically been a 2 percent growth story. The year 2010 was the first calendar year of economic expansion in America post-recession. In 2010, the US economy expanded 2.5 percent, but the next year was 1.6 percent, the year after that 2.3 percent, and then 2.2 percent. Last year was 2.4 percent. It's been a 2 percent recovery, and how do you get the 2 percent year after year? It's very simple. Good quarter, bad quarter, good quarter, bad quarter. A lack of staying momentum.

That said, last year we started to see some momentum in the US economy. I point you to the second quarter 2014. [visual] Obviously there are many, many panels here, but

during the second quarter of 2014, the US economy grew 4.6 percent in real terms on an annualized basis. That's pretty good, you say. It is good. But we had other quarters previously in the cycle during which the US economy performed roughly as well, only to be disappointed with the next quarter. Good quarter, bad quarter, good quarter, bad quarter. So the question after that second quarter was, Would we see the same momentum?

I went to India for the holidays at the request of my wife to visit my in-laws, so that was no holiday and that was no request. I left the shores on December 18, 2014, and I wept. At that time the Bureau of Economic Analysis, the BEA, which supplies us with our GDPs, which was indicated during the third quarter of last year. The US economy expanded 3.5 percent in real terms. However, upon my joyful return to these lands on January 5, 2015, I learned that the BEA had subsequently revised upward the third quarter estimate to 5.0 percent. So there we had it, two good quarters in a row, 4.6 percent and 5.0 percent. Many economists were thinking that the US economy was ready to take off. Fourth quarter last year, 2.2 percent. First quarter this year, -0.7 percent. We have seen this repeatedly, the US economy failing to manifest sustained momentum. You can see some of that weakness in those industrial production numbers.

To the extent that the US economy is making progress, what is driving it forward? You all remember from school the equation $Y = C + I + G + E - M$. That's all I'm showing you here and you are welcome. [visual] This is called the National Income Identity equation. Identity why? Because the notion is output, what is produced and the Americans produce around \$18 trillion in output per annum. What is produced equals the uses of that output.

We measure output in various ways, including gross domestic product, GDP. From an equation standpoint, the abbreviation for output is the letter Y. Output. Output equals the uses of output. You do not supply the services that you supply or the products that you supply for no reason; you do so because somebody benefits from that provision. In fact, they benefit so much they're willing to compensate you for that provision. So the notion is output Y equals the uses of output, and there are various categories of users of output. Y output equals C, the first category of users of output. That stands for personal consumption, the first set of bars here. [visual] So $Y = C$, where C is personal consumption. That is household spending; that's consumer spending. Plus I. What's I? Gross investment. The last set of bars here. That's business spending—equipment,

software, inventories, private construction. Plus G. What's G? Government spending. The second set of bars here. That's public agency spending at every level of government from federal to municipal. Plus E. What's E? Exports. That's what is produced in America but sold abroad. Minus M, which is imports. That's what is produced abroad but sold in America. (E - M) together is net exports. The third set of bars here. $Y = C + I + G + E - M$, simple.

Now, how does this slide work? [visual] If you just look at the green colored bars, for the green colored bars designate the first quarter 2015, and if you add up the numbers attached to those bars, you would get that -0.7 percent.

All I'm doing for you is decomposing economic growth. What's driving growth? Now the slide becomes very simple to interpret. What has been the most consistent and sustained source of growth in America is growth in consumer spending. That's all this says. This is a consumer-led recovery. You've heard this before, of course. This is the way that we economists demonstrate that. What is it not? It is not a government spending led recovery. No surprise. State budgets are still weak. Tax collections have not rebounded in many states. And, of course, sequestration. Federal governments spending cuts began March 1, 2013. It is not a net export led recovery. No surprise.

Global economy has been weak, halting, erratic, and difficult for US exporters to grow exports in that kind of environment. Moreover, the US dollar has gotten stronger over time. Today \$1 USD will buy ¥123 JPY. It was not long ago that \$1 USD would only buy ¥100 JPY. Today 1€ will buy roughly \$1.13 USD. It wasn't long ago that 1€ would buy \$1.38 USD. Today \$1 USD will buy \$1.23 CAD, but it wasn't long ago that the Canadian dollar was worth more than the US dollar. With the dollar rising in value, while that's good for Americans who want to go to Tokyo or Kyoto or to Toronto or Vancouver, which is where you're headed next year, it's not great for exporters. Net exports has become a drag on the economy.

Gross investment has been an erratic source of growth and a regular source of growth, and a lot of the growth is driven by what's called inventory accumulation. Inventories are often accumulated by retailers to sell ultimately to consumers. This, in fact, reinforces the notion that this is a consumer-led recovery. What do consumers need to keep driving US economy forward? They need a job.

During the recession if you went to various employment centers, you would see fewer bodies than the previous month or previous quarter or previous year. The bodies were being

snatched. But the pendulum has swung away from that pit, and now we're seeing some healthy job creation in America. The most recent jobs report, the May jobs report, indicates that the nation added 280,000 additional jobs in May, a solid performance. The nation has added 3.058 million jobs over the past 12 months, which is more than 250,000 jobs per month over the past year. The US job market is quite strong.

Unemployment nationally is down to 5.5 percent. Often people talk about, we economists talk about jobs as a lagging indicator. The jobs come after the economy improves. That's true. But jobs can also be a leading indicator because as long as we keep adding jobs, more people have money to spend, and that keeps the economic recovery going.

Here I'm breaking down for you the 3.058 million jobs that have been added by this society over the last 12 months, May 2014 versus May 2015. [visual] What I'm trying to say here is the professional business services support not quite 700,000 more jobs than it did a year ago. Education and health services have chipped in a lot of other jobs, but most of those jobs are in health services.

Next is a section called retail trade/wholesale trade, transportation, utilities. That's the supply chain of the US economy. Those are the distribution channels. A lot of that job growth is in retail trade. Next is leisure and hospitality. That's mostly hotels and restaurants. What is that evidence of? Well, what we just talked about, the consumer is spending. You can see it right here in New Orleans. I saw many of you, in fact I recognize some of you from the outlet center next door. You were there, and I saw you.

It's happening all across this country. The consumer is spending; you do not need an economist to come from Baltimore, Maryland, to tell you that the consumer is spending. You can see it yourselves at the malls, the outlet centers, the auto dealerships. We're sending a ton of new cars into this country right now. I'll show you data on that in a moment.

Where I really see consumer spending is in the full-service restaurants. That's where I see Americans spending most freely. Go tonight to an Applebee's. Don't eat there; you're better than that. But go there from the perspective of doing some primary research. It will be busy as will the Olive Garden next door, the steak house up the street, and the Chipotle's will be slammed I can assure you. I even saw someone last week go into a Red Lobster. So that gives you some sense of how engaged the consumer is.

One of the other complaints about the recovery is yes, we've been adding jobs but these jobs are poor quality, and one could reasonably have stated that until last year because

last year the US economy started to add more jobs in construction, finance, manufacturing, and local government, which is encompassed by that government sector. Job quality started to improve, and you see some of that in these wage growth numbers.

This is percentage job growth for the 50 states. [visual] The state that's added the most jobs in percentage terms over the past year is the great state of Utah, 4 percent. Technology, tourism, retirement, quality of life—a lot of industries are contributing to Utah's success. Number two is Florida. Why is that? Many reasons but one is that baby boomers are increasingly retiring to Florida. And of course, that's part of the American demographic, and this is likely to continue for quite some time.

You'll notice states like Georgia, California, Arizona, and Nevada, who suffered mightily during the downturn, are now among the most rapidly recovering states. Their housing markets have stabilized, allowing these states to really progress. These are unemployment rates for the 50 states. [visual] The lowest rate of unemployment in our country is in the great state of Nebraska. Part of the reason for that is no one wants to live there, and so population growth there is pretty soft. Second is North Dakota, aforementioned. Third is Utah. Again, these are all natural resource intensive states. For the Nebraskans, it's corn and wheat and other agricultural commodities. Again, that's where we've seen the greatest amount of growth relative to overall population.

This represents the rates for the 20 largest metropolitan areas in America. [visual] Many of these communities you'll recognize. Minneapolis has the lowest rate of unemployment among these 20 large metropolitan areas. It's a region of roughly three million people. Not a lot of people talk about Minneapolis in part because their sports teams are so bad. The Twins, the Vikings, the Timberwolves, the Golden Gophers are almost all uniformly horrific in their arenas and on the fields. These are some of the most uncoordinated people in our country. But when you're a region of just three million people and you're able to have companies like Best Buy, Target, 3M, Cargo, General Mills, United Health, Wells Fargo, US Bank, too many to name, not to mention the Mayo Clinic, there is going to be a lot of prosperity. That business climate really works quite well.

Dallas-Fort Worth, 6.7 million people. In the most recent year for which data are available, more people move to Dallas-Fort Worth than to any other metropolitan area in the country. Dallas-Fort Worth and Houston both have low rates of unemployment. You can see both of them have high

rankings. [visual] This may change because oil prices are lower now, that's absolutely true. Nonetheless, to date at least these have been among the nation's best performers. You'll see a lot of technology markets in America with low rates of unemployment such as Boston, Seattle, Houston, which is energy technology, San Francisco, and Washington, DC. Also, San Diego has a lot of technology that has been among the most rapidly growing segments of the US economy. It's no surprise those regions also have relatively low rates of unemployment.

Let me talk very quickly about American real estate, residential real estate, and then conclude with my forecast. I delivered a presentation recently to a group of realtors and real estate professionals in Annapolis, Maryland. I said to those realtors, "Look, we economists have done everything we can do on your behalf. We've created more than three million jobs over the past year; we've brought unemployment nationally neatly below 6 percent. We're actually creating better quality jobs. Asset prices are high; stock prices are still high despite yesterday and some recent negative weeks; stock prices are still quite high relative to store norms. And we've given you cheap money." A 30-year fixed mortgage rate of around 4 percent, a 15-year fixed mortgage rate, which is shown on the bottom line of around 3 percent. The top line is a 30-year fixed mortgage rate. The burn rate for 30-year money. [visual]

We economists can't do anything more than that: High asset prices, solid job growth, cheap money. You would think with these factors in play that the US owner-occupied housing market, the market to own homes in America, would be booming. It's not. This is US new home sales, no boom there. People ask me, "Anirban, why do you economists insist on comparing today's new home sales with what they were in 2005 during the bubble, during the market peak, the artificial bubble?" I'm not. Compare new home sales today against 1999, which is where the slide begins. This is 1999 right here. [visual] You'll see that new home sales are nowhere near where they were pre-millennium. Pre-boom, we're not even to those levels of sales let alone the spike in 2004 and 2005 in activity. Of course, when you don't have vigorous new home sales, you don't have a ton of housing starts. Construction. The blue shaded area here is single-family housing starts. [visual] Where we're seeing the recovery is in the yellow section. That's multifamily housing starts, and most of that is apartments. This is more of a renter nation, less of a homeowner nation. How do we know that? We measure it with a measure called the US homeownership rates.

During the second quarter of 2007, the US homeownership rate was 69.2 percent. We just got data for the first quarter of 2015, 63.8 percent. From the perspective of homeownership in this country, it's as if the 1990s and the 2000s never occurred. We're back to homeownership rates of the 1980s and before that the 1960s. Homeownership fell in America during much of the 1970s. No surprise. Interest rates were very high. Mortgage rates were very high. You would think with this plummet in US homeownership that interest rates must be very high right now. No. They're near record lows. If you take this slide and flip it upside down, you'll get that. [visual] That's US new private multifamily construction; that's apartments. There is an apartment building boom in America. We're more of a renter nation.

Now, who's leasing these apartments? Often it's young people. These are the kids who were living with their parents. They graduate from college, live with mom and dad, but now they're getting jobs in large numbers, and they're moving out and moving into apartments. We know this trend is going to continue. We have a leading indicator called building permits. In the United States before you can build you must get permission from a local authority to build. These are permissions to build.

Again, the blue shaded area is single-family building permits. [visual] It tells us that we're not going to see a big increase in single-family housing construction anytime soon, whereas the momentum in the yellow, that's multifamily, that's apartments. Why is this happening? With high asset prices, cheap money, solid job growth, better quality job growth, why are we becoming more of a renter nation? There are many reasons.

Student debt is one. There is \$1.2 trillion in outstanding student debt in this country, much of it held, ostensibly, by 20 and 30 somethings. These kids already have a mortgage; they already have debt. It's harder to get a mortgage than it used to be. The lending standards are tighter, more restrictive. For many categories of borrowers, the down payment requirements are stiffer than they used to be. They have to raise more money to bring to settlement before they can buy a home than used to be the case for many categories of borrowers, though not all. And of course there's the role of culture. We economists do not like to talk about culture because it's hard to measure. It's squishy. The fact of the matter is culture has an impact on economic outcomes. Today's young people in America do not seem to be as inspired by asset accumulation as we were when we were growing up. My generation is generation X. One of the movies of my

generation was *Wall Street*, a movie that came out in 1989 starring Michael Douglas and Charlie Sheen with Michael Douglas playing the role of corporate raider, Gordon Gekko. In that movie Gordon Gekko famously says, "Greed is good." And my generation said, "Yes, that's right."

My generation was all about asset accumulation. We could not, for instance, wait to buy homes. One of the reasons we have the 2000 housing market bubble in this country is my generation. We didn't stop with one home. We were the buyers, the rehabilitators, the flippers, the speculators. We could not wait to buy a home, and often one was not enough. These young people today don't seem to want to own anything. They rent their bicycles.

The only thing they seem to own are those Beats audio headphones and those, as I understand, are borrowed. And it's not just the decision of whether or not to rent or buy a dwelling unit. Take a deep dive into driver's license data to see how culturally different today's generation of young people is versus us. Sixteen- and 17-year-olds are not getting drivers' licenses the way we did when we were 16 or 17. When you were 16, what was the first thing you wanted? A driver's license was in the top two. My point is this, as a professional economist, if you're not getting a driver's license, you're not about to buy a car. It tells me that.

Now you watch, this thing is really going to change in the next ten years. Homeownership is going to come back with a vengeance in America. Why? Passage of time. Today generation Y, our largest generation, is between the ages of 16 and 35. They're also our most educated generation in US history. That's why they have so much student debt. They've spent a long time in school. That generation between 16 and 35, the essential tendency of that generation is in their mid-20s; most of them would be renters under most circumstances. In ten years, that generation will be between the ages of 26 and 45. Essential tendency becomes the mid-30s. What happens in those ten magical years? People have children, get married, often in that order, and all of a sudden renting may not be a best option. Moreover, home prices aren't rising in much of the country.

When I was growing up, we took buying a home as a good idea. It will make you money; it will make you richer. These young people do not have the luxury to think that way. They're seeing home prices rise, but they've also seen them collapse. They're not convinced that buying a home will make them wealthier. In fact, they believe something very different from that. However, as the housing market reestablishes its track record for building wealth not destroying it,

you'll see more young families buying homes and in many cases in the suburbs.

One of the things you'll hear about American young people is that these kids love the cities. Of course, they can't drive. In ten years when they have kids, they better know how to drive because there is soccer practice and sometimes even occasionally school.

Which brings me to my forecasts. Why do I call the forecast part of my presentation Psycho? Because you're a psycho if you think I can forecast. I think we economists have proven to you that we can't. In my own defense, I will say this, I've not fallen for the head fakes. There have been times when we get a good piece of data, GDP, or a really good jobs number, and economists would say, "Oh my goodness, now the US economy is ready to perform at normal levels of economic performance. Better than 3 percent growth."

During the 25 years that preceded the great recession, this nation averaged 3.25 percent growth. Once upon a time, 3 percent growth was not a big deal for this country. We've gotten a lot of head fakes, all to be supported with the next month of data or the next quarter of data. And that happened again with GDP in the first quarter. I've not fallen for the head fakes because my feeling is we can't get to 3 percent growth unless middleclass America is fully participating in the economic recovery. Now they're beginning to. We're adding more jobs, and hard quality jobs. So the outlook is not terrible, but I don't think we're going to make it to 3.1 percent growth this year. My forecast is 2.6 percent GDP growth for America.

To the extent that America gets close to 3 percent, it will be because the consumer is spending. It's not because of government spending; it's not net exports; it's not even business investment. It's consumer spending. Consumers are not that confident. That makes me a little nervous. Consumer confidence has actually been falling recently. But I still believe that given hard quality jobs, more jobs, consumers are going to break out their wallets and their purses this quarter or next. We have seen some improvement in retail sales the last two months. This is year-over-year percentage change in retail and food services sales, retail and restaurants basically.

Just the last couple of months after several months of weakness, things are getting a little bit better. On a year-over-year basis here's what retail sales growth looks like. [visual] I've broken down retail sales into various categories for you. This is from May 2014 to May 2015. I'm comparing the two months and asking how much sales have grown by category. The top category happens to be a sector called

food services and drinking places. It's a fancy way of saying restaurants and bars. By the way, it's one of the reasons that we economists almost never hook up is because we ask people questions such as, "Hey do you come to this drinking place often?" In any case, those sales were up 8.2 percent on a year-over-year basis. Pretty good. In fact, the category that includes grocery stores, which is food and beverage stores, was only up a little bit more than 3 percent. What does that tell you? The increment of dollars being spent more eating outside of the home than inside of the home is actually a sign of consumer confidence. They're spending outside. They're spending more on food.

More—that's your auto dealers. Actually, you can see some of the American lifestyle right here as it turns out. We Americans, we wake up, and we go to a bar and start drinking. Then we get into our cars and start driving and then while we're driving, we get on the Internet and start texting and tweeting while we're drinking and driving. Eventually we get to a health care store. That's the American lifestyle in a nutshell. Nothing to be proud of, but it drives an \$18 trillion economy.

This is national vehicle sales. [visual] Auto sales are way up. Again, a sign of confidence. You can see that auto sales have rebounded back to prerecession levels. I've colored the data for you, so the red is GM and Ford. That bottom segment, the dark red, is General Motors. Next up is Ford, then Chrysler, Honda, Toyota, Nissan, and then others are in blue. But you can see the overall wave. The pattern here is quite good, and auto sales have rebounded, and leading indicators remain positive.

Perhaps the best index of leading economic indicators in our country is produced by the Conference Board, a private organization in New York. The index readings continue to be positive, signaling ongoing economic expansion in America, and, in fact, America probably will have some of the best economic expansion in the advanced world over the next two to three quarters. That would be my forecast.

Where are we headed? The economy gained momentum over the course of last year and then again we lost it. We see this repeatedly to the extent that tailwinds remain, things pushing us forward. A lot of those things pertain to the US consumer. That's where the strength of the economy is going to be. A stock market that's solid, low gasoline prices, and low interest rates all help to boost consumer spending. Of course, job creation and income growth help as well.

This next bullet you might disagree with me. The current year's social great uncertainty regarding monetary policy.

You might say, “Anirban, that’s wrong. Everyone is wondering when Janet Yellen and the Federal Reserve will begin increasing interest rates. How do you call that certainty?” I’m not saying certainty, I’m saying greater certainty. Remember, last year was the end of quantitative easing in America. We had been buying \$85 billion each month in bonds, \$45 billion each month in US Treasury bills, \$40 billion each month in collateralized mortgage-backed securities, and \$85 billion each month purchased by the Federal Reserve in fixed-income assets. That ended last October. The question became, what does that mean for interest rates?

Interest rates, as it turns out, actually fell. The thing was unpredictable, unprecedented, who knew? We know what rising interest rates look like, and we know what short-term interest rates look like. Now people are asking the question, when will it begin? When will the Federal Reserve begin tightening monetary policy? September. Why do I say that? Because I think the data between now, this is June, and September are going to be quite strong. The US economy data are going to be quite strong, and that will induce the Federal Reserve to begin tightening in September. I know the bond market is saying no, that it is more likely to be in December or January. I know that. I’m betting against the market. I understand that. We’ll see in three months whether I’m right or wrong. I think September is the month.

What difference does it make? It makes a difference to traders perhaps, but not to people who are managing accounts over the long term. The point is whether it’s September or December or January, interest rates are going to head higher. One of the reasons for this, and you’ll see this next year, is that wage pressures are now building in the US economy. Watch for that. We economists have not talked about inflation for a long time. Next year we’re going to start talking about inflation, and that’s going to affect fixed income investments.

Obviously, it’s an upbeat forecast for the US economy that I’ve given you. The world is not perfect. All kinds of geopolitical risks are out there. I’ve listed some of them—Israel and Iran, another European financial crisis, obviously Greece. The Greeks are much in the news. Contagions, things like Ebola. Cyber security attacks, electromagnetic pulse. All kinds of risks are out there. You might ask the question, “Anirban, you don’t have ISIS on your list. Where

is ISIS?” Well, I was smart-alecky, I would say Iraq and Syria. But why is it not on my list? Because ISIS is happening right now. A black swan threat event is a low probability event. Low probability.

There are a lot of bad things happening in the world right now. ISIS is 100 percent; it’s happening right now. It’s not black swan; it’s happening. A lot of bad things happen in the world. This is on top of that. The list of potentials, of course, is endless. North Korea. When you’ve got nuclear weapons, and your best friend on the entire planet is Dennis Rodman, well that’s a combustible situation.

The stock market has been nervous on and off, but relatively nervous since the summer of last year. Volatility has been high, not constantly. There have been times when the market has become complacent, but volatility is a bit higher in general since last summer. My feeling is that it began with lower oil prices or falling oil prices where the equity market investor started looking at the oil market investor and asking questions: Do you see something we don’t? Do you foresee a weaker global economy than we in the equity market pits do? Because if that’s what you’re telling us, that’s corporate earnings and stock prices. Whereas, other people look at those falling oil prices and say that it’s good for corporate earnings. Prices are falling. So the series of actions began to bifurcate more violently, and you get more volatility.

Of course, more people benefit from lower oil prices than are hurt in America, despite all the progress America has made in producing more oil. We’re still a net importer of oil. More contractors and developers are helped than hurt, frankly. Lower oil prices just don’t make me that nervous from a US macroeconomic perspective.

However, something else does. What is that? A stronger US dollar. I really believe the dollar will get stronger from here on out. That really hits us in terms of net export category. Why do I believe that, by the way? Because our interest rates are going to start to rise this year, and as those interest rates start to rise, more money looking for those higher yields begins to flow to America. That raises the value of the dollar.

The Europeans by contrast are just now embarking on their own version of quantitative easing. My view is the euro down, the dollar up. Bad for net exports. That makes me nervous, and if we don’t get to the 2 percent this year, that will be the reason.