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> *"To love your country, to obey its laws, to seek its peace, and to keep yourselves from attachments to any foreign nation; your observance of these short and comprehensive expressions will make you good citizens, and greatly promote the cause of the oppressed, and show to the world that you hold dear the name of George Washington."* ~ Rev. Richard Allen, Founder of the African Methodist Episcopal Church in Philadelphia, during his eulogy of George Washington to the AME congregation.

Trump Policies: First Impressions

Beyond the impulsive tweets and counter-productive noise (e.g. inauguration crowd size, alternative facts, a "ban" or "not a ban," bathrobes, wiretaps, etc.) surrounding the new administration, President Trump was quite prolific on the policy front over the last 2 months. In fact, he issued 36 Presidential Actions, of which 17 were Executive Orders as of March 17, 2017. Technically, Presidential Actions fall into three categories:

- Executive Orders are published in the Federal Register, as are laws passed by Congress, and generally implement a new policy for the Executive branch;
- Presidential Memoranda usually delegate tasks that Congress has already assigned the President to members of the executive branch;
- Proclamations can carry great weight (e.g., the Emancipation Proclamation), while others are ceremonial (e.g., awareness months).

As a point of reference, President Obama issued 277 Executive Orders over his 8 years (35 per year), which is in line with his modern predecessors. However, over his first 8 weeks, when the spotlight was shining most brightly, President Obama issued 18 executive orders. Contrary to the media's portrayal, President Obama was even more active than President Trump's "hyper-active" first eight weeks in office. In each case, the newly-elected President aggressively pursued his campaign promises to the delight of his electoral base and the utter despair of his opponents. Focusing primarily on President Trump's Executive Orders and a few select Presidential Memoranda, we attempt here to apolitically sift through the substance of this administration's intended policies, as they relate to commercial real estate and the broader economy.

Leading up to the 2016 Presidential election, candidate Trump and Republican Congressional candidates promised to "repeal and replace" the Affordable Care Act (a.k.a., ACA/Obamacare), so it was neither a surprise that his first Presidential Order sought to unwind ACA, nor that on March 6, Republicans released their healthcare proposal, dubbed

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President Trump's Executive Orders

#	Date Signed	Presidential Executive Order On:
1	20-Jan-17	Minimizing the Economic Burden of the Patient Protection and Affordable Care Act Pending Repeal
2	24-Jan-17	Expediting Environmental Reviews and Approvals For High Priority Infrastructure Projects
3	25-Jan-17	Border Security and Immigration Enforcement Improvements
4	25-Jan-17	Enhancing Public Safety in the Interior of the United States
5	27-Jan-17	Protecting the Nation from Foreign Terrorist Entry into the United States
6	28-Jan-17	Ethics Commitments by Executive Branch Appointees
7	30-Jan-17	Reducing Regulation and Controlling Regulatory Costs
8	3-Feb-17	Core Principles for Regulating the United States Financial System
9	9-Feb-17	Providing an Order of Succession Within the Department of Justice
10	9-Feb-17	Enforcing Federal Law with Respect to Transnational Criminal Organizations and Preventing International Trafficking
11	9-Feb-17	Preventing Violence Against Federal, State, Tribal, and Local Law Enforcement Officers
12	9-Feb-17	A Task Force on Crime Reduction and Public Safety
13	24-Feb-17	Enforcing the Regulatory Reform Agenda
14	28-Feb-17	The White House Initiative to Promote Excellence and Innovation at Historically Black Colleges and Universities
15	28-Feb-17	Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the "Waters of the United States" Rule
16	6-Mar-17	Protecting The Nation From Foreign Terrorist Entry Into The United States
17	13-Mar-17	Comprehensive Plan for Reorganizing the Executive Branch

Source: https://www.whitehouse.gov/briefing-room/presidential-actions/executive-orders

figure 1

the "American Health Care Act" (AHCA/Trumpcare). However, from that day forward, the AHCA faced serious opposition even within the Republican Party, and ultimately died in dramatic fashion on March 24. The conservative House Freedom Caucus did not believe the AHCA went far enough in repudiating the ACA, while moderate Republicans balked at changes that attempted to appease the Freedom Caucus.

Trumpcare had sought to eliminate hefty Obamacare taxes levied on upper income earners; provide young and healthy citizens with more choices (including less expensive scaled-down plans); eliminate employer requirements for providing health insurance to employees; and eliminate the cap on deducting executive pay as a business expense. Healthy young adults and higher income individuals would have seen net cost declines, while lower income families and older Americans (50-60 year-olds) would have faced higher premiums and deductibles compared to what they paid under Obamacare.

Under the Republican proposal, insurance for those with pre-existing conditions would have remained protected, while the individual mandate to purchase health insurance (along with the penalty for not purchasing) would have gone away. In an attempt to avoid people getting insurance only when they become ill, Trumpcare would have enabled insurers to assess a 30% premium surcharge if an individual let his or her coverage lapse.

Gallup Poll Initial Job Approval Ratings of Elected U.S. Presidents

	Dates of First Poll	Approve (%)	Disapprove (%)	No opinion (%)
Donald Trump	2017 Jan 20-22	45	45	10
Barack Obama	2009 Jan 21-23	68	12	21
George W. Bush	2001 Feb 1-4	57	25	18
Bill Clinton	1993 Jan 24-26	58	20	22
George H. W. Bush	1989 Jan 24-26	51	6	43
Ronald Reagan	1981 Jan 30-Feb 2	51	13	36
Jimmy Carter	1977 Feb 4-7	66	8	26
Richard Nixon	1969 Jan 23-28	59	5	36
John F. Kennedy	1961 Feb 10-15	72	6	22
Dwight Eisenhower	1953 Feb 1-5	68	7	25

figure 2

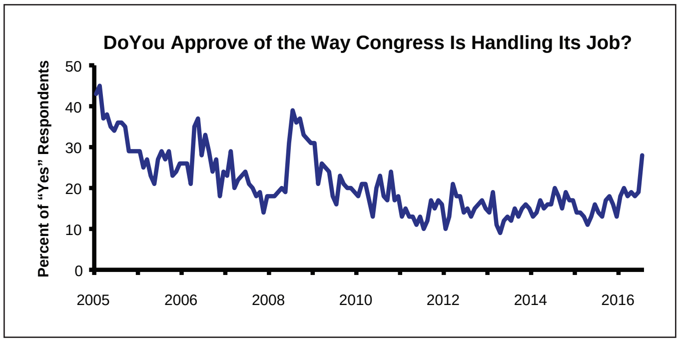


figure 3

Obamacare's upfront subsidies for premiums would have been eliminated, replaced by refundable tax credits based on age and income. The Federal funding for Medicaid would have stayed the same through 2019, but the ACA's expansion of Medicaid after 2019 would have been eliminated.

The Congressional Budget Office (CBO) issued a report indicating that 14 million fewer people would be insured in the first year of AHCA versus ACA. However, the CBO also reported that "most" of these 14 million individuals would not have enrolled in ACA absent Obamacare penalties. That is, these individuals would rather spend their money in other ways. In 2016, an estimated 8 million people paid $3 billion in ACA individual mandate penalties, while 11 million tax payers claimed an ACA exemption from non-enrollment penalties, up from 10.7 million the previous year. As the number of hardship exemptions increases, ACA pricing is driven up for others.

It remains to be seen what the future holds for changes in Obamacare. It is worth remembering that it was withering in Congress until it suddenly leapt into existence by a strong push by President Obama and Democratic leadership, and the utilization of a variety of parliamentary tricks. Only time will tell.

Another campaign target of President Trump was the Trans-Pacific Partnership Negotiations and Agreement (TPP), an economic pact between 12 nations bordering the Pacific Ocean (U.S., Japan, Malaysia, Vietnam, Singapore, Brunei, Australia, New Zealand, Canada, Mexico, Chile, and Peru). Together, these nations account for 40% of global trade. The proposed partnership promised to reduce tariffs and foster trade. It was dead as a doornail by mid-year 2016 as Congressional Democrats (including both Secretary Clinton and Senator Sanders) opposed the Treaty, but on January 23, President Trump presided over its funeral by signing a Presidential Memorandum declaring U.S. withdrawal from the TPP. The President characterized

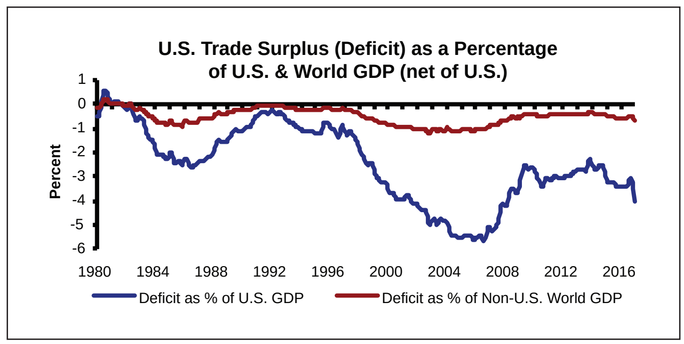


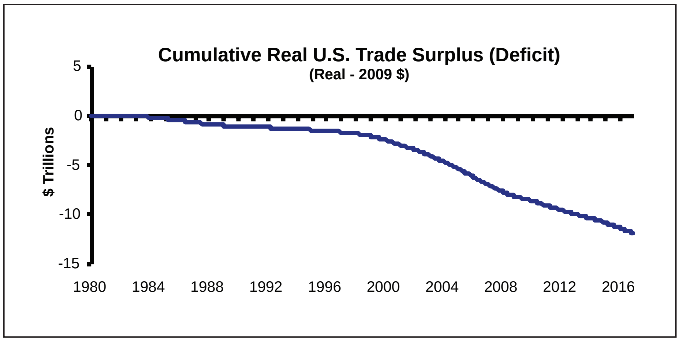
figure 5

President Trump's Presidential Memoranda

#	Date Signed	Presidential Memoranda Regarding:
1	20-Jan-17	The Heads of Executive Departments and Agencies
2	23-Jan-17	Mexico City Policy
3	23-Jan-17	Withdrawal of the United States from the Trans-Pacific Partnership Negotiations and Agreement
4	23-Jan-17	The Hiring Freeze
5	24-Jan-17	Streamlining Permitting and Reducing Regulatory Burdens for Domestic Manufacturing
6	24-Jan-17	Construction of American Pipelines
7	24-Jan-17	Construction of the Keystone XL Pipeline
8	24-Jan-17	Construction of the Dakota Access Pipeline
9	27-Jan-17	Rebuilding the U.S. Armed Forces
10	28-Jan-17	Organization of the National Security Council and the Homeland Security Council
11	28-Jan-17	Plan to Defeat the Islamic State of Iraq and Syria
12	3-Feb-17	Fiduciary Duty Rule
13	6-Mar-17	The Secretary of State, the Attorney General, the Secretary of Homeland Security

Source: https://www.whitehouse.gov/briefing-room/presidential-actions/presidential-memoranda

figure 4



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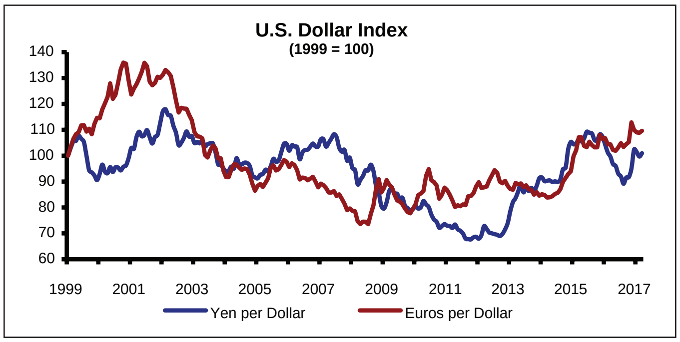


figure 7

the Treaty as favoring big business and other countries at the expense of American jobs. The other nations may move forward with a variant of TPP, but the U.S. withdrawal significantly lessens its scope.

The biggest losers resulting from U.S. withdrawal from TPP appear to be Singapore, Vietnam, and, Malaysia, as they are seeking to expand their global trade footprints, while the biggest winner could be China, as it fills a global trade "leadership" vacuum.

President Trump declared a freeze on hiring Federal civilian employees in the Executive branch. Specifically, "no vacant positions existing at noon on January 22, 2017, may be filled and no new positions may be created, except in limited circumstances." Exemptions include military personnel and any positions deemed to satisfy national security or public safety requirements. President Trump also issued Memoranda indicating his intention to expand the U.S. Armed Forces and to move forward with the construction of American oil and gas pipelines. The hiring freeze will not offset the proposed $54 billion increase in defense spending. President Trump, like all recent Presidents, has not proposed a coherent budget plan, much less one that addresses the looming Baby Boom driven Social Security/Medicare budget explosion.

President Trump also issued a Memorandum vowing to "support the expansion of manufacturing in the United States through expedited reviews of and approvals for proposals to construct or expand manufacturing facilities and through reductions in regulatory burdens affecting domestic manufacturing." If enacted, this would be positive for the U.S. industrial sector.

A Memorandum issued on February 3 addressed the Fiduciary Duty Rule, which is currently scheduled to be phased in April 10, 2017 to January 1, 2018. Currently the rule only applies to those who work on commission, requiring that advisors act in the best interest of their clients, and disclose all conflicts of interest, fees, and commissions. Previously, non-commissioned financial advisors have been required to conform to a "Suitability" standard, which only required that investment recommendations met a client's defined need and objective. The Trump Memorandum puts the Fiduciary Rule's implementation on hold, pending further examination.

> *"The rights of every man are diminished when the rights of one man are threatened."* ~ John F. Kennedy
>
> *"Until justice is blind to color, until education is unaware of race, until opportunity is unconcerned with the color of men's skins, emancipation will be a proclamation but not a fact."*
> ~ Lyndon B. Johnson

The Executive Order that has garnered the most attention is the proposed immigration ban, which was first issued on January 27, and was revised and reissued on March 6. The revised Order sought to ban immigrants from the nations of Iran, Libya, Somalia, Sudan, Syria, and Yemen, purportedly in order to protect our nation from potential terrorists. Both immigration related Executive Orders were blocked by federal judges, the first in Washington State and the second in Hawaii and Maryland.

Our stance remains that legitimate immigrants are the backbone of the U.S. We have written many articles in ***The Linneman Letter*** over the years which summarize research showing that immigrants fuel our economy. See, for example, past pieces (we are happy to resend these to you): "Immigration Fuels Growth" Summer 2005; "We Must Welcome Immigrants," Summer 2006; "Facts About Foreign-Born Immigrants," Fall 2014; "The Impact of Immigration on Citizen Welfare" and "Ten Facts You Should Know About U.S. Immigration, Spring 2015. The (real) facts confirm what we wrote 2 years ago: "immigration greases the wheels of the labor market, particularly where labor market frictions are high."

While we believe that President Trump is not racist and intends the immigration ban as a way to improve the U.S., it will not achieve this goal. Unfortunately, early indicators show a direct link between these Executive Orders and a decline in tourism from overseas. New York City projects 300,000 fewer international visitors in 2017 compared to 2016. ForwardKeys, a travel analytics firm, reported that online flight searches and bookings from abroad fell 6.5% after the January 27 Order. Bookings went back up when the courts ruled against it, but then dropped again with the revised Order.

There is much to follow due to President Trump's almost daily activity. We will continue to monitor the issues as they relate to the economy and real estate.

> *"If you once forfeit the confidence of your fellow citizens, you can never regain their respect and esteem. It is true that you may fool all of the people some of the time; you can even fool some of the people all of the time; but you can't fool all of the people all of the time."* ~ Abraham Lincoln

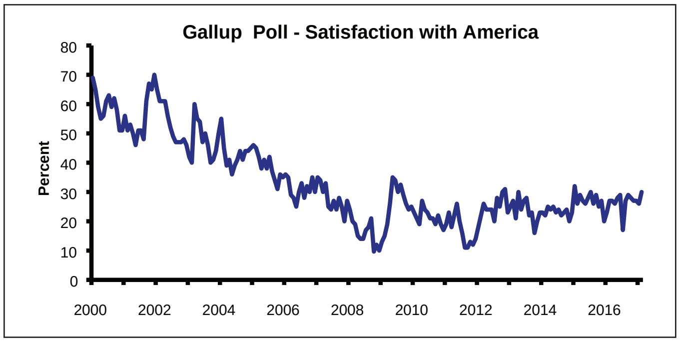
> *"Extremes to the right and to the left of any political dispute are always wrong."*
> ~ Dwight D. Eisenhower

President Obama's Economic Report Card

We have been frequently asked what economic report card we would give to the Obama administration. President Obama entered office with a Congressional super majority and a seeming mandate to remake the U.S. economic framework. The model for this remake was that of the social democracies of France, Germany, Japan, and Scandinavia, where "market forces are tamed by politicians," and resource redistribution is more important than economic growth. What the incoming Obama administration failed to grasp was that the French and Japanese economies were in shambles as a result of social democratic policies crushing supply-side growth, while both Germany and the Scandinavian countries had already introduced radical free-market reforms in response to decades of anemic economic growth. During the Obama administration, we saw a prolonged period of economic policy uncertainty, federal budget deficits unlike any the U.S. has ever experienced in peacetime, the complete reorganization of the U.S. healthcare system, the prolonged extension of unemployment benefits, a de facto reduction of worker disability standards, a sweeping change of financial system regulations, the introduction of a new consumer protection agency, and an explosion of regulations on every front (largely delivered by agency fiat and executive orders after the first 2 years in office).

Strange Politics

That the Alt-Right supports Vladimir Putin is as strange as the fact that "freedom loving" leftist academics long supported Joseph Stalin. These leftists claimed to desire transparency and accountability in leadership, as well as a better life and voice "for the people." In contrast, what Joseph Stalin delivered was suppression, brutality, and tyranny. Yet the left continued to support Stalin in the belief that he was somehow liberating the proletariat. Today's Alt-Right political movement in the U.S. supports Putin as if he is the poster boy of a better life, fairness and a voice for "the common man." But nothing could be further from the truth, as he believes that what is good for him is good for the people. "So shut up and enjoy all the magnificent things I'm doing for you," is his mantra. That anyone who believes in freedom and democracy could support Putin's view is beyond our comprehension. We hope that the passage of time will erode this strange relationship.



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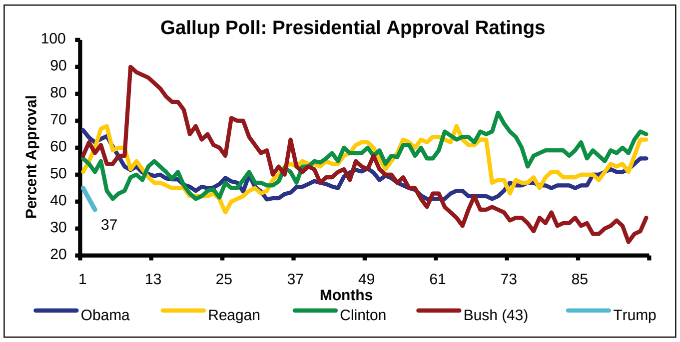


figure 9

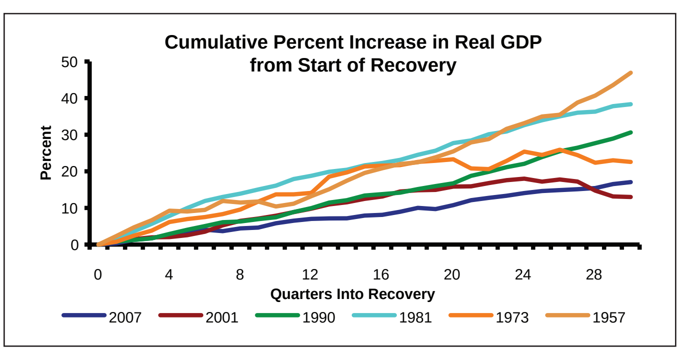
So what does the U.S. economy have to show for this heightened policy activity? Certainly not a reduction in income disparity. And while the U.S. stock market (as measured by the Dow Jones Industrial Average) was up by 90.5% on Election Day 2016 versus the day President Obama was elected, this was primarily attributable to the typical cyclical normalization of multiples and profits.

Most telling, is that although real GDP is up 12.8% from the third quarter of 2008, it remains $3.1 trillion below its long-term trend. This 14.3% deviation of real GDP from its long-term trend, which has developed over the past 8 years, amounts to about $210,000 per capita in cumulative lost GDP over this period. This is the additional GDP we would have had if the U.S. had simply cyclically regained its lost real GDP, as has been the case with all past recoveries. But instead of the usual robust recovery following an extraordinarily deep recession, economic growth over this recovery has been tepid, running 80 bps below its long-term trend, with real GDP growth about 2.1% versus the long-term GDP growth rate of about 2.9%.

Meanwhile, the recovery of the U.S. labor market has been long but slow. The unemployment rate of 4.7% today is good, but partially attributable to an abnormally low labor force participation rate, as millions of Americans have not returned to the labor force, choosing instead to collect disability or unemployment payments.

The single-family housing market, a prime engine of the U.S. economy and middle-class employment, remains a shadow of itself after 7 years of recovery. It has a cumulative underproduction versus an implied historical norm (1976-2001) of approximately 1.6 million units (based on 1.1 million housing units per year). This is almost completely attributable to the Fed's (whose members are appointed by the President) unprecedented policy of imposing absurdly below-market interest rates for 7 years. These low rates have sapped the ability of short-term safe savers to generate the income necessary to fund down payments for home purchases. These interventionist policies reflect

The single-family housing market, a prime engine of the U.S. economy and middle-class employment, remains a shadow of itself after 7 years of recovery.



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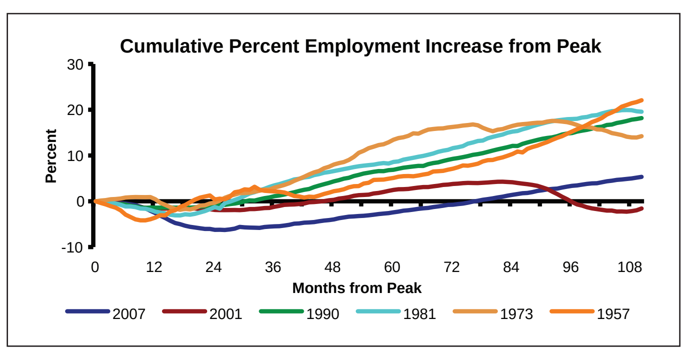

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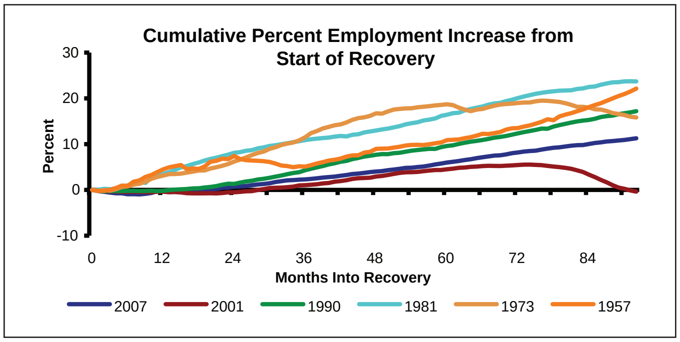


figure 12

a core belief of social democracies that "government knows better than markets."

Due to the high regulatory burdens and high corporate taxes (relative to the rest of the world), U.S. investment activity remains low, and manufacturing output was up only 15.9% during the Obama administration's term. Examples of regulatory burdens include nearly 300,000 restrictions faced by U.S. manufacturers, and 30,000 restrictions arising from Dodd-Frank (which in spite of being passed in 2010 still has nearly one-third of its rules unwritten). And while we suggested the Volcker Rule before Volcker, it took us (and Volcker) a few sentences versus the labyrinth 300 pages which eventually described the rule. It is estimated that compliance with Dodd-Frank has required 73 million pages of paperwork and $36 billion. A Minneapolis Federal Reserve study concludes that the addition of just 2 compliance officers swings one-third of small banks into the red. Meanwhile the U.S. tax structure spirals out of control. An estimated 7.6 billion hours (roughly 55 hours per household) and $28 billion are required each year for Americans to file their taxes, after which few are sure that they have correctly computed their taxes. And these burdens only scratch the surface.

In short, while there was substantial growth during the Obama years, this was attributable to the normal recovery which always occurs as the U.S. economy comes out of an economic downturn. After a full 8 years of the Obama administration's social democratic economic policies, the U.S. has achieved the same outcome as the social democratic economies of Europe and Japan: slow economic growth. While slow growth is better than no growth, it exacted a huge human toll on a per capita basis, without any reduction of inequality. Those who praise radical economic interventions such as TARP and the bail-out of the auto companies (neither of which we believe helped the economy, but are widely viewed as economic saviors), fail to remember that these were Bush administration policies. So if you believe that these policies saved the U.S. economy (a view which we do not share), then full credit must go to the Bush administration, not to the Obama administration.

All in all, the university professor in the U.S. gives a gentleman's C to the Obama administration's economic policies (far better than that of the Bush years). And this reflects today's "no one fails" approach to grading. But any 8-year period where real GDP and employment fell so far behind long-term U.S. patterns cannot be awarded a higher grade.

Economy Watch: Key Indicators

Do we still believe that there will not be a recession until 2019? The answer is yes, because prolonged growth breeds excess, and excesses sow the seeds for a recession. However, to date no obvious excesses exist in consumer behavior. While consumer confidence is rising, it is holding tight just above the long-term average. And as long as we collectively believe that catastrophe is just around the corner, catastrophe is unlikely, as caution prevents accidents. Thus, we believe that the recovery phase of the business cycle is still in the bottom of the sixth inning. However, from a capital markets perspective, the days of "cheap money" have entered the ninth inning, and will soon be the stuff of once-in-a-lifetime industry lore.

After bottoming at 25.3 in 2009, the Conference Board Consumer Confidence Index rebounded over the last 7 years, jumping to 114.8 in February 2017. The current level is about 230 bps above the historical average (1977-present), 200 bps higher than one year earlier, and has surpassed the 2007 pre-recession level of

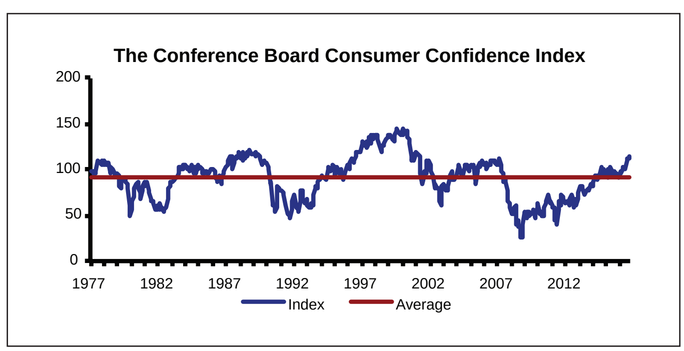


figure 13

Post-War Recoveries: First Glance Suggests the 9th Inning

	Average	Most Robust	Least Robust	Current*
Number of Months From Bottom To Peak	59	120	12	90
Unemployment Rate At Peak	4.9	2.6	7.4	4.7
Consumer Confidence Index At Peak	92	114	82	108
% Change From Bottom To Peak				
Real GDP	25	52	4	17
Employment (Total Nonfarm)	15	33	2	10
Industrial Production	32	75	5	19
Real Retail Sales	17	37	-1	22
Difference From Bottom To Peak (bps)				
Employment To Population Ratio	201	537	-27	10

*Note: * as of fourth quarter of 2016*

Post-War Recoveries: Second Look Suggests 6th Inning

	Average	Most Robust	Least Robust	Current*
Number of Months From Bottom To Peak	59	120	12	90
Unemployment Rate At Peak	4.9	2.6	7.4	4.7
Consumer Confidence Index At Peak	92	114	82	108
% Change From Peak To Peak				
Real GDP	23	52	2	12
Employment (Total Nonfarm)	12	30	1	5
Industrial Production	23	66	-1	-1
Real Retail Sales	14	32	-5	6
Difference From Peak To Peak (bps)				
Employment To Population Ratio	62	370	-157	-307

*Note: * as of fourth quarter of 2016*

figure 14

111. The improvement since 2009 reflects sustained increases in net household wealth, continued job growth, and most recently — a post-election pop.

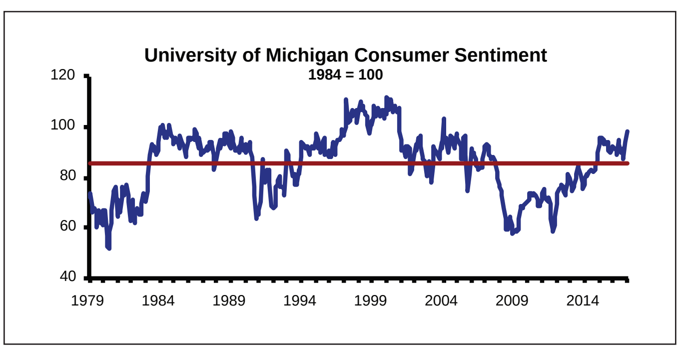


figure 15

Even with rising post-election consumer confidence, this metric suggests that the economy is still 1-2 years away from a recession. Only after consumer confidence has been well above average for several years do hubris and exuberance set in, sowing the seeds of recession. While we are not there yet, an early sign of market euphoria can be seen in the sharp jump in small business optimism in December 2016 and January 2017, as small business owners displayed hope in the new administration.

The Economic Policy Uncertainty Index (EPUI) is also an important metric to watch in terms of gauging the economy. The EPUI has a long-term average of 108 based on data from 1985 through today, and settled in at 135.5 in February of 2017, after spiking at 169.4 in

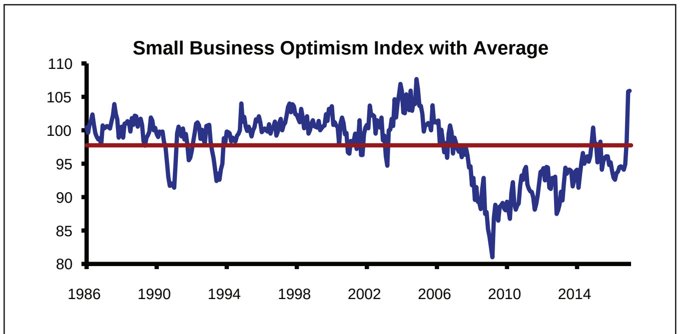


figure 16

November amid election and interest rate uncertainty. The EPUI is based on three major components:

- A search of key words and phrases (e.g. uncertainty, economy, congress, legislation, etc.) in 10 major U.S. newspapers;
- The number of temporary federal tax provisions as reported by the Congressional Budget Office; and
- Examination of the Federal Reserve Bank of Philadelphia's Survey of Professional Forecasters, and specifically the level of disagreement among forecasters.

With the election behind us and the equity markets clearly liking the Trump Presidency, we expect the Uncertainty Index to retreat a bit more, but will remain above average for much of 2017 as the policy landscape (for better or worse) becomes more clearly defined.

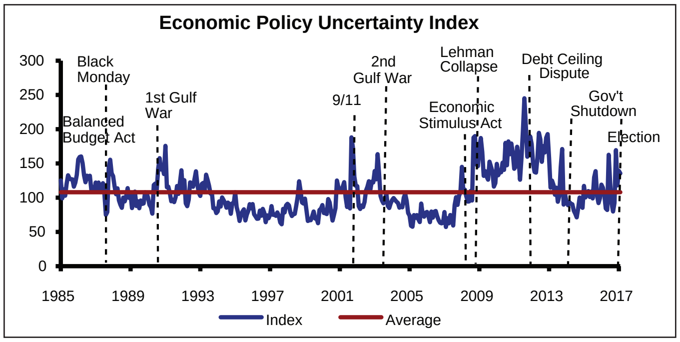
We remind readers to keep a close eye on weekly initial unemployment claims. If this number is below 300,000, it suggests that the labor market is in pretty

On the Road to Recovery: Then vs. Now

	2009	2016/2017*	% Change
Real GDP ($ billions)	$15,855.8	$18,560.2	17.1
Real Per Capita GDP	$51,710.9	$57,202.5	10.6
Real Retail Sales ($ millions)	$330,008.5	$405,010.9	22.7
Real Median Home Price Index (FHFA)	191.9	238.1	24.0
Durable Industrial Output Index	77.9	108.1	38.8
Non-Durable Industrial Output Index	97.0	102.5	5.6
Real Per Capita HH Net Worth	$201,831.3	$281,690.2	39.6
Payroll Employment (000s)	131,451.3	145,798.0	10.9
Unemployment Rate (%)	9.3	4.7	-49.5
Conference Board Consumer Confidence Index	48.3	114.8	137.6
Median Weeks Unemployed	14.8	10.0	-32.6
Capacity Utilization Index	67.1	75.5	12.5
SA Auto & Light Truck Sales - Thousands	809.7	1,455.4	79.8
Median Home Price-to-Per Capita DPI	6.0	7.1	17.5
Profits After-Tax ($ billions)	$1,177.2	$1,552.8	31.9
Percent of Industries Adding Workers (LTM Avg)	29.4	54.2	84.0
Multifamily Starts (SAAR 000s)	99.0	396.0	300.0
Single-Family Starts (SAAR 000s)	425.7	872.0	104.9
Real Home Prices ($) (Census)	$240,019.3	$309,489.4	28.9
Real REIT Value Index	438.6	1,142.0	160.4
Real Private Real Estate Value Index	118.6	215.9	82.1
Real Average Office Rent PSF	$24.14	$29.87	23.7
Office Vacancy (%)	13.7	11.2	-18.7
Real Median Multifamily Rent (Census)	$782.7	$847.6	8.3
Apartment Vacancy (%)	8.3	7.2	-13.0
Hotel Occupancy (%)	57.6	65.5	13.8
Real RevPAR	$59.43	$81.35	$36.89
Real Average Industrial Rent PSF	$6.40	$6.42	0.3
Industrial Vacancy (%)	10.1	3.9	-61.6

**Quarterly data through 4Q16; latest monthly varies, Dec 2016-Feb 2017.*
SAAR indicates seasonally-adjusted annual rates.
All dollars in real 2015 dollars.

figure 17



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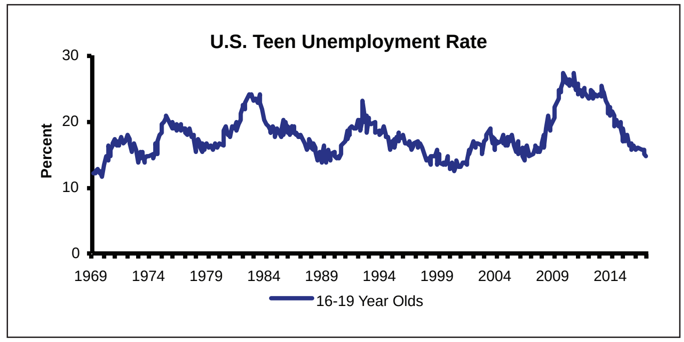

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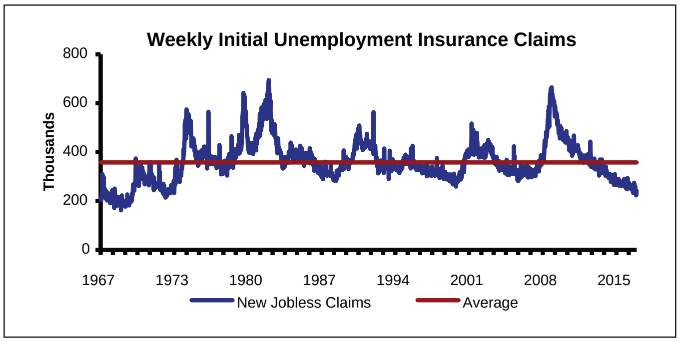

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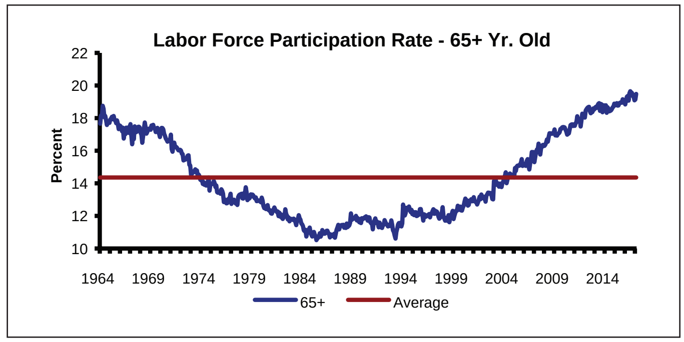


figure 22

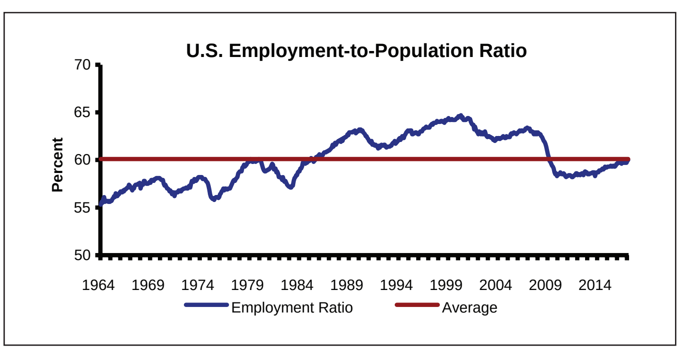
good shape. But if it rapidly moves upwards for 2-3 months, the economy is weakening notably. Averaging 234,000 in February and 242,000 in the first half of March, weekly initial unemployment claims have not been this low since the early 1970s.

The employment-to-working age population ratio (60% in February 2017) has risen 130 bps over the past 2 years. We believe this pattern will continue, with an expected ratio of about 62% in 2018.

If interest rates rise, low-risk savers will finally shed the de facto 100% tax on their safe savings, and with a two-year lag, single family housing demand will finally boom.

Standing at 15% in February 2017, youth unemployment continues to recover, and is now 1,220 bps below its recessionary peak, and 270 bps below its historic average of 17.8%. This shows the breadth of labor market strength, though teen labor force participation rates must move beyond the current historical lows.

Single-family housing continues its slow recovery, remaining a staggering 2.6 million units below its historic norm.



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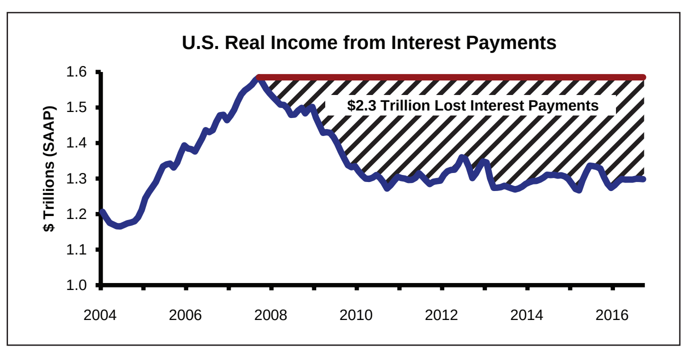
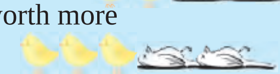


figure 23

This is because artificially low interest rates hindered potential buyers in accumulating a down payment. If interest rates rise, low-risk savers will finally shed the de facto 100% tax on their safe savings, and with a two-year lag, single family housing demand will finally boom.

Canary Watch Box

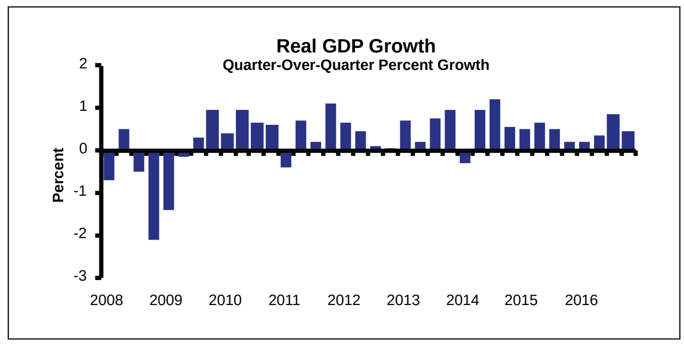
Like miners who brought canaries into mine shafts to detect toxic gas levels, we are tracking what we believe are key early indicators which signal a peaking market. On a scale of 1 to 5 canaries, the "danger zone" rises as canaries die. Currently, most of our canaries are alive and chirping loudly, suggesting continued growth, though a few have passed on. We started with 40 canaries, and are down to 26, including 1 that we brought back to life in the second quarter of 2016, as commercial mortgage lenders showed surprising restraint. Thus, the majority of canaries are still chirping, and the noxious fumes of greed are (mostly) still in check.

- Increase in payment-in-kind (PIK) financing 
- Massive commercial mortgage growth 
- Speculative real estate development boom 
- First mortgage lending replaces mezzanine loans 
- Mezzanine lending replaces equity 
- Narrow spreads and rising LTVs 
- Record buyout deals 
- Empty space worth more than full space 

U.S. Growth Continues

We expect 2.2% (annualized) real GDP growth in the first quarter of 2017. Employment grew by 445,000 jobs (0.3%) in the fourth quarter of 2016, driving real annualized GDP growth by 1.9% over the same period. New weekly unemployment claims have trended downward since the 2009 peak of 665,000, and have averaged just 250,000 over the six months through mid-March 2017. This is well below the 300,000 threshold for labor market strength, and is basically the lowest level in more than 40 years. As a result, consumer confidence continues to rise, but is still within reach of the long-term average. Fourth quarter-GDP growth compares to 0.9% and 3.5% annualized growth in the fourth quarter of 2015 and the third quarter of 2016, respectively. Solid job creation and low new unemployment claims continue to indicate growth into the first quarter.

Trend Analysis. By the end of the fourth quarter of 2016, real GDP and per capita real GDP exceeded their pre-recession highs by 12% and 4.5%, respectively. Year-over-year real GDP growth of 1.9% in 2016



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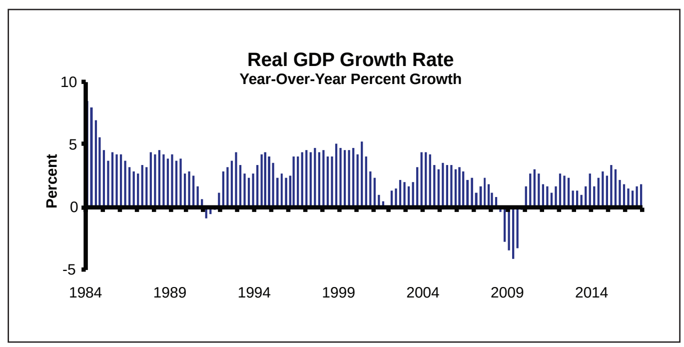

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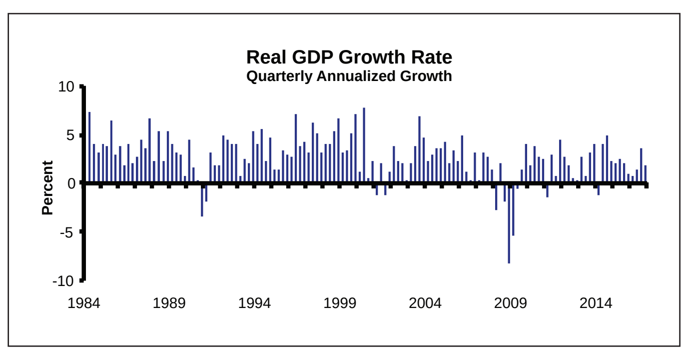
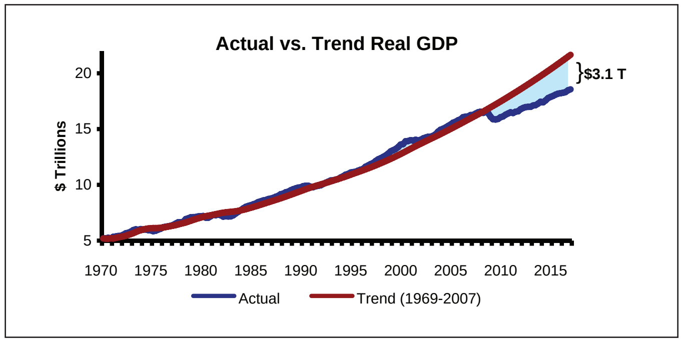


figure 26

reflects 75 basis points (bps) of growth from population increases (versus about 95 bps over the past 40 years) and only 115 bps from productivity growth (versus a norm of about 200 bps). The sluggish recovery of the housing market has resulted in a cumulative production shortfall of almost $1.5 trillion.

The U.S. today is the richest large economy in the history of the world. But GDP remains nearly $3.1 trillion (14.3%) below its long-term trend GDP. This gap is a stunning cumulative shortfall of $9,529 per capita. Real GDP and real GDP per capita remain 1.4 and 1.2 standard deviations below trend, respectively. About 40% of the gap relates to the under-production of single family housing over the last decade, with the Fed's low interest rate policy handicapping recovery.

Over the 77 months since post-recession employment growth began, through February 2017, the U.S. has averaged 191,000 new jobs per month. Despite strong job growth in January (238,000) and February (235,000), the economy remains nearly 19.2 million jobs (0.97 standard deviations) below trend, an employment gap about equal to all jobs in New York, New Jersey, and Pennsylvania. Labor market strength is seen in the fact that through January 2017 (latest available), 42 of the 45 MSAs we track have more jobs today than at their respective pre-recessionary peaks, versus 39 MSAs a year ago and 28 (out of 44 markets) two years ago. Today, only the Cleveland, Detroit, and Fairfield County, CT MSAs have fewer jobs than when the Financial Crisis began, with Cleveland and Fairfield County losing jobs over the last 12 months. Meanwhile, the U.S. job gap between actual versus trend has declined by 306,000 since its peak in February 2014. Job growth totaled nearly 2.4 million over the past 24



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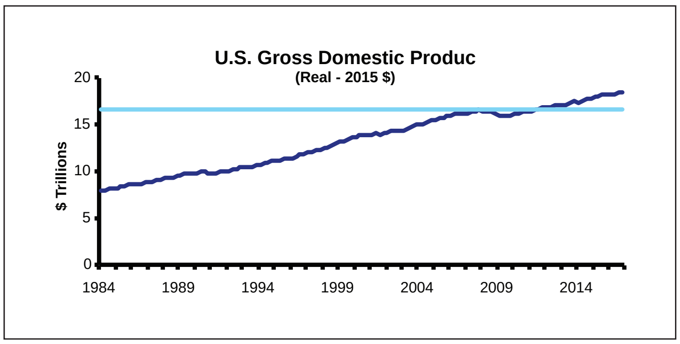

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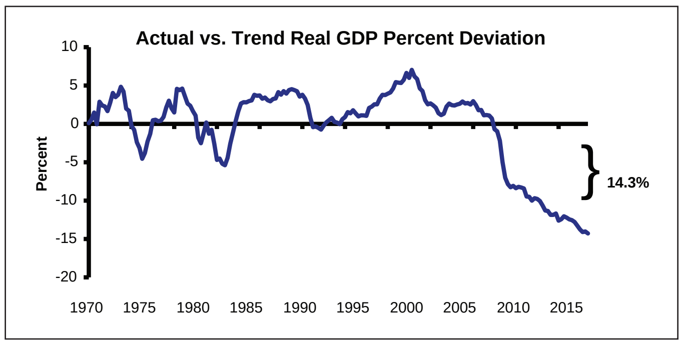

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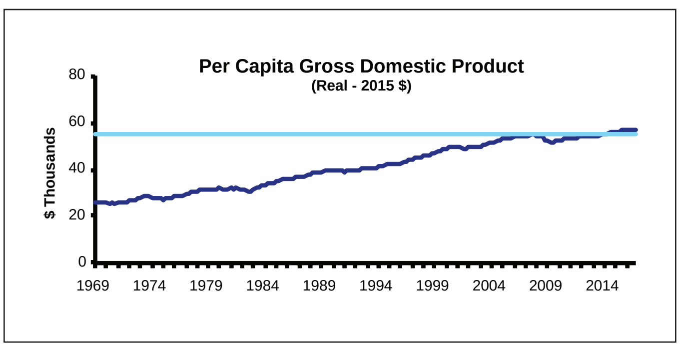

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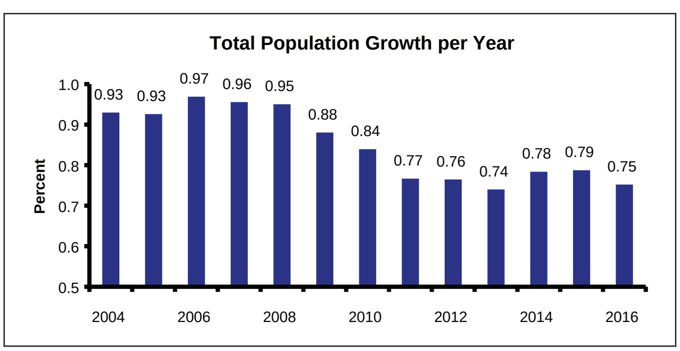

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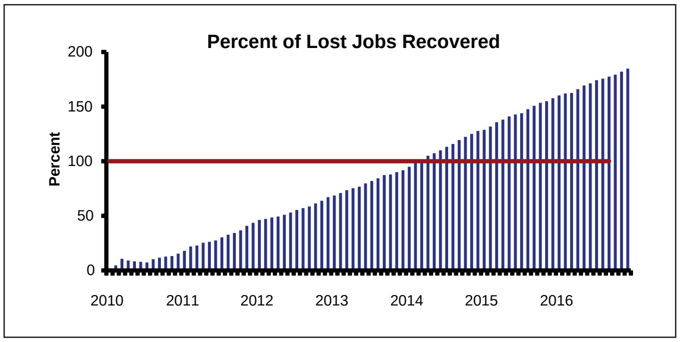

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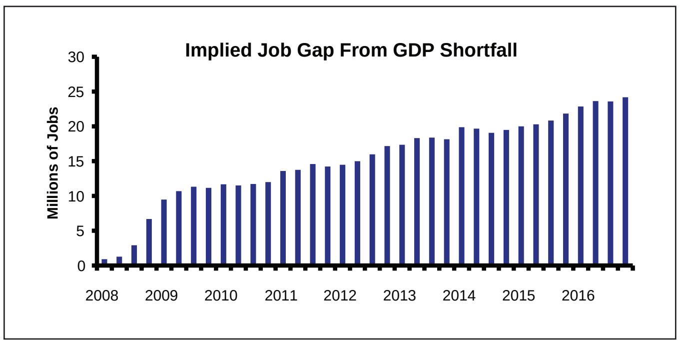


figure 33

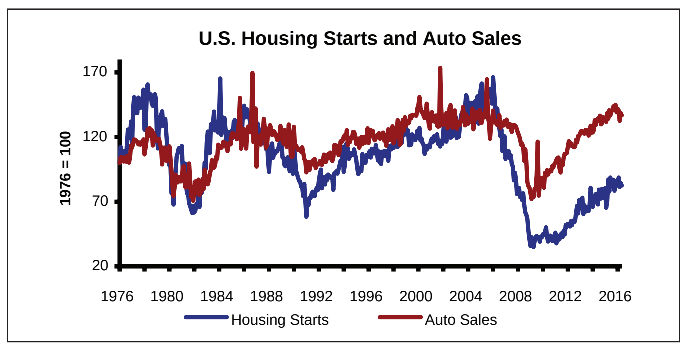
Auto & Light Truck Production Shortfall			
Average Value per Vehicle	$32,560		
Production Shortfall Since 2003	6,812,904	vehicles	
Multiplier	1.5		
Pent-up Production Value	**$333**	**billion**	
GDP Gap	$3,092	billion	
Pent-up Auto % of GDP Gap	**10.8%**		
Housing Production Shortfall			
Multifamily Shortfall (units)	924,465		
Multifamily Average Cost	$147,578		
MF Shortfall Value	$136.4	billion	
Multiplier	1.5		
	$204.6	billion	7% of GDP
Single Family Shortfall (units)	2,594,861		
Latest SF Average Cost (new)	318,854		
SF Shortfall Value	$827.4	billion	
Multiplier	1.5		
	$1,241.1	billion	40% of GDP
MF+SF Shortfall Value	$964	billion	
Multiplier	1.5		
Total Value of Pent-up Housing	**$1,446**	**billion**	
GDP Gap	$3,092	billion	
Pent-up Housing as % of GDP Gap	**46.8%**		

figure 34

months through February 2017, while the U.S. added just under 2.2 million people. This is clearly an unsustainable job growth rate, and will slow as the economy continues to grow.

Single-family housing production remains weak, even though it is up 3.2% year-over-year. The Fed's low interest rates are hampering the ability of households to accumulate required down payments, causing a 2.6 million-unit single family housing production shortfall since the start of 2002. And while auto sales are strong, the U.S. has produced about 6.8 million cars fewer than the historic norm over the past decade, down from the peak 10.2 million-car cumulative shortfall registered in 2013. We estimate that the housing sector shortfall amounts to nearly $1.5 trillion of pent-up economic activity, while for autos it is $333 billion. Combined, housing and autos represent 57.5% of the real GDP gap.

Based on the latest available data (varying by indicator), real per capita household net worth, the unemployment rate, median home prices-to-per capita disposable personal income, multifamily housing starts, and real Census home prices are at or above



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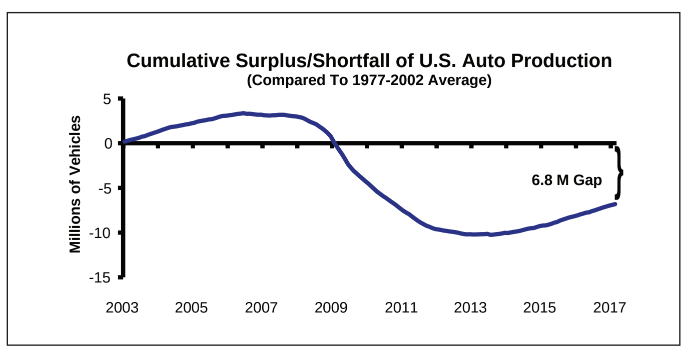


figure 36

their respective trends. Despite the above-trend performance of the Census Bureau's real Home Price Index, the real median home price index reported by the Federal Housing Finance Agency (FHFA) is still 1.33 standard deviations below trend (though improving). Multifamily housing starts stood at a robust annualized rate of 396,000 units in February 2017 (2.9 standard deviations above norm). Other key economic metrics remain below their long-term norms, with third quarter-2016 (latest available) corporate profits lagging trend by an astounding 7.5 standard deviations.

Employment. Through February 2017, the U.S. had nearly 7.4 million jobs above the pre-recession employment peak of 138.4 million. This employment peak of 145.8 million is 16.1 million jobs above the February 2010 recessionary low, but comes with a corresponding increase in population of nearly 22 million people since 2007.

The Payroll Survey shows an increase of almost 2.4 million jobs over the last 12 months, and 2.5 million jobs (annualized) based on the last 3 months through February 2017. Payroll employment increased by 155,000, 238,000, and 235,000 jobs in December 2016 and January and February 2017, respectively. The trailing 12-month and annualized 3-month employment trends imply annual growth rates of 1.6% and 1.7%, respectively.

Private sector employment has grown for 77 consecutive months (since February 2010), adding 16.2 million jobs, while the government sector had a net loss of 152,000 jobs during the same period. Meanwhile, the mining sector is down by 224,000 jobs from its September 2014 peak through February 2017, driven by the sharp decline in oil prices.

The Household Survey, from which the unemployment rate is derived, peaked in November 2007 at 146.6

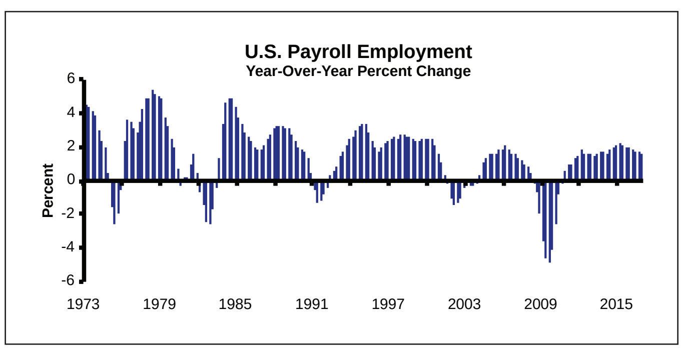


figure 37

On the Road to Recovery

	Pre-Recession Best	Recessionary Worst	Current*	% of Loss Recovered	Predicted Trend**	Difference From Trend	% Change Needed To Achieve Trend	Std. Dev. from Trend	Versus Trend
Real GDP ($ billions)	$16,558.5	$15,855.8	$18,560.2	384.9	$21,652.0	-$3,091.9	16.7	-1.39	lagging
Real Per Capita GDP	$54,726.7	$51,710.9	$57,202.5	182.1	$65,036.4	-$7,833.9	13.7	-1.22	lagging
Real Retail Sales ($ millions)	$383,032.4	$326,434.5	$405,010.9	138.8	$488,354.7	-$83,343.8	20.6	-1.40	lagging
Real Median Home Price Index (FHFA)	224.6	177.9	238.1	128.9	357.8	-119.7	50.3	-1.33	lagging
Durable Industrial Output Index	105.2	76.8	108.1	110.0	140.3	-32.2	29.8	-2.29	lagging
Non-Durable Industrial Output Index	113.1	96.9	102.5	34.4	124.2	-21.7	21.2	-0.93	lagging
Real Per Capita HH Net Worth	$259,839.2	$199,941.0	$281,690.2	136.5	$272,178.0	$9,512.2	0.0	0.27	**beating**
Payroll Employment (000s)	138,430.0	129,733.0	145,798.0	184.7	164,974.0	-19,176.0	13.2	-0.97	lagging
Unemployment Rate (%)	4.4	10.0	4.7	94.6	4.9	-0.2	0.0	-0.06	**beating**
Conference Board Consumer Confidence Index	111.9	25.3	114.8	103.3	115.7	-0.9	0.7	-0.02	lagging
Median Weeks Unemployed	7.5	25.2	10.0	85.9	8.9	1.1	-11.5	0.10	lagging
Capacity Utilization Index	81.0	66.7	75.5	61.5	80.4	-4.9	6.5	-3.50	lagging
SA Auto & Light Truck Sales - Thousands	1,464.4	751.9	1,455.4	98.7	1,567.6	-112.2	7.7	-0.39	lagging
Median Home Price-to-Per Capita DPI	7.8	5.6	7.1	69.9	6.0	1.1	0.0	2.78	**beating**
Profits After-Tax ($ billions)	$1,396.0	$879.4	$1,552.8	130.3	$1,909.5	-$356.6	23.0	-7.54	lagging
Percent of Industries Adding Workers (LTM Avg)	65.8	25.8	54.2	70.8	103.6	-49.4	91.2	-2.21	lagging
Multifamily Starts (SAAR 000s)	378.0	53.0	396.0	105.5	355.3	40.7	0.0	2.94	**beating**
Single-Family Starts (SAAR 000s)	1,823.0	353.0	872.0	35.3	1,407.8	-535.8	61.4	-0.76	lagging
Real Home Prices ($) (Census)	$308,203.5	$221,923.8	$309,489.4	101.5	$299,206.0	$10,283.4	0.0	0.24	**beating**

**Quarterly data through 4Q16; latest monthly varies, Dec 2016 to Feb 2017. SAAR indicates seasonally-adjusted annual rates.*
*** Trend data based on historical data through 2007. All dollars in 2015 real dollars. Multifamily trend based on long-term average (1970-2010, inclusive).*

figure 38

million jobs, bottomed in December 2009 with nearly 8.6 million fewer jobs, and has since regained over 14.5 million jobs (169% of lost jobs) through February 2017. The Household Survey indicates that over the most recent 3 months through February, the economy grew by nearly 1.9 million jobs on an annualized basis. Over the 12 months through February, the Household Survey indicates a gain of nearly 1.5 million jobs.

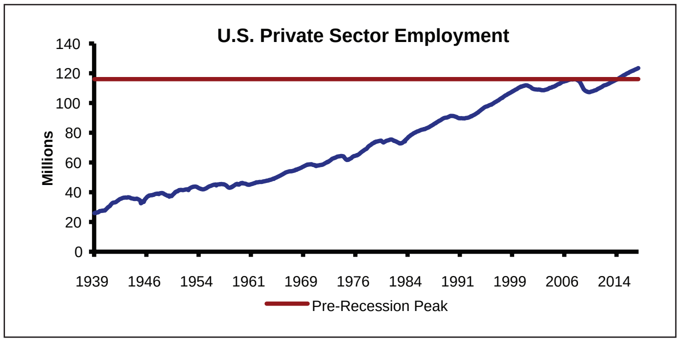
Manufacturing workers put in an average of 41.9 hours per week during the fourth quarter of 2016. This

Recovery Snapshot - February 2017
(Employment in Thousands)

Pre-Recession Peak Employment	138,430
Current Employment	145,798
Percent of Jobs in Excess of Pre-Recession Peak	5.3%
Current Employment	145,798
Lowest Employment Level	129,733
Total Jobs Added From the Bottom	16,065
Peak Unemployment Rate	10.0%
Current Unemployment Rate	4.7%
Decline in the Unemployment Rate (bps)	530

Source: BLS, Linneman Associates

figure 39



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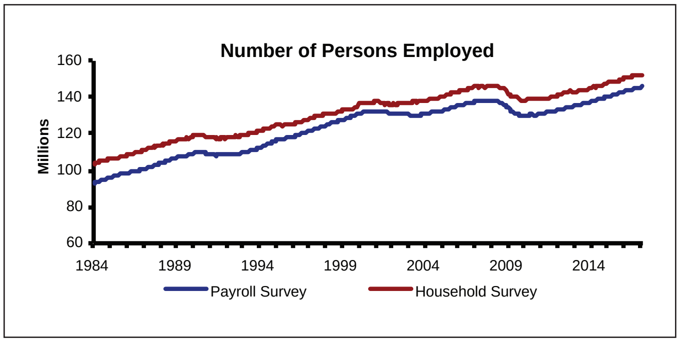

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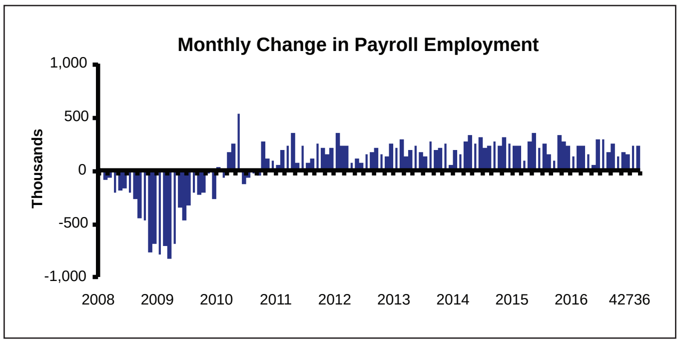

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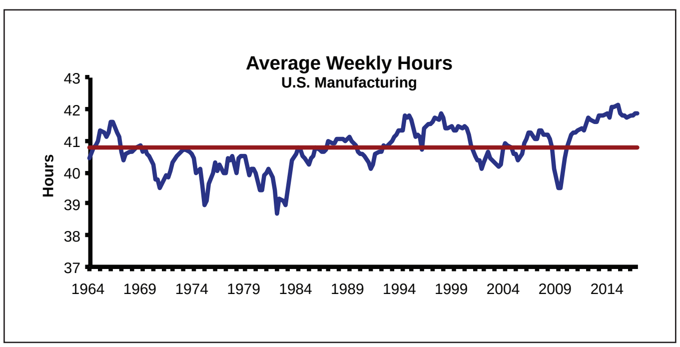

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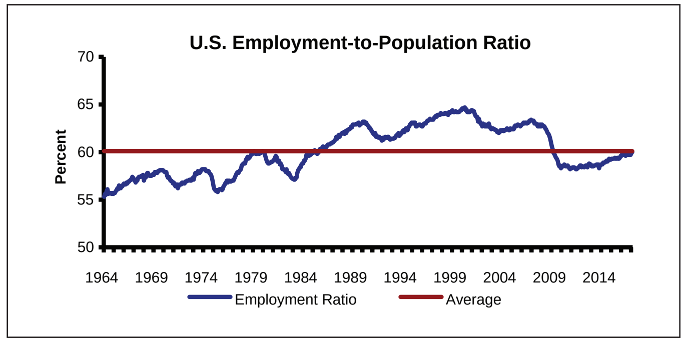

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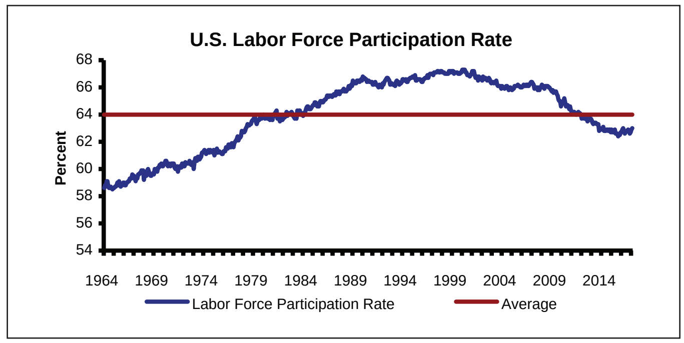


figure 45

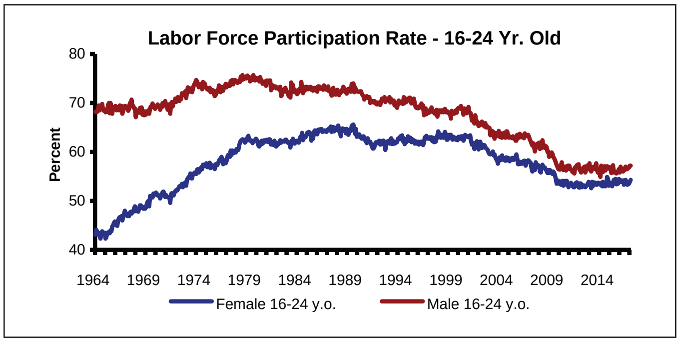
was 1.1 hours above the 50-year average, but below the long-term high of 42.1 manufacturing hours per week.

The civilian employment-to-population ratio, which bottomed at 58.3% in October 2013, has since risen by 170 bps. While the current 60% rate is well below the pre-crisis high of 63.4%, it is in line with the 50-year average of 60.1%. The labor force participation rate, which is the ratio of the labor force (both employed and unemployed, but actively looking) to the total working age (16+ years old) population, appears near the bottom, whereas, the employment-to-population ratio has seen modest improvement. This implies that the number of unemployed people has declined, not only because they are finding jobs, but because many have removed themselves from the labor force altogether.

Starting in the 1980s, as more women entered the workforce, both ratios saw a steady increase until the housing bust of the 1990s, and it rose during the robust economy prior to the Financial Crisis. Much of today's lower labor participation rate is due to the explosion of education-aged Millennials and their prolonged periods of education and training. However, those over 65 years of age continue to work, and their labor participation rate has generally increased since the early 1980s, with a brief exception in the early 1990s. Today (February 2017), 19.5% of the 65+ cohort are in the labor force, versus a 50-year average of 14.4%.

As of February 2017, manufacturing jobs stood at 8.5% of total U.S. employment. This is 170 bps above the expected long-term trend of 6.8%. On an absolute basis, nearly 12.4 million people work in manufacturing in the U.S., up 7,000 jobs year-over-year. Manufacturing output remains near its all-time high due to productivity improvements.

The service sector represents 86.3% of all jobs today, up by 10 bps year-over-year. The current share is



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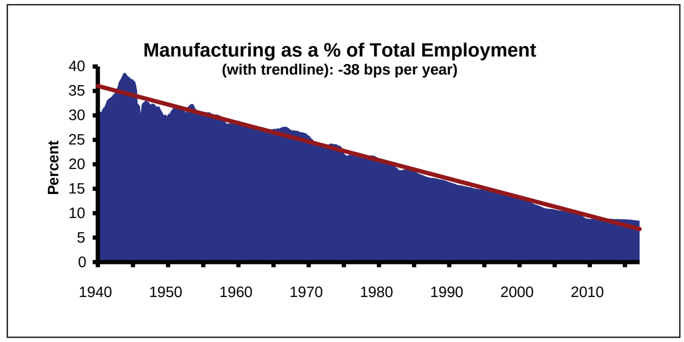

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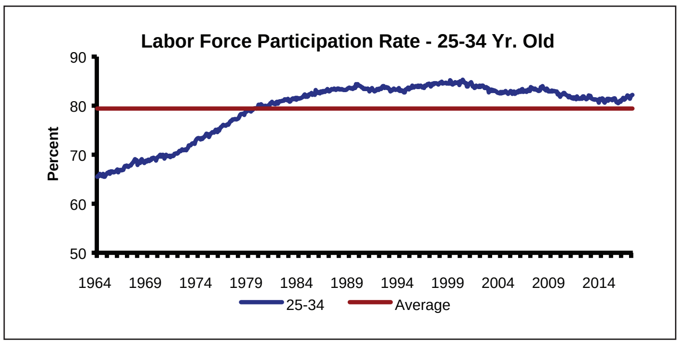

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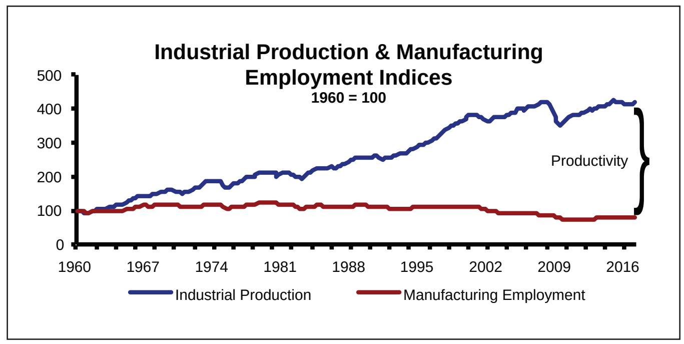

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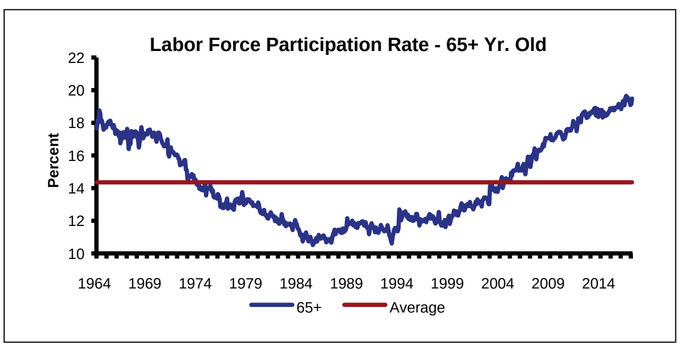

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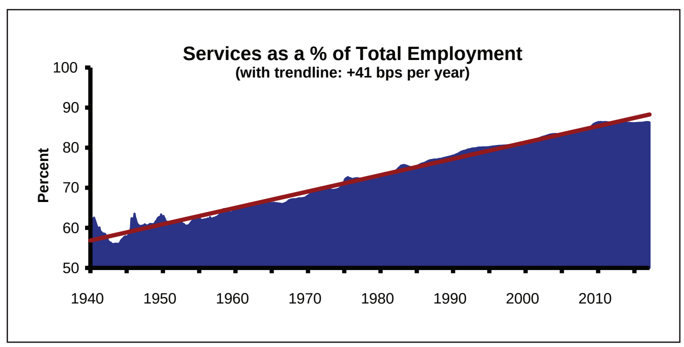

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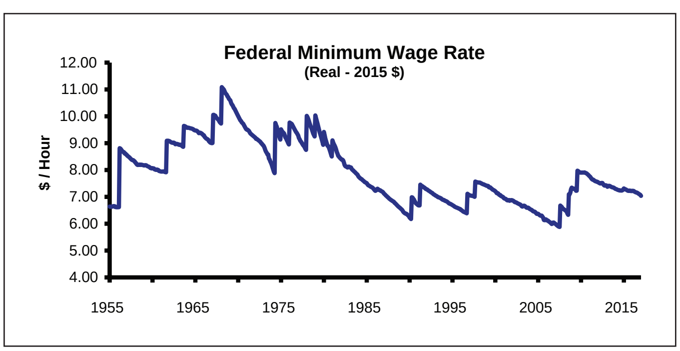

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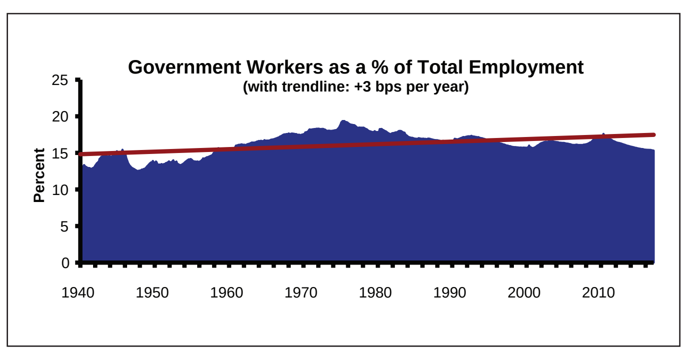


figure 53

200 bps below the long-term trend estimate of 88.3%.

The government employment share is 15.3% of total employment, 220 bps below trend, and down by 100 bps year-over-year.

In Figure 54, MSAs and MSA divisions are sorted by January 2017 unemployment rates (latest available), with those 5.5% and below categorized as "Hot," those between 5.6% and 7.0% categorized as "Solid," those between 7.1% and 9.0% categorized as "Weak," and those above 9.0% categorized as being in a "Severe Recession." In January 2017, all but 5 of our covered markets were categorized as Hot, led by Denver, Boston, and Austin, all of which saw unemployment rates below 3.5%. Over the last quarter, Houston, Detroit, and Cleveland dropped

Metropolitan Area Employment Growth
Employer Payroll Survey versus Household Survey

		Payroll Survey				Household Survey			
Jobs in Thousands	Unemp. Rate	Jobs Lost During Recession	Jobs Regained To Date*	% Regained Thru Prev. Month	Latest % Regained*	Jobs Lost During Recession	Jobs Regained To Date*	% Regained Thru Prev. Month	Latest % Regained*
U.S.	**4.7**	**8,697**	**16,065**	**182**	**185**	**8,582**	**14,515**	**164**	**169**
HOT									
Denver	2.8	73	264	359	363	64	244	383	380
Boston	3.0	101	336	316	332	78	290	357	373
Austin	3.4	24	249	1,029	1,034	10	265	2,668	2,772
San Francisco	3.6	164	452	276	276	108	441	413	408
San Jose	3.6	78	227	294	290	47	228	524	481
Minneapolis	3.7	116	238	203	205	76	151	182	198
Washington, D.C.	3.7	75	279	364	374	72	354	484	489
Indianapolis	3.7	56	155	272	276	73	153	201	209
Orange County	3.8	176	233	130	133	180	163	101	91
Dallas/Fort Worth	3.9	155	698	437	451	74	683	911	920
Portland	3.9	82	183	228	223	56	185	325	330
Long Island	4.0	55	122	217	221	92	67	68	72
Nashville	4.2	53	222	415	419	46	189	391	411
Seattle	4.2	134	326	242	244	75	269	347	359
Columbus	4.3	52	160	313	306	46	112	227	242
Baltimore	4.3	72	153	207	213	57	138	243	242
Kansas City	4.3	58	126	207	216	43	148	330	347
St. Louis	4.3	82	100	119	121	111	151	149	136
Westchester County/N.NJ	4.3	432	883	248	205	275	608	223	222
Raleigh	4.4	32	116	358	358	23	148	642	641
Cincinnati	4.4	73	118	159	161	78	61	68	78
San Diego	4.4	98	209	208	213	118	169	148	143
Durham	4.5	15	36	260	245	16	43	277	262
Phoenix	4.5	240	307	130	128	135	313	216	232
Philadelphia	4.5	142	230	159	162	161	250	151	155
New York City	4.5	139	706	505	509	149	383	242	257
Orlando	4.6	104	259	232	250	90	261	282	288
Ft. Lauderdale	4.8	90	133	145	148	142	150	108	105
Charlotte	4.8	114	226	217	198	75	292	367	389
Tampa	4.9	142	221	155	156	126	298	232	238
Jacksonville	4.9	58	98	170	169	46	107	247	232
Fairfield County	4.9	30	25	77	84	21	27	129	127
Los Angeles	4.9	358	530	145	148	348	532	151	153
Las Vegas	4.9	134	170	124	126	83	160	187	192
Sacramento	5.0	100	134	135	134	67	106	169	158
West Palm Beach	5.2	71	115	161	162	64	144	213	226
Atlanta	5.2	206	468	220	228	233	408	169	175
Pittsburgh	5.3	43	62	133	147	78	53	74	69
Miami	5.5	93	201	205	216	129	220	171	171
Chicago	5.5	340	440	129	130	361	336	93	93
SOLID									
Houston	5.6	120	473	395	394	48	519	1,106	1,082
Inland Empire	5.6	150	280	187	187	146	373	256	256
Detroit	5.8	314	286	89	91	282	203	72	72
Cleveland	5.8	93	69	78	74	80	6	12	8
WEAK									
Fresno	9.3	30	53	170	174	23	45	197	198

** MSA Payroll and Household Survey data are seasonally-adjusted through January 2017.*
U.S. data is seasonally-adjusted through February 2017. Source: BLS, Linneman Associates.

figure 54

back into the "Solid" category as their unemployment rates rose above the "Hot" market threshold. They join the Inland Empire, whose unemployment rate improved by 40 bps over the quarter, but not enough to break below the 5.5% threshold. Meanwhile, Las Vegas, New York City, Chicago, and Pittsburgh all moved up to the "Hot" category, and Fresno, our newest survey addition, has the dubious distinction of being the only market (by far) in the "Weak" category, with a 9.3% unemployment rate.

Comparing year-over-year changes in seasonally-adjusted MSA unemployment rates through January 2017, Las Vegas (-140 bps); Seattle (-120 bps); Boston (-100 bps); New York City (-80 bps), and Los Angeles (-70 bps) saw the greatest improvements. Houston and Cleveland (each +90 bps), Pittsburgh (+50 bps), Nashville (+40 bps), and Minneapolis, Detroit, Austin, West Palm Beach, and Kansas City (each +30 bps) experienced the greatest increases in unemployment rates over the last 12 months through January 2017,

Annual Change in Payroll Employment

Jobs in 000s	Jan-16	Jan-17	Change	% Change
Atlanta-Sandy Springs-Marietta, GA MSA	2,629.3	2,728.8	99.5	3.8%
Austin-Round Rock-San Marcos, TX MSA	984.7	1,018.7	34.0	3.5%
Baltimore-Towson, MD MSA	1,391.0	1,407.1	16.1	1.2%
Boston-Cambridge-Quincy, MA-NH Met NECTA	2,682.8	2,740.2	57.4	2.1%
Bridgeport-Stamford-Norwalk, CT Met NECTA	410.5	409.6	-0.9	-0.2%
Charlotte-Gastonia-Rock Hill, NC-SC MSA	1,120.6	1,156.5	35.9	3.2%
Chicago-Naperville-Elgin, IL-IN-WI	4,642.2	4,665.8	23.6	0.5%
Cincinnati-Middletown, OH-KY-IN MSA	1,074.3	1,096.2	21.9	2.0%
Cleveland-Elyria-Mentor, OH MSA	1,054.7	1,055.2	0.5	0.0%
Columbus, OH MSA	1,052.5	1,072.1	19.6	1.9%
Dallas-Fort Worth-Arlington, TX MSA	3,463.7	3,599.2	135.5	3.9%
Denver-Aurora-Broomfield, CO MSA	1,419.2	1,449.7	30.5	2.1%
Detroit-Warren-Livonia, MI MSA	1,957.3	2,000.1	42.8	2.2%
Durham-Chapel Hill, NC MSA	299.1	305.0	5.9	2.0%
Fort Lauderdale-Pompano Beach-Deerfield Beach, FL Met Div	811.0	834.5	23.5	2.9%
Houston-Sugar Land-Baytown, TX MSA	3,006.2	3,008.9	2.7	0.1%
Indianapolis-Carmel, IN MSA	1,034.4	1,059.1	24.7	2.4%
Jacksonville, FL MSA	658.2	673.6	15.4	2.3%
Kansas City, MO-KS MSA	1,059.1	1,083.9	24.8	2.3%
Las Vegas-Paradise, NV MSA	932.9	967.5	34.6	3.7%
Los Angeles-Long Beach-Glendale, CA Met Div	4,353.8	4,438.3	84.5	1.9%
Miami-Miami Beach-Kendall, FL Met Div	1,143.9	1,178.0	34.1	3.0%
Minneapolis-St. Paul-Bloomington, MN-WI MSA	1,943.7	1,973.5	29.8	1.5%
Nashville-Davidson-Murfreesboro-Franklin, TN MSA	935.4	970.8	35.4	3.8%
Nassau-Suffolk, NY Met Div	1,317.7	1,341.3	23.6	1.8%
New York City	4,312.3	4,392.3	80.0	1.9%
New York-White Plains-Wayne, NY-NJ Met Div	6,684.0	6,807.6	123.6	1.8%
Orlando-Kissimmee-Sanford, FL MSA	1,186.7	1,242.9	56.2	4.7%
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA	2,843.2	2,911.7	68.5	2.4%
Phoenix-Mesa-Glendale, AZ MSA	1,945.4	1,991.8	46.4	2.4%
Pittsburgh, PA MSA	1,162.4	1,171.7	9.3	0.8%
Portland-Vancouver-Hillsboro, OR-WA MSA	1,130.2	1,153.6	23.4	2.1%
Raleigh-Cary, NC MSA	593.0	609.1	16.1	2.7%
Riverside-San Bernardino-Ontario, CA MSA	1,383.0	1,427.1	44.1	3.2%
Sacramento-Arden-Arcade-Roseville, CA MSA	936.2	957.8	21.6	2.3%
San Diego-Carlsbad-San Marcos, CA MSA	1,408.4	1,439.9	31.5	2.2%
San Francisco-Oakland-Fremont, CA MSA	2,309.5	2,371.2	61.7	2.7%
San Jose-Sunnyvale-Santa Clara, CA MSA	1,057.7	1,082.3	24.6	2.3%
Santa Ana-Anaheim-Irvine, CA Met Div	1,569.0	1,593.2	24.2	1.5%
Seattle-Tacoma-Bellevue, WA MSA	1,918.6	1,981.7	63.1	3.3%
St. Louis, MO-IL MSA	1,357.1	1,376.3	19.2	1.4%
Tampa-St. Petersburg-Clearwater, FL MSA	1,278.3	1,318.8	40.5	3.2%
Washington-Arlington-Alexandria, DC-VA-MD-WV MSA	2,616.8	2,662.4	45.6	1.7%
West Palm Beach-Boca Raton-Boynton Beach, FL Met Div	599.4	615.7	16.3	2.7%

Source: U.S. BLS, Linneman Associates

figure 55

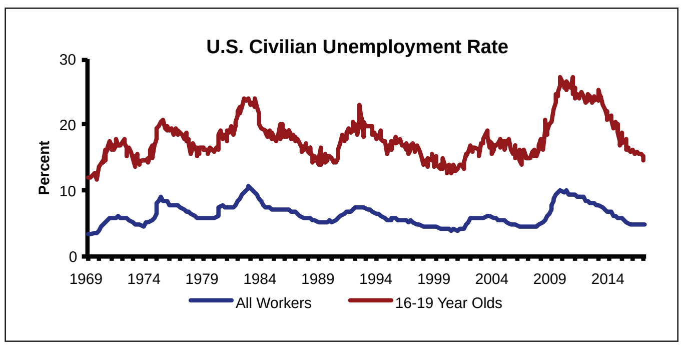
while the unemployment rates in Orlando, Long Island, Columbus, and Fresno were flat during the same period. The average year-over-year change across all covered markets was a decline of 14 bps in MSA unemployment rates.

Of the 45 markets we track (including the addition of Fresno), all but 3 have regained at least 100% of Payroll Survey jobs lost during the recession, led by Austin (1,034%), New York City (509%), Dallas-Ft. Worth (451%), Nashville (419%), and Houston (394%). In contrast, the lowest job recovery rates through January 2017 were in Cleveland (74%), Fairfield County (84%), Detroit (91%), St. Louis (121%), and Las Vegas (126%).

On an absolute basis, the markets that gained the most jobs over the 12 months through January 2017 include Dallas-Ft. Worth (135,500 jobs), NY/NJ Metro area (126,600 of which NYC added 80,000), Atlanta (99,500), Los Angeles (84,500), and Philadelphia (68,500). The smallest absolute job gains over the last 12 months were in Fairfield County, CT (which had a net decline of 900 jobs), Cleveland, Houston, Durham, Pittsburgh, and Fresno, each of which created fewer than 15,000 new jobs over the last 12 months.

The MSAs that registered the largest year-over-year percentage gains in employment through January 2017 were Orlando (4.7%), Dallas-Ft. Worth (3.9%), Nashville and Atlanta (each 3.8%), Las Vegas (3.7%), and Austin (3.5%). In contrast, Fairfield County, CT (-0.2%), Cleveland (0%), Houston (0.1%), Chicago (0.5%), and Pittsburgh (0.8%) registered the smallest percentage gains over the same period.

After peaking in October 2009 at 10%, the U.S. unemployment rate stood at 4.7% in February 2017, representing declines of 530 bps from the peak and 20 bps over the last 12 months. This is compared to the long-term average (1984-present) unemployment rate of 6.1%. As a point of reference, a 6% unemployment rate is generally viewed as the upper bound of a healthy job market, while 5% or lower indicates a strong labor market. Since the unemployment rate peaked, it has averaged a decline of about 6 bps per month. The most dramatic unemployment rate decline has occurred among those 16-19 years old. Currently at 15%, this rate has fallen by 1,220 bps since its peak in 2010, and is now only 190 bps above its pre-recession low of 13.1%.



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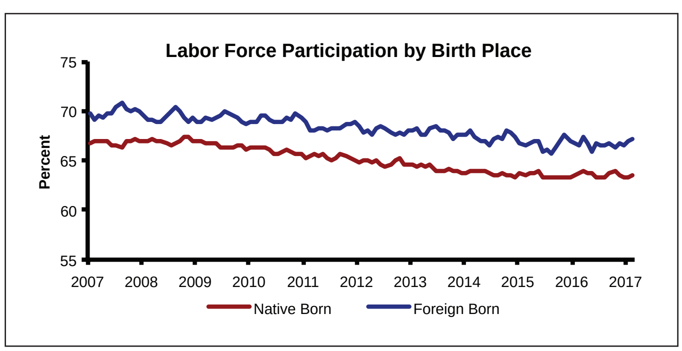
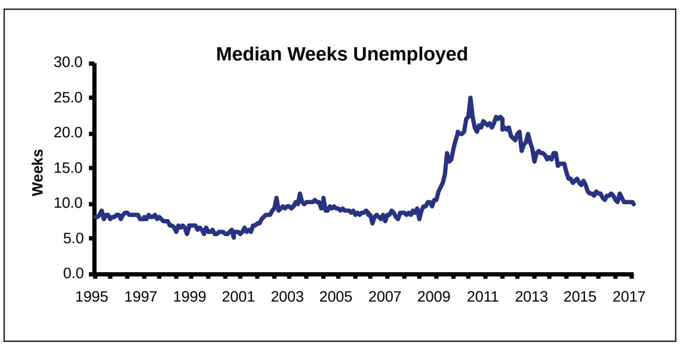


figure 57

A solid labor market continues with the median U.S. unemployment duration at 10 weeks in February 2017, well below the peak of 22.4 weeks in 2011, and steadily (if too slowly) moving closer to the 7.9-week low registered in 2008. Similarly, the average number of weeks unemployed in February was 25.1, down from both 28.9 a year earlier and 40.7 at the 2011 peak.

Long-term unemployment, as measured by the percent of total unemployed who have been out of work for 27 weeks or more, is declining. It stood well below the 45% level registered in 2011, at 23.9% in February 2017, a 360-bp decline from the previous year, but still 770 bps above the low of 16.2% in 2006. Meanwhile, an average of 34.1% of the unemployed were experiencing "short-term unemployment" (i.e., fewer than 5 weeks) in February. This is in comparison to nearly 39% of total unemployed in 2006 and just 17.8% in 2010. After a steep decline from when the number of long-term unemployed outnumbered the short-term unemployed by nearly 2.5x, the current ratio of longer-to-short term unemployment duration stood at 70.2% in February 2017. This is compared to the low of about 50% in 2005, when the long-term unemployed totaled half as many as the short-term unemployed.



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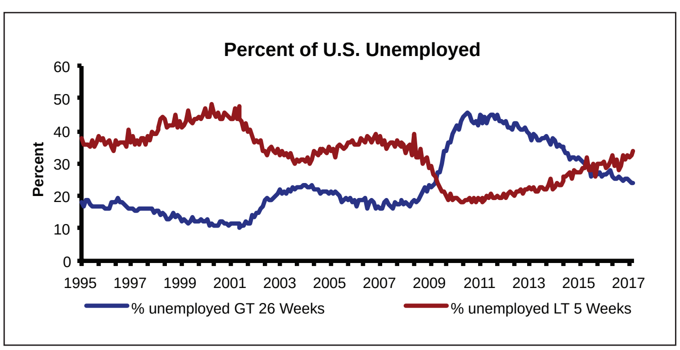

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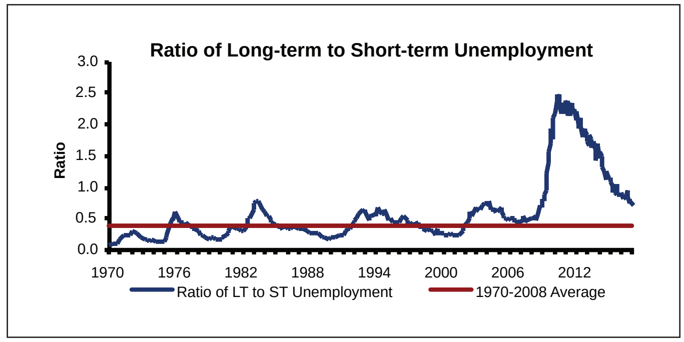
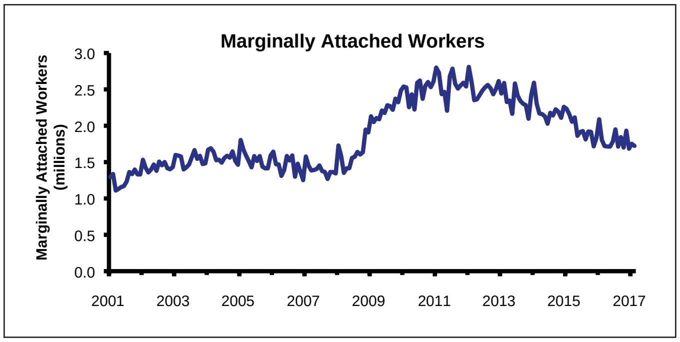


figure 60

The marginally attached labor force was flat over the last 12 months, at 1.7 million in February 2017. The BLS defines the "marginally attached" as individuals who are not part of the labor force and are available and seeking work, having looked for a job in the last 12 months but not in the last four weeks. When marginally attached workers are included, the February 2017 unemployment rate jumps by 450 bps, from 4.7% to 9.2%. Of those who are marginally attached, 522,000 individuals were classified as "discouraged" in February, meaning that they did not look for work during that period, believing that no jobs were available. This number peaked at 1.3 million in 2010, and has been on a slow decline for the past 6 years. It is now back to the upper end of the historical norm. The balance of marginally attached workers who did not search for work had other reasons, such as school or family obligations. There were nearly 3 million Temporary Help Service workers in February 2017,



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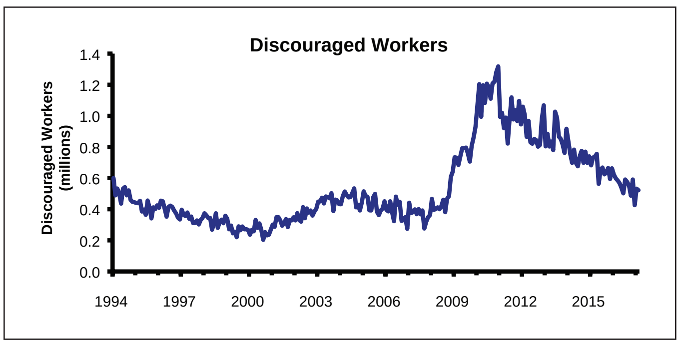


figure 62

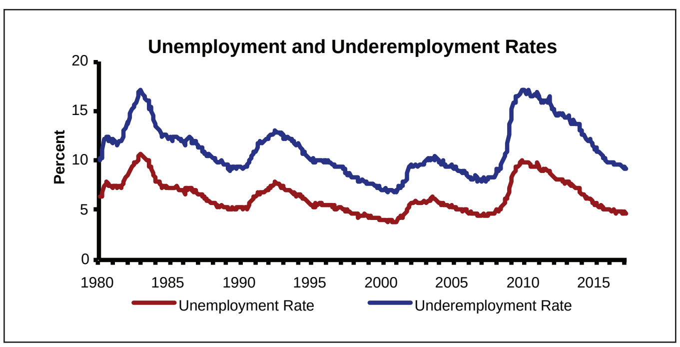
reflecting increases of 3,100 (0.1%) compared to the previous month and 91,000 (3.1%) over the last year.

Over the last 12 months through February 2017, the U.S. added over 2.35 million new jobs (1.6% growth). Going forward, we forecast 2.2 million new jobs in 2017 (1.5%), 2.4 million in 2018 (1.5%), 800,000 in 2019 (0.5%), and losses of 800,000 (-0.5%) in each of 2020 and 2021.

According to the Job Openings and Labor Turnover Survey, 58% of industries were adding workers on a 12-month moving average basis through January 2017. This is in comparison to the long-term average of 55%, the pre-recession high of 66% in 2006, and the 2014 peak of 70%. About 60% of industries add employment in a red hot economy, and about 60% lose jobs in a recession.

Non-farm job openings are up by 139% from the 2009 low point, to 5.6 million in January 2017, an increase of 87,000 openings over the previous month, and above the peak in 2001.

Through February 2017, the greatest job gains since the trough are in professional and business services (4.1 million since August 2009) and education and health services (nearly 4 million since December



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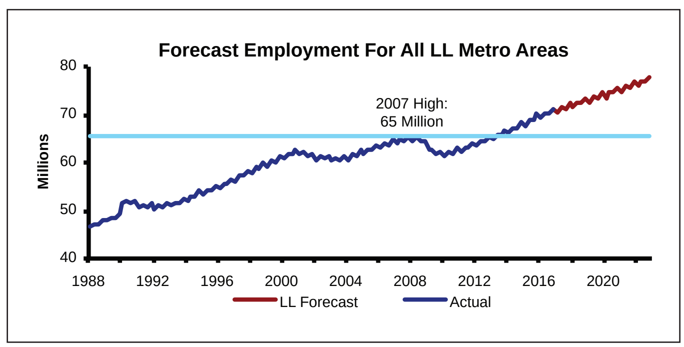
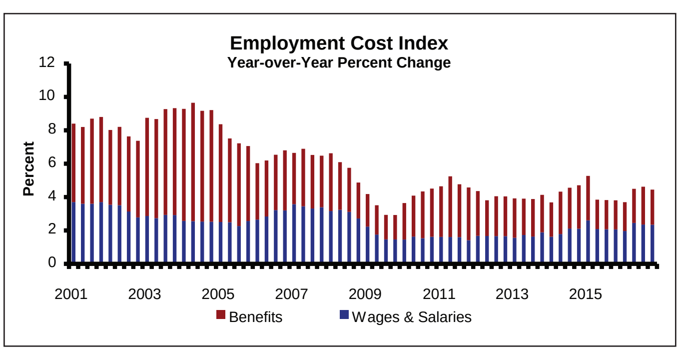


figure 65



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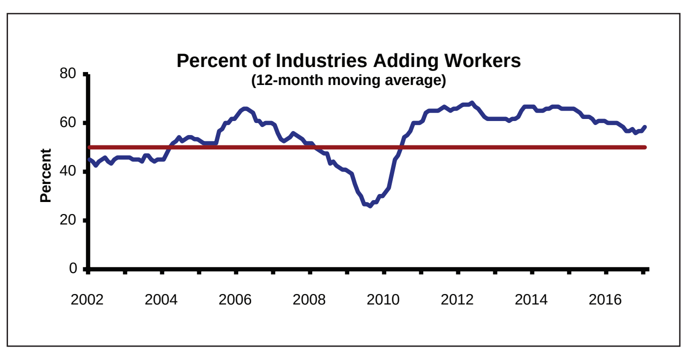
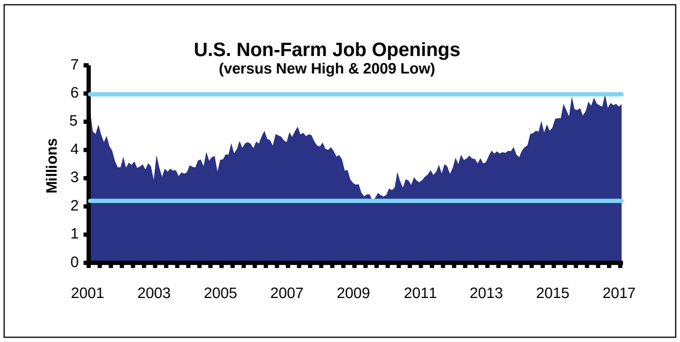


figure 66

2007). The natural resources and mining sector peaked at over 900,000 jobs in 2014, but has since declined by 224,000 (25%) from the peak through February 2017. All other major sectors continue to experience job gains. Aside from natural resources and mining, information (34.5%), manufacturing (35.2% of lost jobs regained), construction (61.9%), and government (77%) have experienced the slowest post-recession job growth.

Household Wealth and Income. In the fourth quarter of 2016, nominal U.S. household net worth (household total assets minus total liabilities) reached a high of $92.8 trillion, 37.1% above its pre-recession peak. After adjusting for inflation and population, the recovery of aggregate household net wealth in the U.S. is more muted. Aggregate real household net wealth as of the fourth quarter of 2016 stood at $90.8 trillion (2015 dollars), 16.4% above its pre-recessionary peak.



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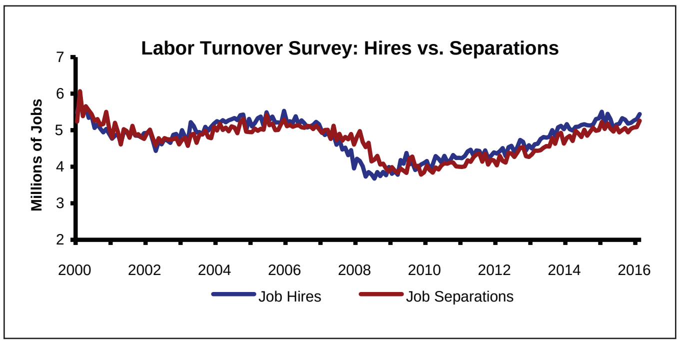

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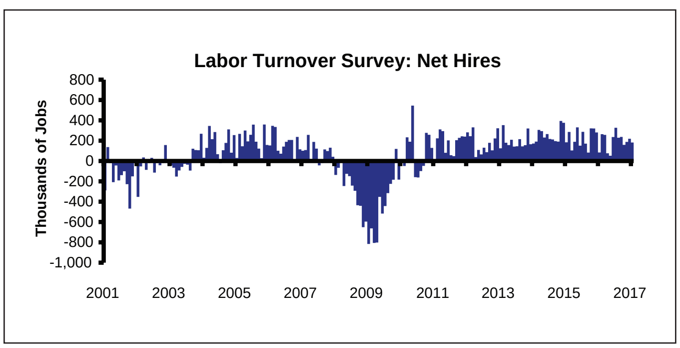

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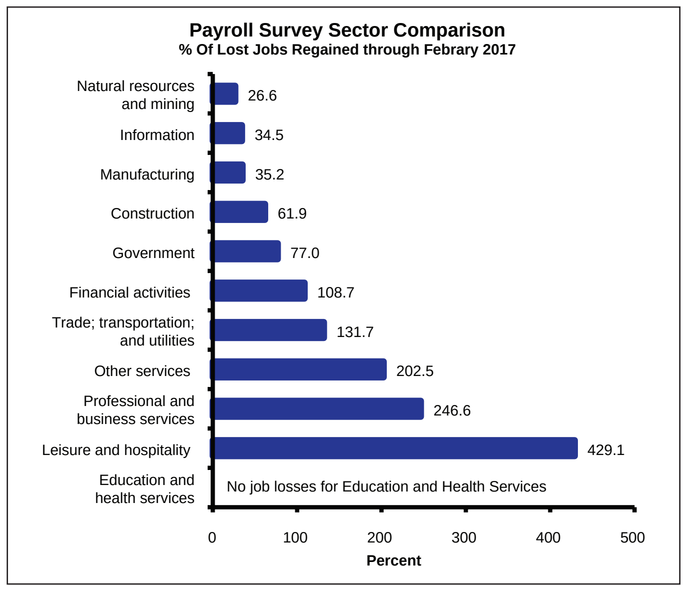


figure 71

Payroll Survey Employment (000s) - Sorted By Percent Of Jobs Regained

Industry	Dec-07	Trough Date	Trough	Feb-17	Peak to Trough Change	Peak to Trough % Change	Trough to Present Change	Trough to Present % Change	% of Lost Jobs Regained
Education and health services	18,924	Dec-07	18,924	22,896	0	0.0%	3,972	21.0%	n/a
Leisure and hospitality	13,550	Feb-10	12,927	15,600	-623	-4.6%	2,673	20.7%	429.1%
Professional and business services	18,051	Aug-09	16,386	20,492	-1,665	-9.2%	4,106	25.1%	246.6%
Other services	5,516	Jun-10	5,315	5,722	-201	-3.6%	407	7.7%	202.5%
Trade; transportation; and utilities	26,714	Dec-09	24,473	27,424	-2,241	-8.4%	2,951	12.1%	131.7%
Financial activities	8,282	Jul-10	7,676	8,335	-606	-7.3%	659	8.6%	108.7%
Government	22,376	Jan-14	21,807	22,245	-569	-2.5%	438	2.0%	77.0%
Construction	7,490	Jan-11	5,427	6,704	-2,063	-27.5%	1,277	23.5%	61.9%
Manufacturing	13,746	Feb-10	11,453	12,260	-2,293	-16.7%	807	7.0%	35.2%
Information	3,024	Aug-11	2,633	2,768	-391	-12.9%	135	5.1%	34.5%
Natural resources and mining	740	Oct-09	661	682	-79	-10.7%	21	3.2%	26.6%

Source: BLS, Linneman Associates
** Government sector gained jobs during the recession, but lost jobs during the recovery.*

figure 70

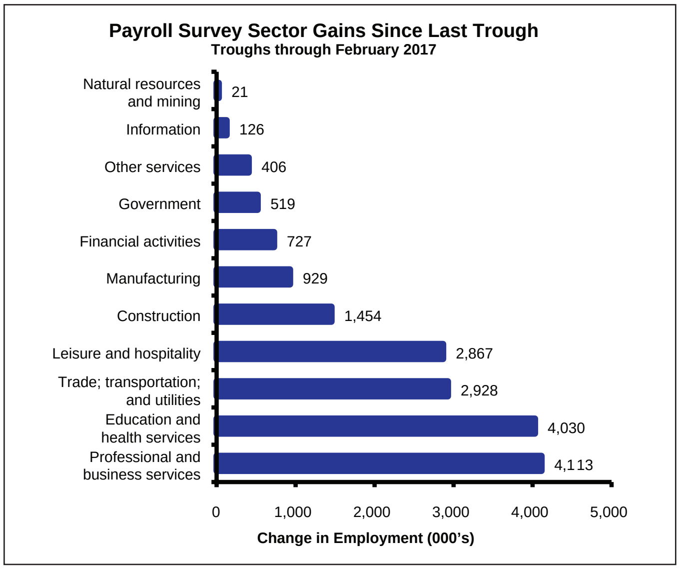


figure 72

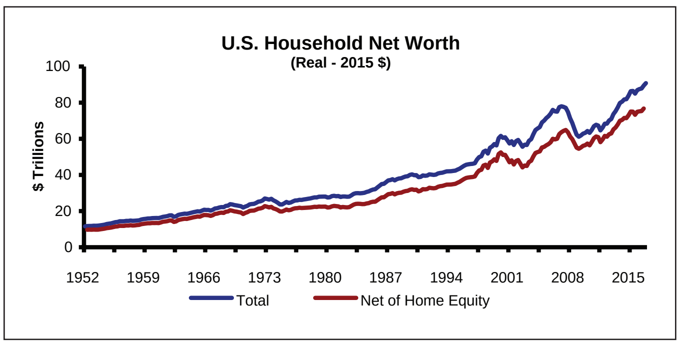
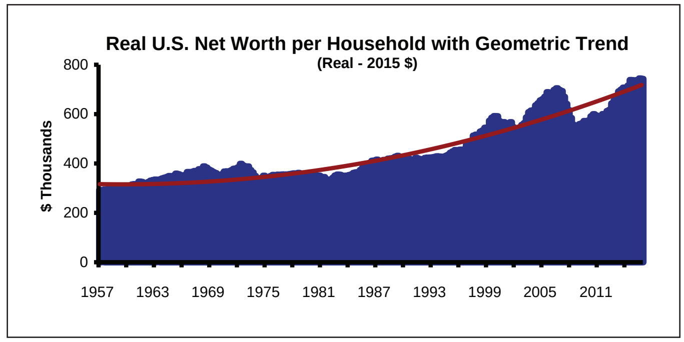


figure 73

Standing at $281,690 in the fourth quarter of 2016, real U.S. household net wealth per capita rose 4.4% year-over-year. Regaining a cumulative total of 137% of the nearly $60,000 loss suffered during the recession, it is one of the handful of key indicators beating trend. Real U.S. household net wealth per capita had previously peaked at $260,000 in 2007 and bottomed at $199,000 in 2009.

Real wealth per household stands at $765,270, which is 8.6% above its 2007 peak and 62.4% above the 50-year average of $471,300. This is also in comparison to the 2009 trough of $547,000.

The recovery in the net value of real home equity continues, rising by more than $6.6 trillion (103.7%) since the low in 2011. However, the latest figure remains $2.9 trillion (18.3%) below the nearly $16 trillion real home equity valuation on household balance sheets in 2006. The largest category of U.S.



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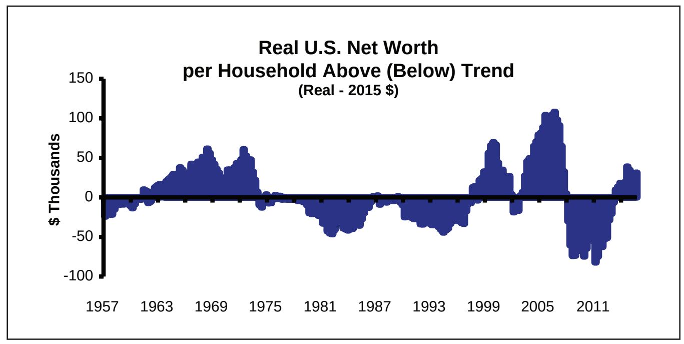

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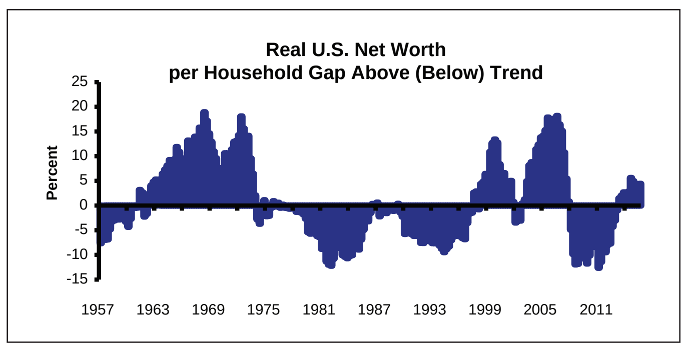

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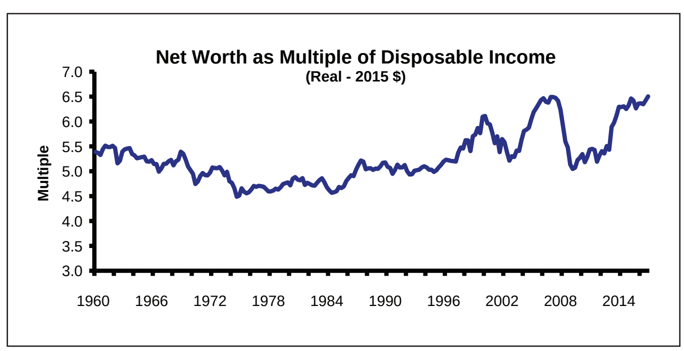


figure 77

household assets is financial assets that are not equities, which stood at $59.6 trillion in the fourth quarter. Corporate equities on the household balance sheet stood at $15.9 trillion in the fourth quarter 2016, well above both the $4.9 trillion low of early 2009 and the $10.9 trillion peak in 2007.

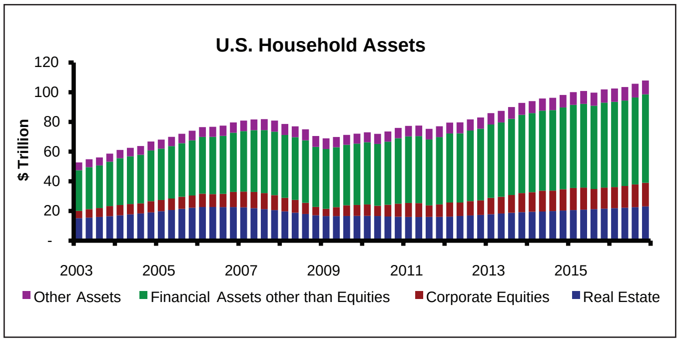


figure 78

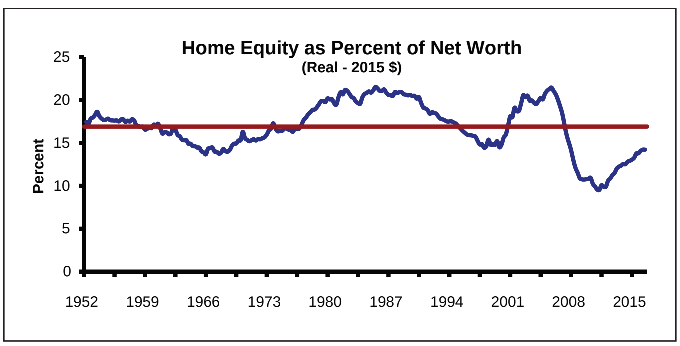
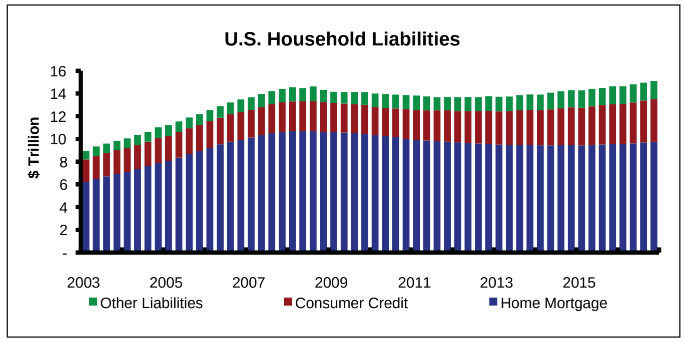


figure 79

Total household liabilities are on the rise, with home mortgages accounting for 64.6% of the total in the fourth quarter of 2016, compared to the 75% peak share in 2009. Home mortgages rose for the seventh consecutive quarter to end 2016 at more than $9.7 trillion. Prior to the second half of 2015, home mortgages had been on a steady decline over the last eight years, from a high of nearly $10.7 trillion in 2008. Consumer credit as a percent of total household liabilities has steadily risen from 17.9% in 2007 to 24.9% today. This represents an increase of nearly $1.3 trillion, from just below $2.5 trillion to $3.8 trillion today. Meanwhile, consumer installment credit as a percent of personal income is up to 45%, from 21% in 1960 and 30% in 1990.

Household debt as a percent of GDP has fallen from a peak of 92.6% in 2009 to 71.3% today, compared to



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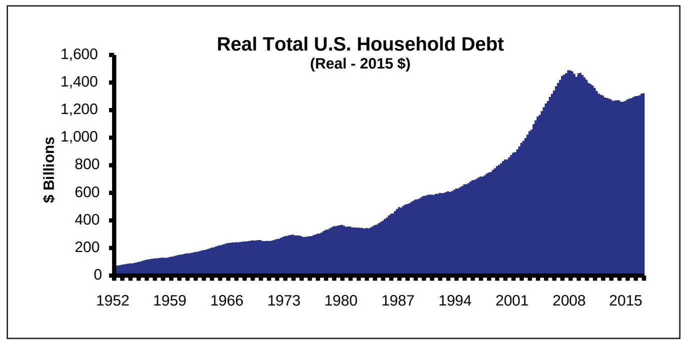

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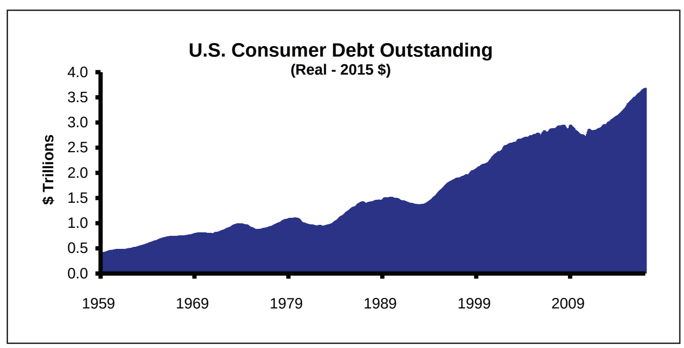
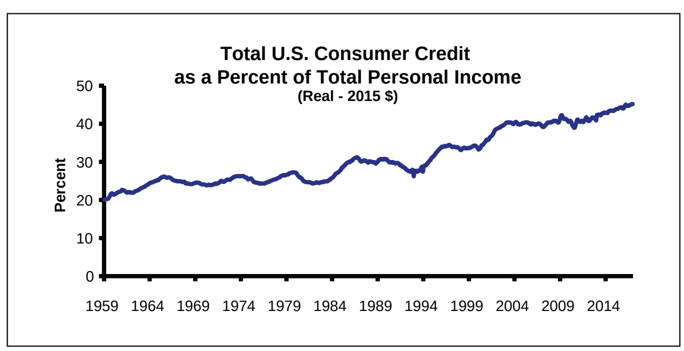


figure 82



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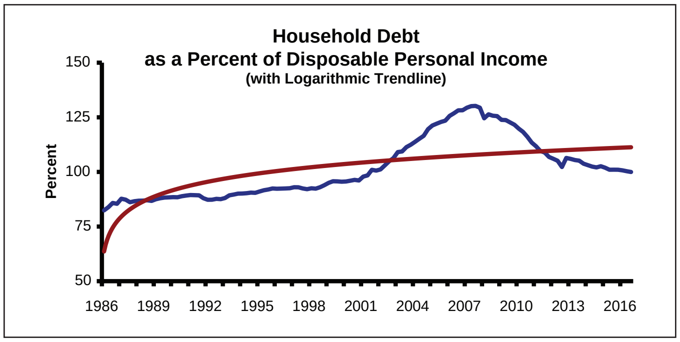
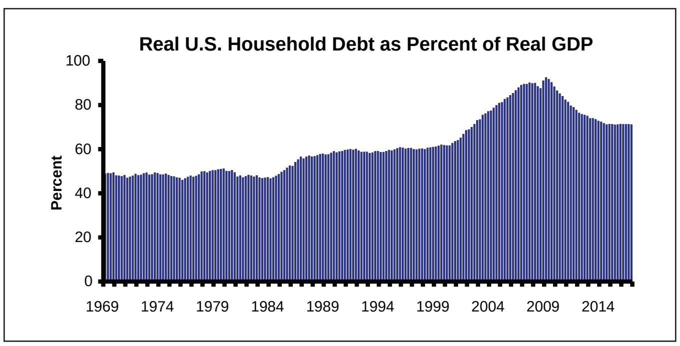


figure 84

the long-term average (1969-present) of 62%. The composition of household debt has changed dramatically since 2006, with student loans rising from just 4.1% to 10.4% in the fourth quarter of 2016, while mortgage debt fell from 79.8% to 72.2%, and credit card debt is unchanged at about 7.4%. Real student debt has risen to nearly $1.4 trillion in the fourth quarter of 2016, a 4.7% increase over the past year.

The household debt service ratio (DSR) is the ratio of total required household debt payments to total disposable personal income (DPI). Total DSR peaked in 2007 at 13.2% and stood at 10.0% in the third quarter of



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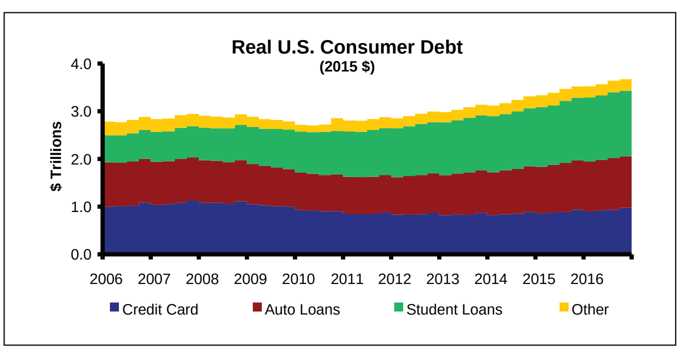

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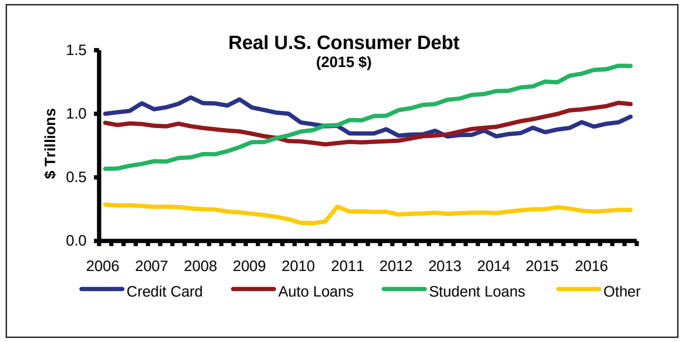

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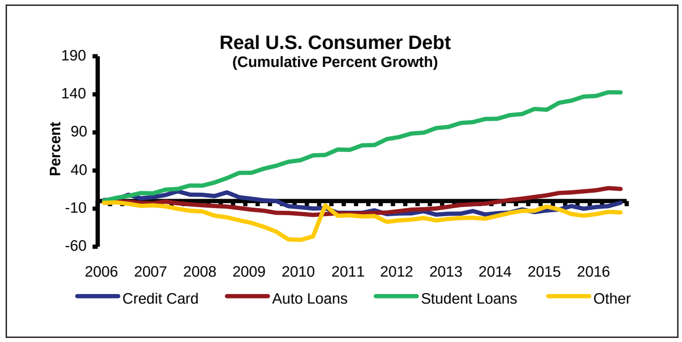

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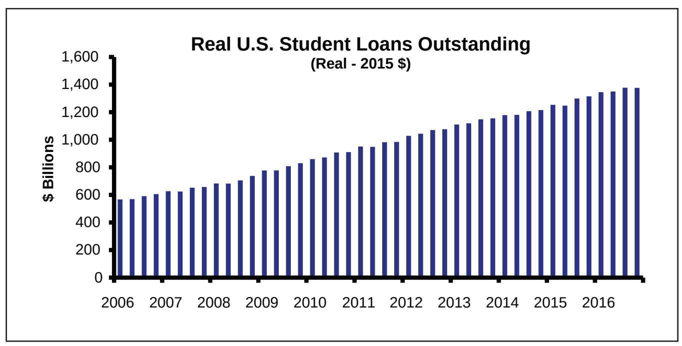

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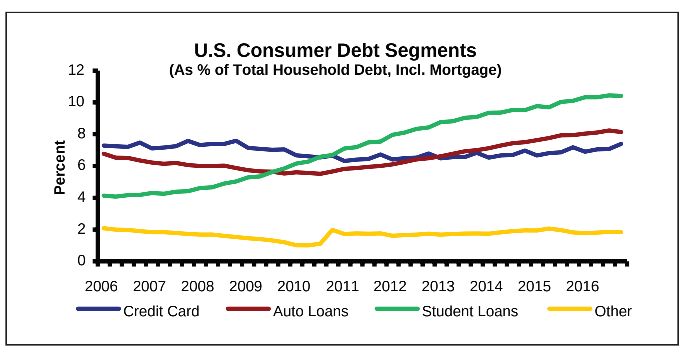

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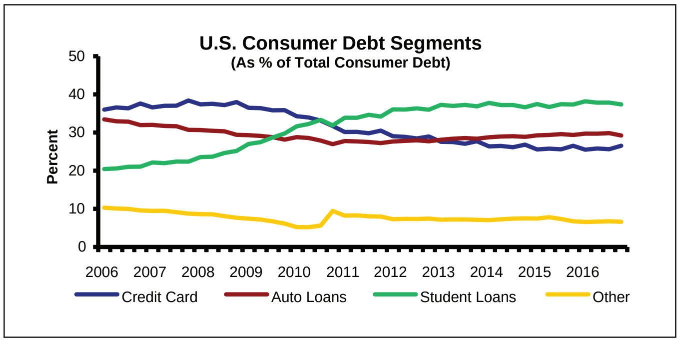

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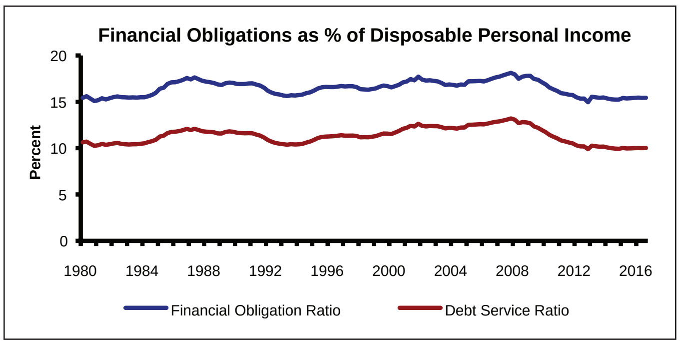
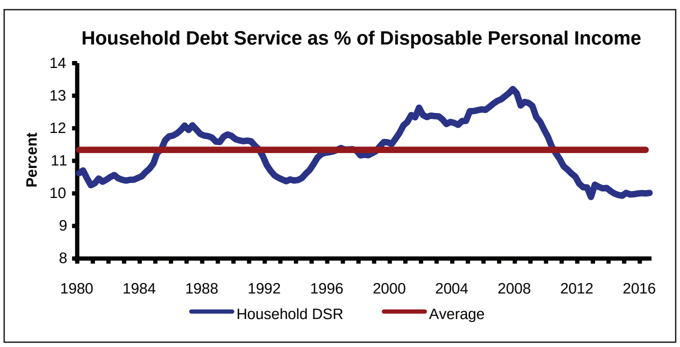


figure 92

2016 (latest available). The financial obligations ratio (FOR), which includes additional required minimum payments (e.g., rent) other than debt service, peaked at 18.1% in 2007, and stood at 14.4% in the third quarter of 2016. In 2008, consumer debt payments peaked at 6% of DPI, and mortgage payments accounted for 7.2% of DPI. In the third quarter of 2016, consumer debt payments (5.5%) accounted for a greater share of DPI than mortgage payments (4.5%). Thus, the consumer DSR declined by 50 bps since the peak, but the mortgage DSR declined by 270 bps over the same period through the third quarter of 2016.

Real median household income (2015 dollars) stood at $59,643 in 2015 (latest available). This represented increases of 11.2% versus the previous year and 21.3% versus the 2010 low of $49,160.

The official personal savings rate stood at 5.5% as of January 2017, versus a historical peak of 12.7% in 1981 and a low of 1.9% in 2005. This recovery is particularly strong among highly educated, prime-age households, but weak among the young and the old, for whom simple savings accounts are their primary liquid assets.



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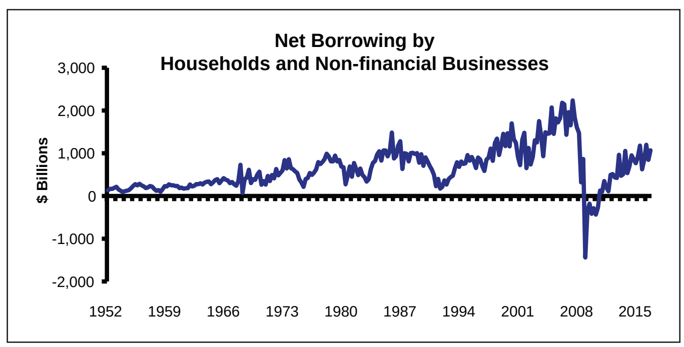

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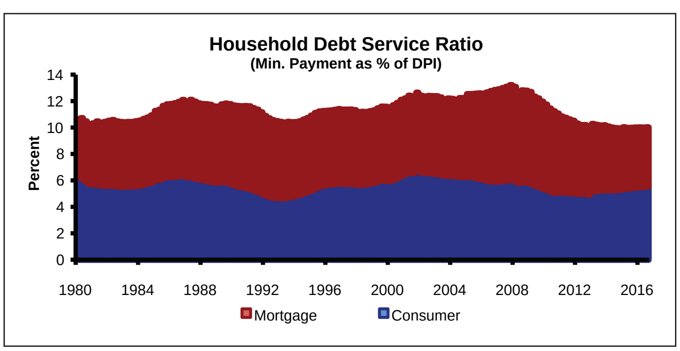

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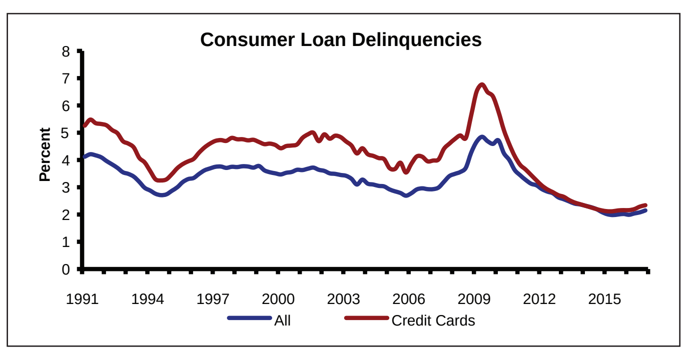

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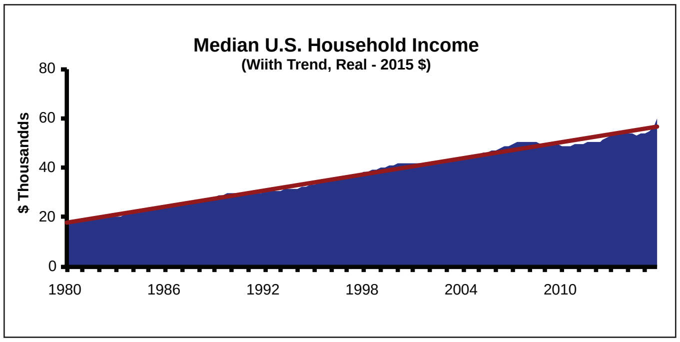

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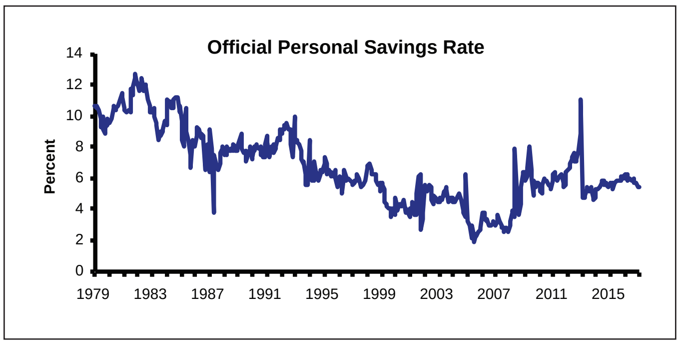
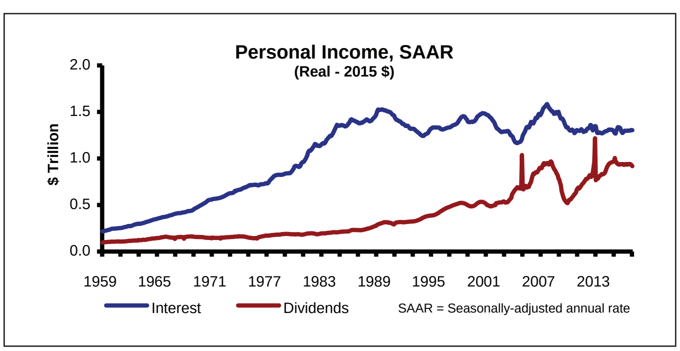


figure 98

At $1.3 trillion as of January 2017, real personal annual interest income is about $281 billion (17.7%) less than it was in 2007 ($2,250 per household per year), due to the Fed's tragically misguided attempt to stimulate the economy with low interest rates (in spite of evidence to the contrary). This is the case even though total outstanding debt is up by $5.5 trillion (about $45,000 per household) since 2007. Real annual dividend income is down 2.3% year-over-year through January 2017, and is $51.5 billion (5.3%) below its 2008 high, with firms sitting on record cash cushions. At $4 trillion, checking deposits and currency levels



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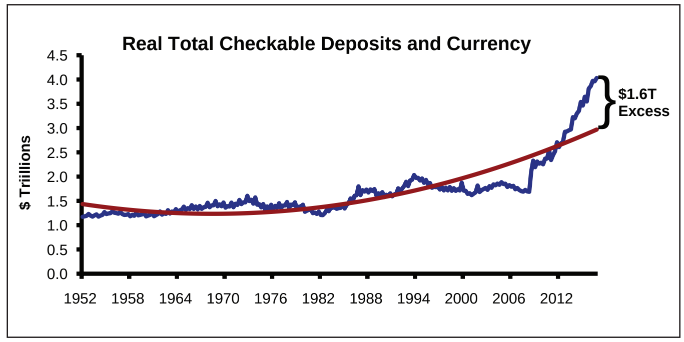
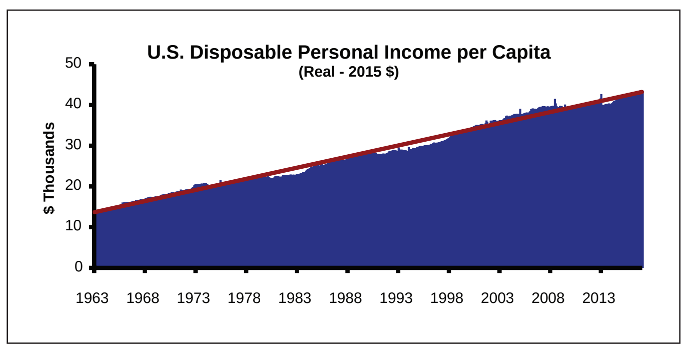


figure 100

are also at an all-time high and are $1.6 trillion above the 1952-2008 trend. Deploying this excess cash in activities with a 10% yield (instead of 0.75-1%), would generate about 1% additional GDP growth.

Real annual government social insurance income (i.e., unemployment compensation) is up by 1.1% or $30.6 billion year-over-year through January 2017, and 25.2% or $543.2 billion since the low point in mid-2008. Total real wage and salary compensation rose by 1.9% year-over-year through January 2017. Real disposable personal income per capita stood at $43,544 as of January 2017, surpassing the 2008 peak by 4.9%.



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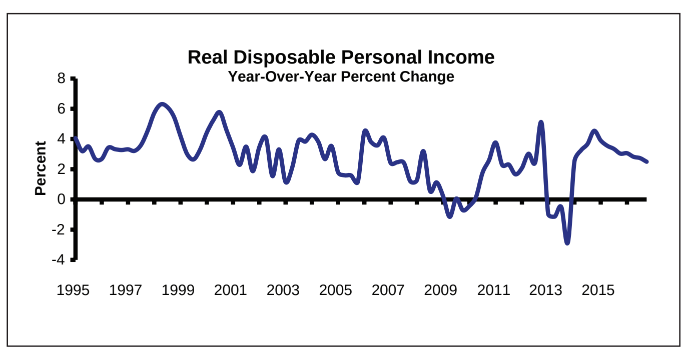

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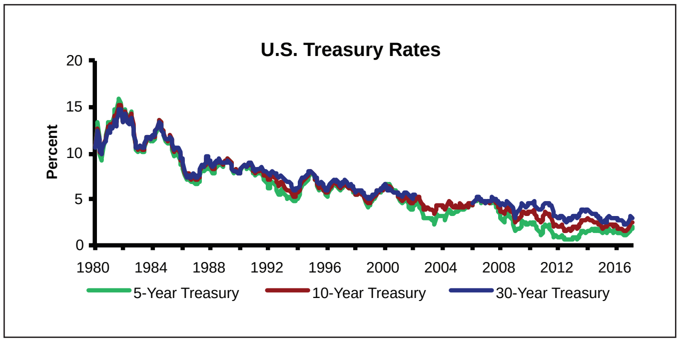

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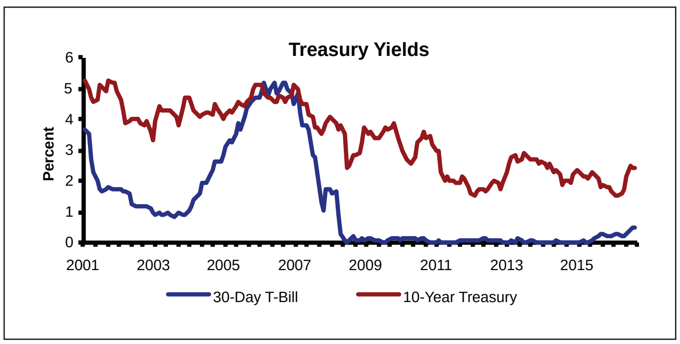
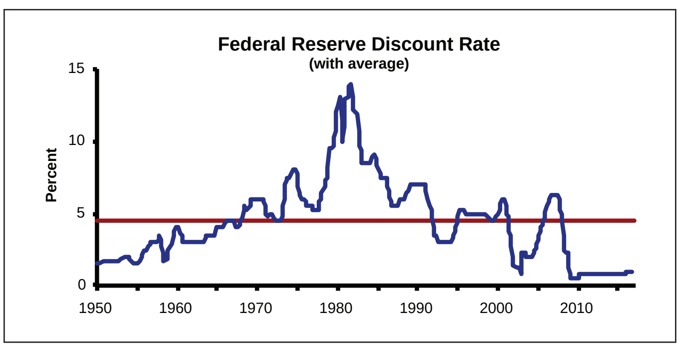


figure 104

Interest Rates and Debt. In December 2016, the Fed raised the Federal Funds interest rate target range by 25 bps, to 0.50%-0.75%, and then by another 25 bps in March 2017, citing its monetary policy stance as being "moderately accommodative." In March, the Fed indicated that it expects to implement three rate hikes in 2017, each of which we believe will be quarter-point increases (25 bps). The Fed appears satisfied that the economy has met the goal of full employment and a 2% inflation rate, and therefore has finally begun to allow markets to prevail.

The effective Fed Funds rate (which is the rate banks are charged on overnight loans) was 0.7% in March 2017, or about 180-230 bps below market-driven rates. The 10-year Treasury yield increased by 30 bps over the last 3 months, to 2.6% in mid-March. While this is an improvement from the recessionary lows, it is still 190-240 bps below market-driven rates, as the Fed continues its "we know best" capital interventions. We expect a 25-50-bp increase in the Fed Funds rate in the first half of 2017, with a less than 50-50 chance of a 50-bp increase. While this will help the economy by modestly reducing capital market distortions, it will not eliminate them.



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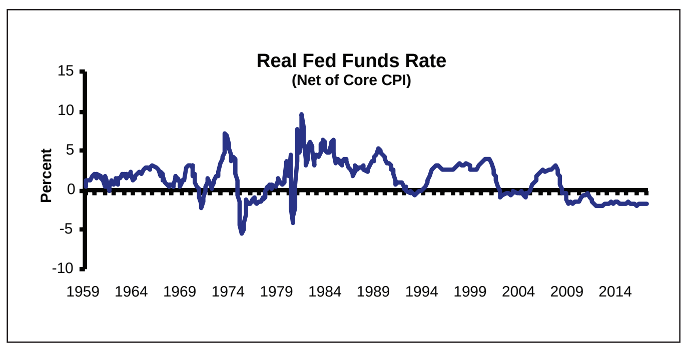

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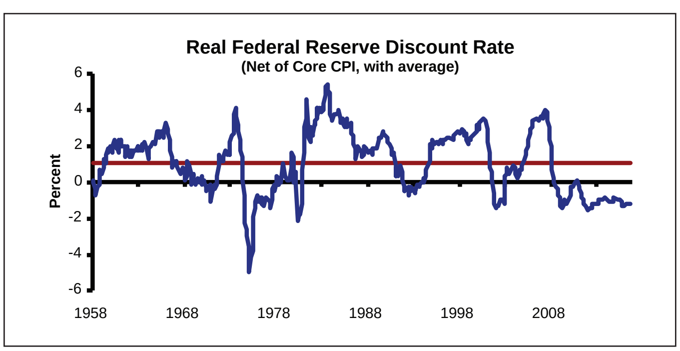

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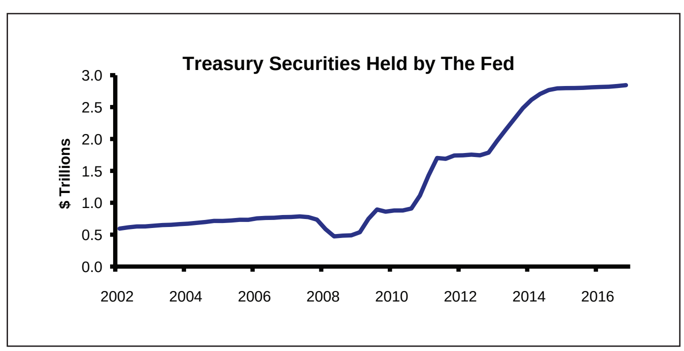

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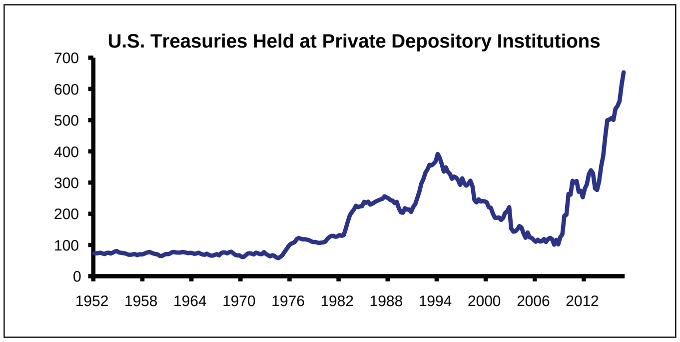

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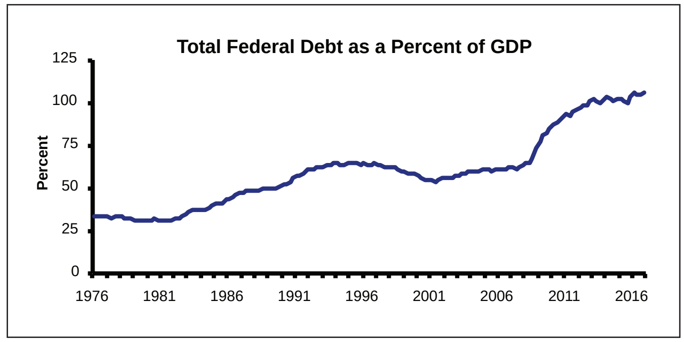
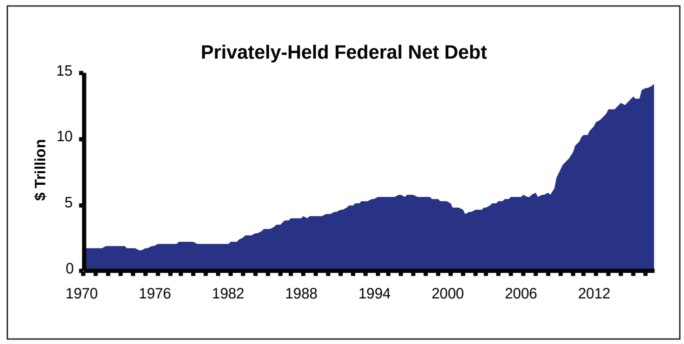


figure 112

Low interest rates have reduced growth both by discouraging true entrepreneurial risk-taking and strangling the single family housing market. Low short-term interest rates have required people to save longer for the down payment on a home, and also discouraged intergenerational transfers for down payments. Research clearly shows that having the requisite down payment is the key to buying a home — not a low monthly payment.

In January 2017, total monthly federal government interest payments stood at \$21.7 billion. This is nearly \$3.5 billion less than federal government interest



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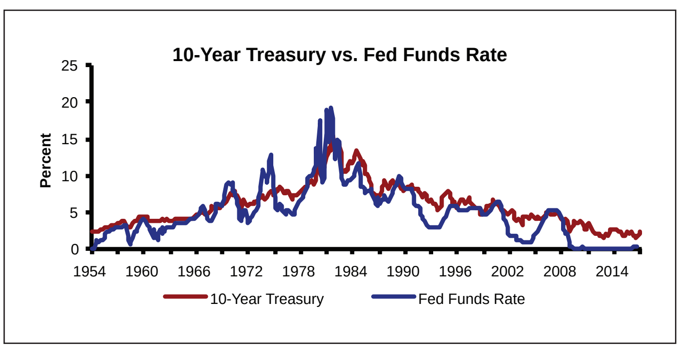

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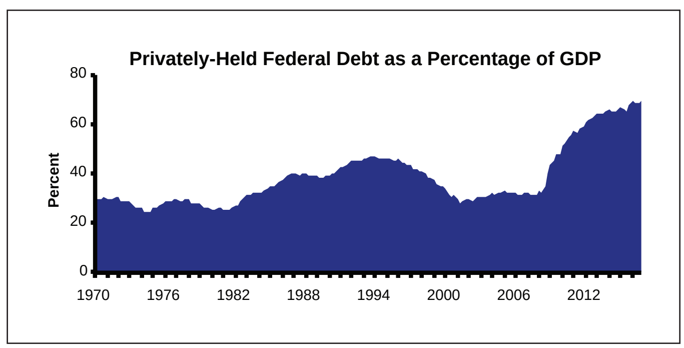

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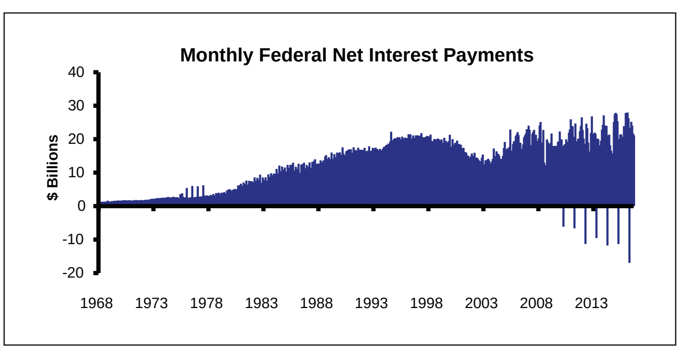

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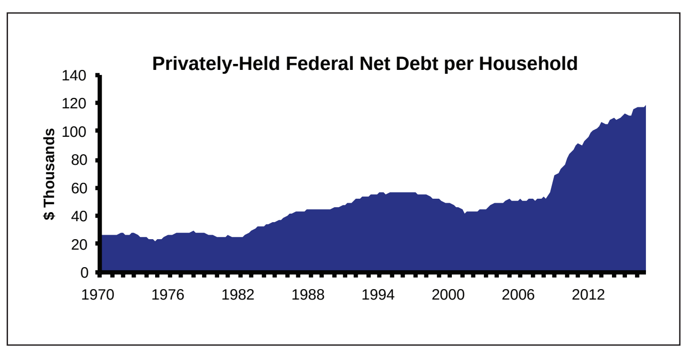
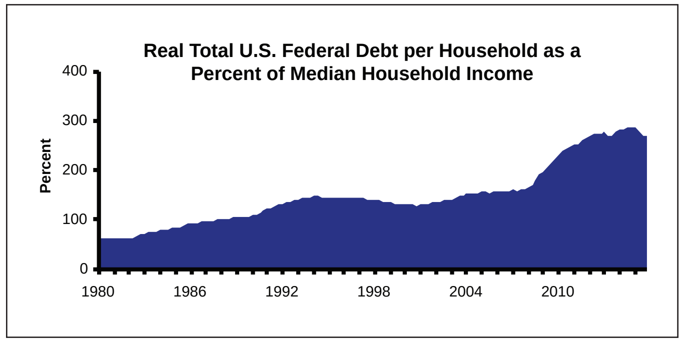


figure 115

payments in September 2008, despite an increase of nearly $7.8 trillion (125%) in total federal debt held by the public.

The real federal debt burden (2015 dollars) on U.S. citizens grew from $97,000 per household in September 2008, to $165,000 in December 2016, an increase of $68,000 per household. The ratio of total debt burden per household relative to median income rose from 178% to 269% through year-end 2015 (latest available). Real government debt increased by $8.1 trillion between September 2008 and year-end 2016, as total outstanding non-government debt fell by $2.7 trillion (5.5%). Effectively, federal government debt is squeezing out private debt, with capital being diverted from private uses to less productive governmental uses (primarily transfer payments). If this $8.1 trillion of increased Federal debt were a mere 200 bps more productive in private hands than when used by the government, it would have generated an additional $163 billion (0.9%) of real GDP growth annually. It is not coincidental that this is roughly the extent to which GDP growth has lagged trend over the past 7 years.



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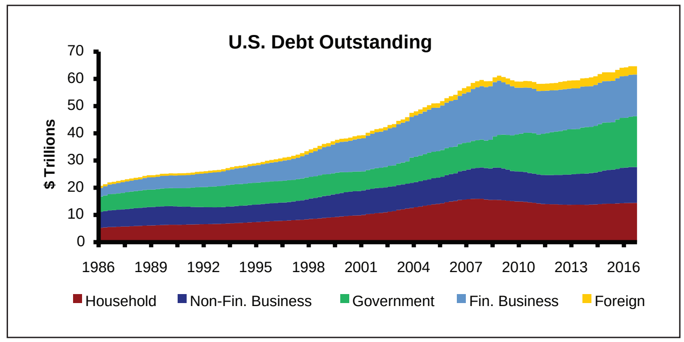

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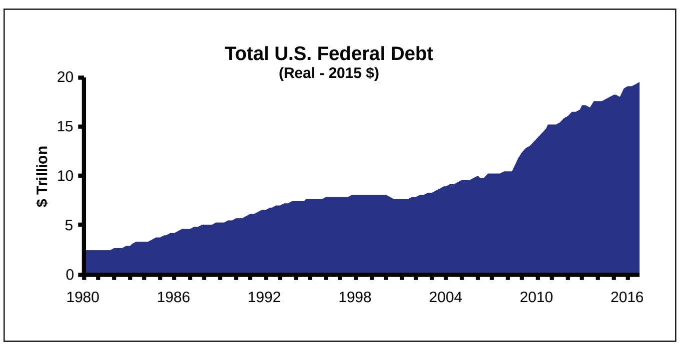

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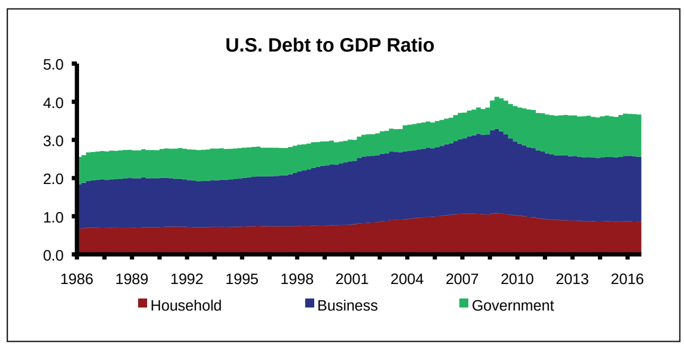

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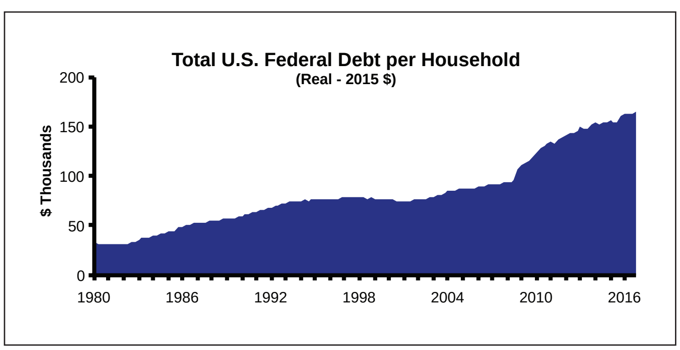

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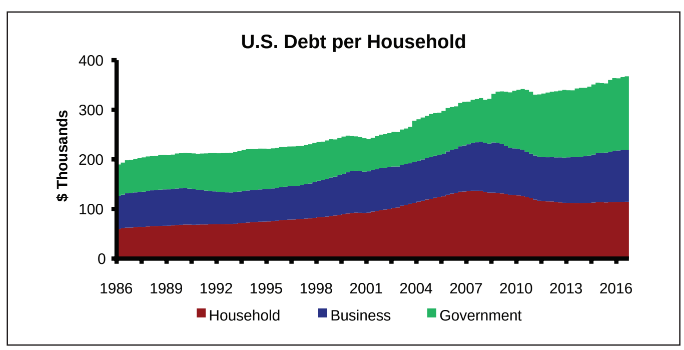

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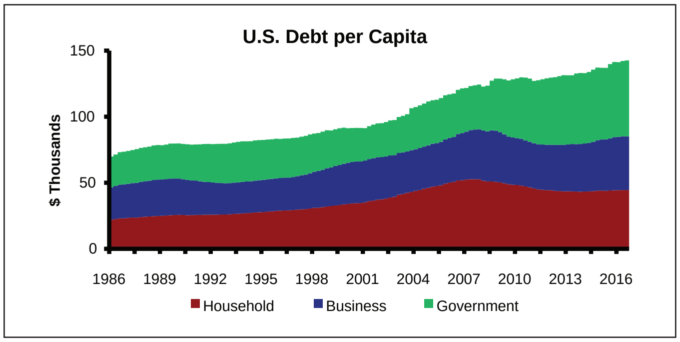


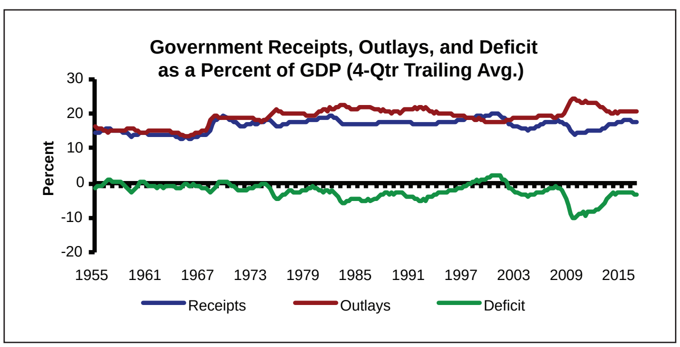
figure 122

Budget Deficit. In the fourth quarter of 2016, federal revenues and spending accounted for 15.7% and 20.1% of GDP, respectively, and resulted in a budget deficit of 4.4% of GDP. On a 4-quarter trailing basis, outlays outpaced receipts, resulting in a budget deficit of 3.1% of GDP. Since 2008, the U.S. has had an average annual budget deficit of 5.6% of GDP.

Real federal defense spending has fallen 27% since the 2010 peak, but remains above its historical norm (since 1981) of $552 billion per year. Real annualized government defense spending stood at $614 billion through the fourth quarter of 2016, and accounts for approximately 3.3% of U.S. real GDP. This is expected to rise, given President Trump's indicated defense budget increase of $54 billion. The last time defense spending as a percent of GDP was at the current level was in 2001. Defense spending hit a 30-year peak in 2010 at $844 billion, or 5.1% of U.S. real GDP. By comparison, the lowest level of real government defense spending over the past 30 years was $360 billion in 1998, and the lowest level as a percent of GDP was just 2.9% in 2000, while the 30-year average is $552 billion per year, or 4.5% of U.S. real GDP.

Inflation. The February 2017 year-over-year change in the consumer price index (CPI, all goods) was 2.8%, up from 0.9% one year ago and surpassing the long-term average (since 1990) of 2.5%. Excluding food and energy prices, core CPI rose by 2.2% over the last 12 months through February 2017, versus 2.3% for the previous 12-month period and a long-term average of 2.4%. At current core inflation rates, we have a real short-term rate of -1.6% and a real 10-year yield of 0.2%. The increase in service prices over the 12 months through February 2017 was 3.2%, broadly in line with consumer inflation expectations.

CPI is rising, and any price declines (like oil and



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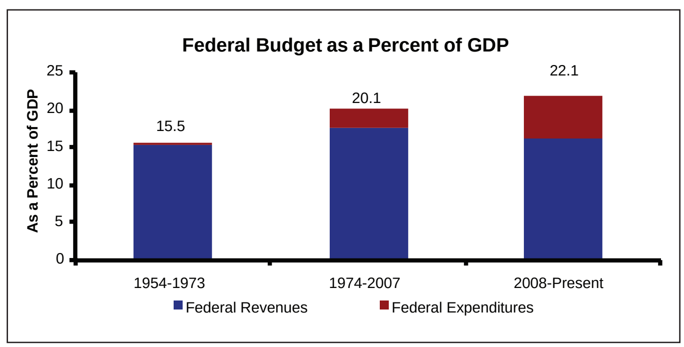

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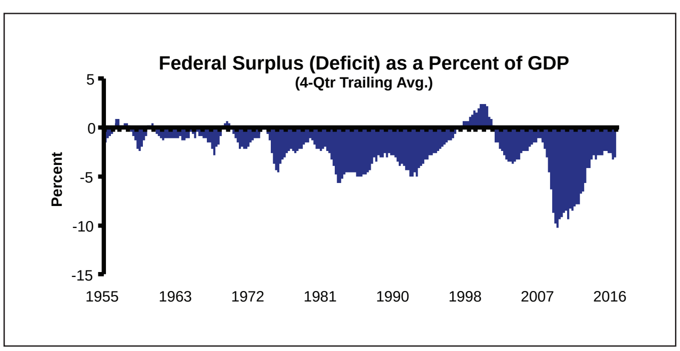

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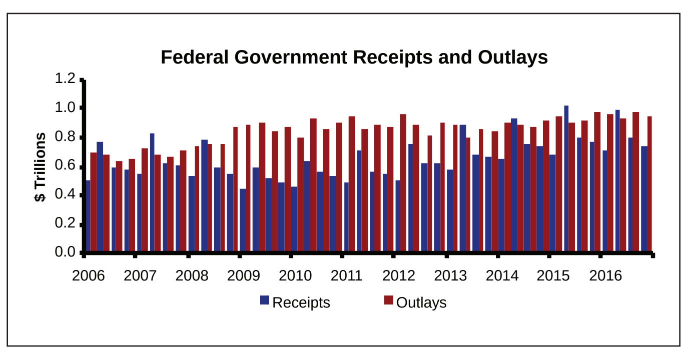

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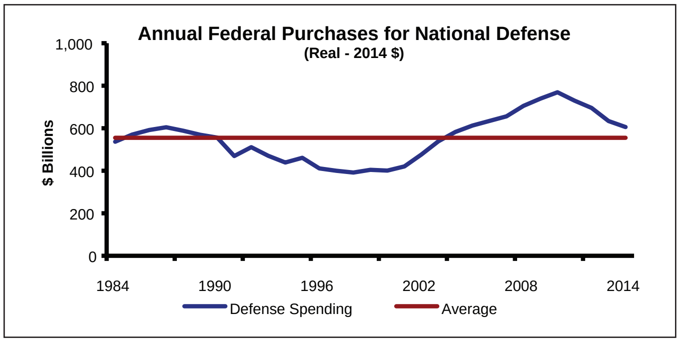

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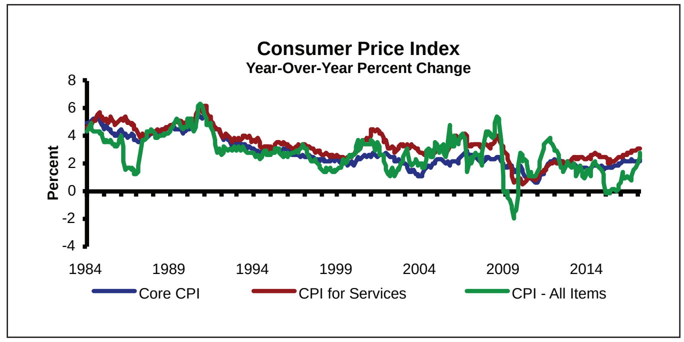

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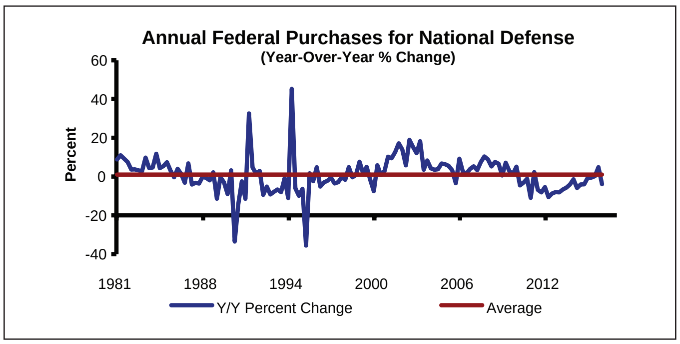

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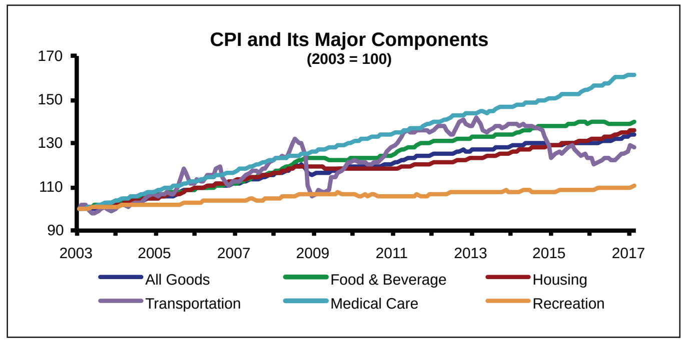

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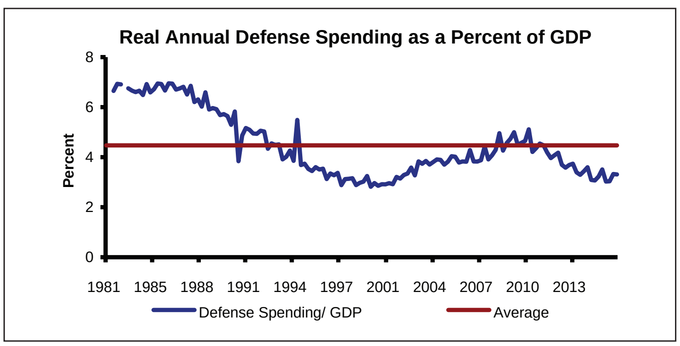

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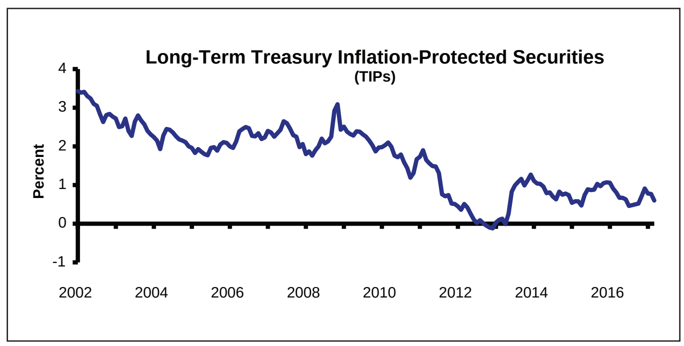


figure 132

tech) have increased consumer welfare. At 0.6% in mid-March 2017, the yield on 10-year Treasury Inflation-Protected Securities (TIPS) declined during the first quarter of 2017, and remains 190-240 bps too low.

Retail Sales. Real monthly retail sales (2015 dollars) are at an all-time high, yet are below the historical trend by 1.4 standard deviations. They peaked at $383 billion in late 2007, bottomed at $326 billion in March 2009, and have since risen to $405 billion as of February 2017, an increase of 24.1% from the bottom. At $310 billion, real monthly retail sales excluding autos increased by $43.2 billion (16.2%) above the recessionary low and are now greater than their pre-recessionary high of $298 billion. Real monthly electronic and mail order sales were more than $42 billion in January 2017 (latest available), accounting for 10.3% of total retail sales — a rate that has steadily increased from 1.8% in 1992.

Between March 2009 and February 2017, real monthly retail sales at restaurants and bars (30.2% growth) outpaced sales at building materials and garden supply dealers (23.3%), health and personal care

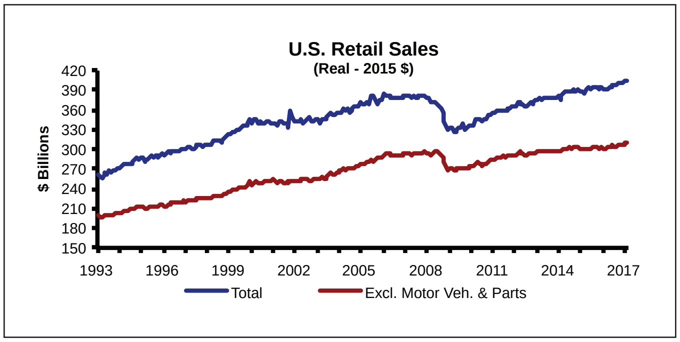
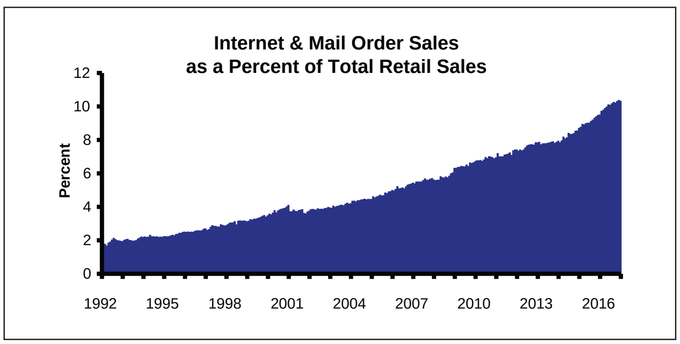


figure 133

stores (20.7%), furniture and home furnishing stores (14.9%), gas stations (11.0%), and grocery and liquor stores (10.1%). In contrast, department stores (-30.0%), electronics and appliance stores (-11.9%), and sporting goods and book and music stores (-0.6%) saw declining sales between March 2009 and February 2017.

Positive growth from March 2009 through January 2017 (latest available) was seen in electronic (online) shopping and mail order (102.0%), clothing and shoe stores (14.2%), jewelry stores (13.0%), and warehouse clubs and superstores (11.0%).



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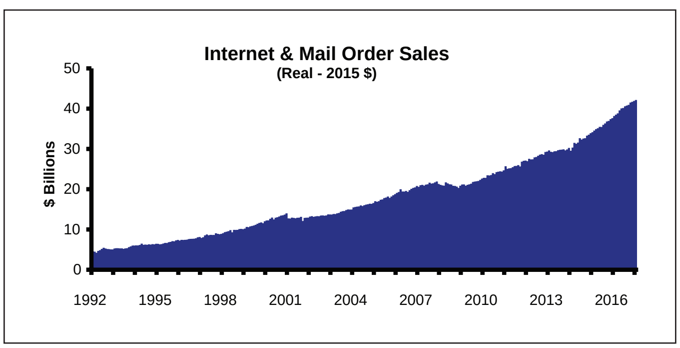

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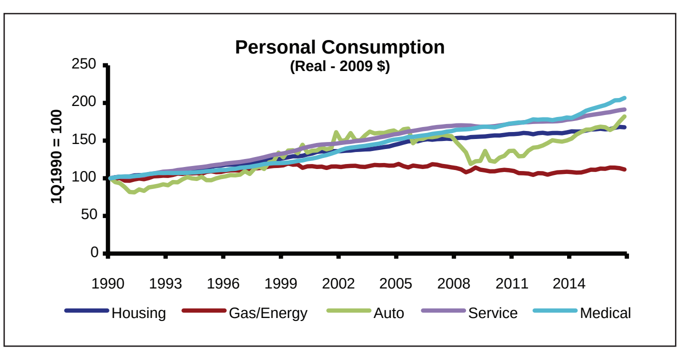

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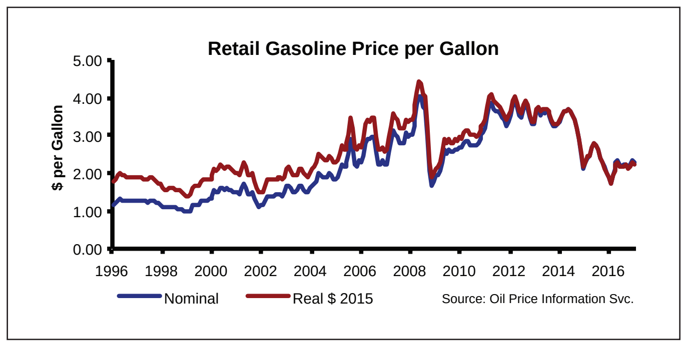

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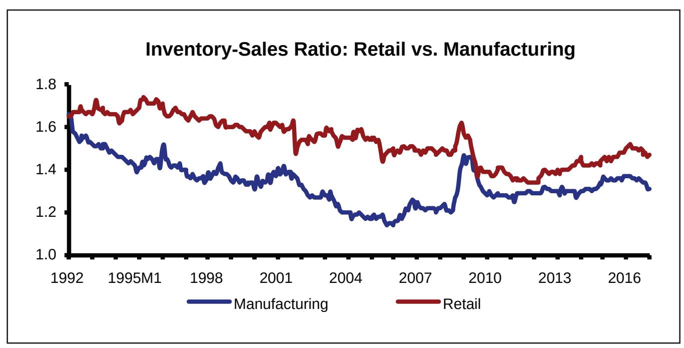

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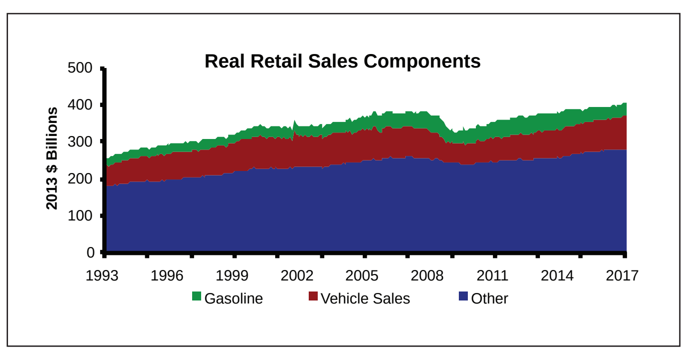
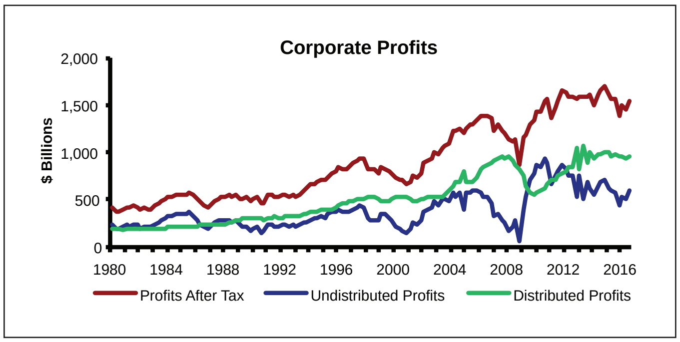


figure 139

Profits. Real after-tax corporate profits peaked at $1.7 trillion in the fourth quarter of 2014 and have since fallen by 8.9%, to less than $1.6 trillion due to strong labor markets and rising salaries. Because of the recent declines, after-tax profits are 7.5 standard deviations below trend as of the third quarter of 2016 (latest available), and only about 11% higher than the pre-recessionary high. This reflects the drag resulting from holding cash rather than investing in the face of cash's zero opportunity cost due to low rates. However, stock market values rose post-election, reflective of an expectation of a substantial boost in after-tax profits as corporate taxes are reduced.

Real after-tax profits as a percent of GDP stood at 8.4% in the third quarter of 2016, versus the long-term historical average (since 1980) of 6.9%. This ratio approached 10% in 2014, and is now reverting towards its historical norm, contrary to the hysterical ravings of the likes of Pickety and Krugman. Meanwhile, average profit distributions over the trailing four quarters through the third quarter of 2016 reached 65%, versus 60% in 2013-2014, 55% in 2012, and just 44% in 2011. That is, the percentage of cash flow being distributed has increased significantly — a trend which we expect to continue.

Industrial Production. The overall industrial production index stood at 104.7 in February 2017, just below the pre-recessionary high of 105.7, and gained 19.8% from the June 2009 low of 87.4. Through February 2017, the durable industrial output level recovered 110% of the volume lost during the recession, while the non-durable industrial output level was only 34% of the way back to pre-recession levels. Non-durable production is being held down by the complete collapse of the apparel and printing sectors, which will not rebound. Durable



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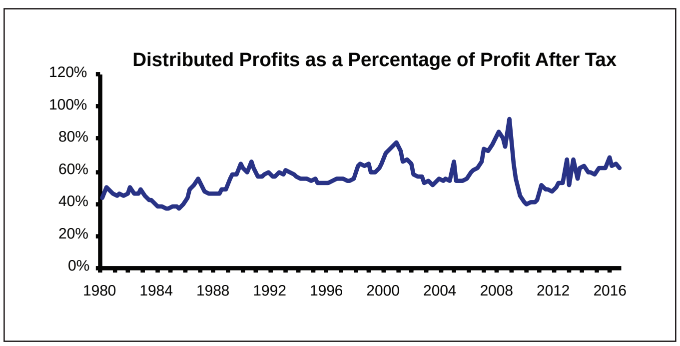

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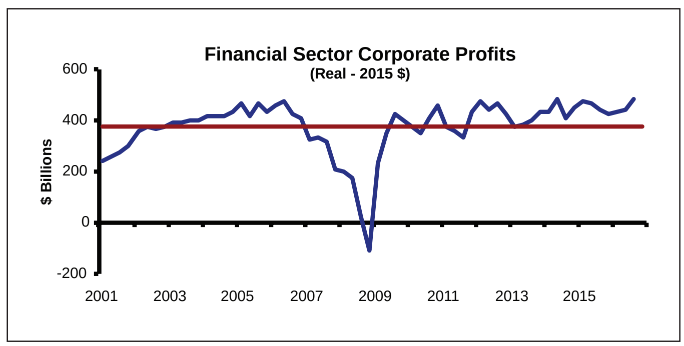

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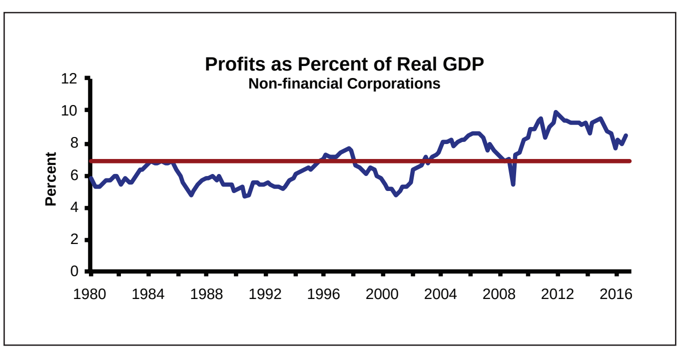

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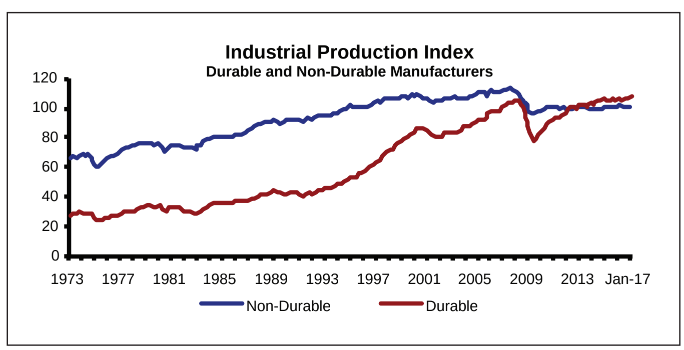


figure 144

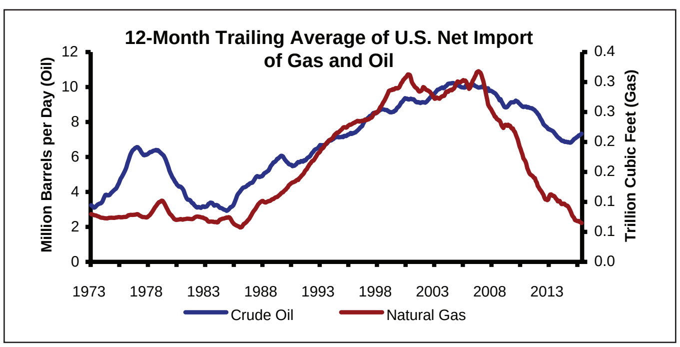
and non-durable production levels are well below trend, by 2.3 and 0.9 standard deviation, respectively.

U.S. real annualized exports edged up over the last year through the fourth quarter of 2016, standing at over $2.1 trillion in spite of a strong dollar. Exported goods increased by $29 billion (2.0%) over the last 12 months, while exported services increased by $4.3 billion (0.6%) over the same period. This is consistent with past industrial behavior, where research finds that a stronger dollar spurs U.S. exporters to reduce their production costs in order to remain competitive.

Mining sector output is 19.9% above its pre-recessionary peak through February 2017, and is up 2.2% year-over-year, but is 10.8% from its peak in 2014. The electric and gas utility industrial production index is just 11.7% below the 2007 high.

After reaching $108 per barrel in 2013 (real 2015 dollars), West Texas Intermediate oil prices plunged precipitously to $30 per barrel in February 2016, rebounding to about $49 per barrel in mid-March 2017. From 1994 through the first quarter of 2009, the ratio of real crude oil prices to real natural gas prices (2015

figure 145



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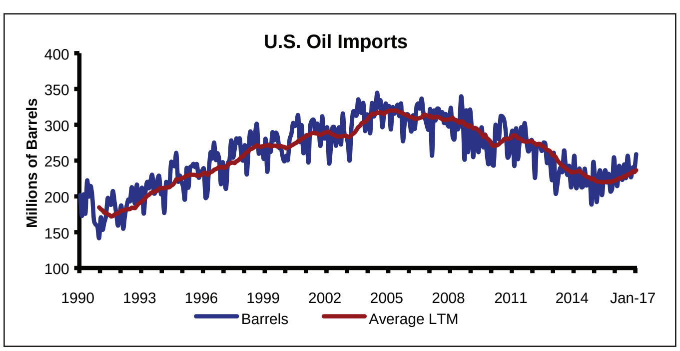

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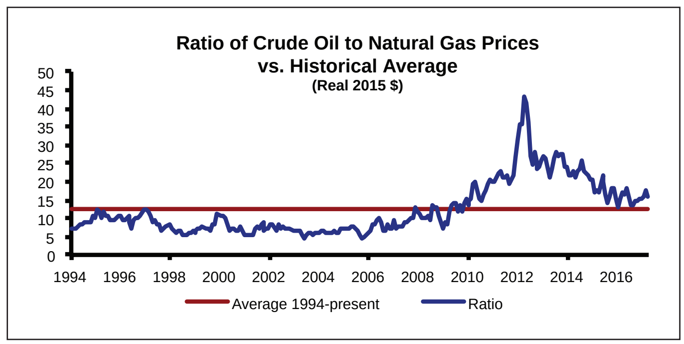

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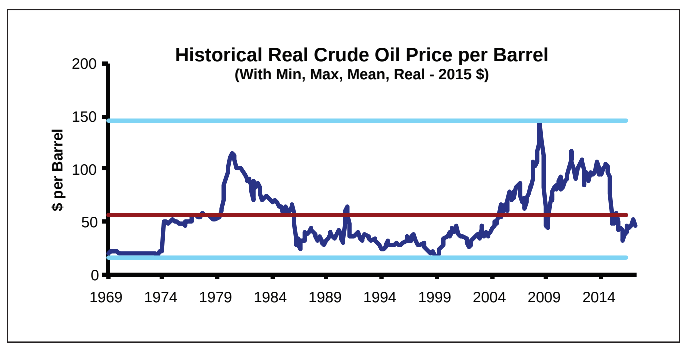

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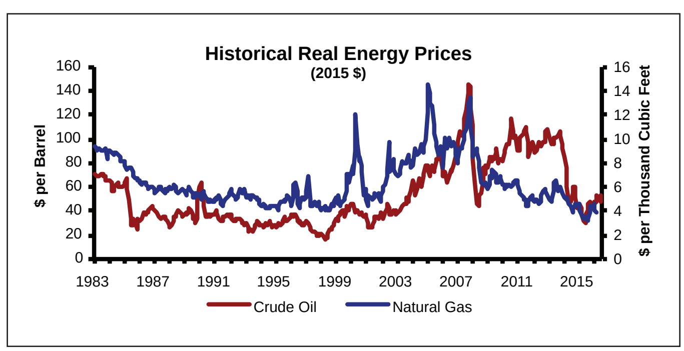


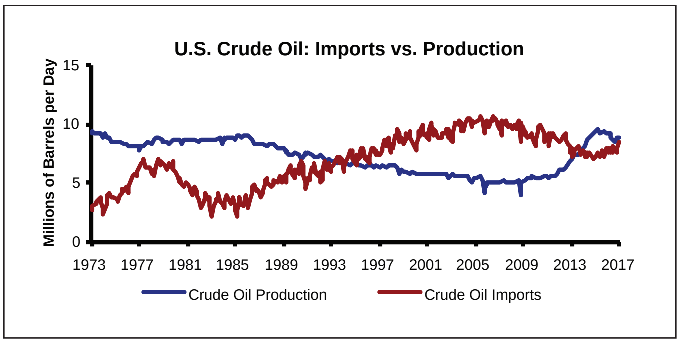
figure 150

dollars) averaged about 8x. It then rose dramatically to a peak of 43x in early 2012, but has fallen to 12x in March 2017.

U.S. natural gas production steadily rose from 2006-2015, while crude oil production notably increased beginning in 2009. Production of both commodities reversed course in 2015 and are modestly declining.

Defense and space-related equipment production is 13.5% below pre-recession levels, as defense spending retrenchment continues. We expect this to increase significantly under the Trump administration. In February 2017, consumer goods output underperformed its pre-recessionary high by just 2.2%, versus a 15.9% decline at the lowest point of the recession.

Computer output (including smart phones and tablet computers) is 33% above its pre-recession high, after a 16.7% decline during the recession. The motor vehicle production index is now 17.9% higher than its pre-recession high, after experiencing a 55.6% decline during the recession. Output of fabricated metals remains 12.4% below its pre-recession high, while the U.S. output of apparel remains a staggering 64.5% below its pre-recession high, with no sign of improvement for a sector that is in secular decline.



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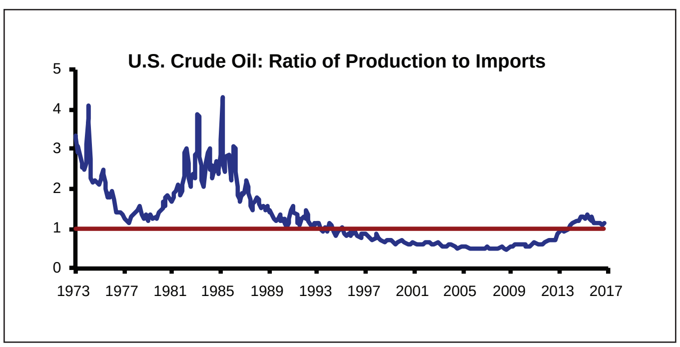

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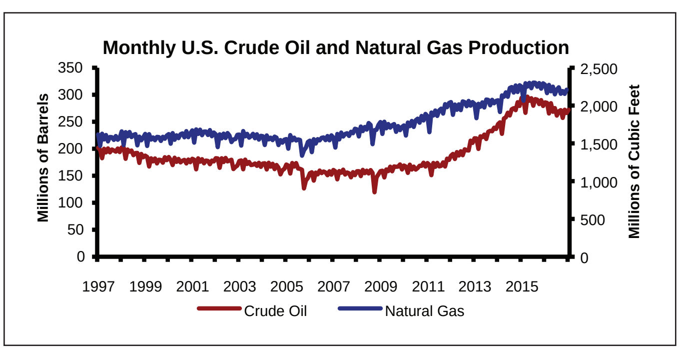

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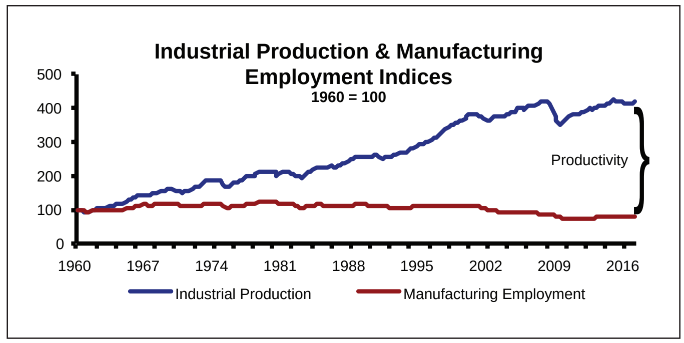

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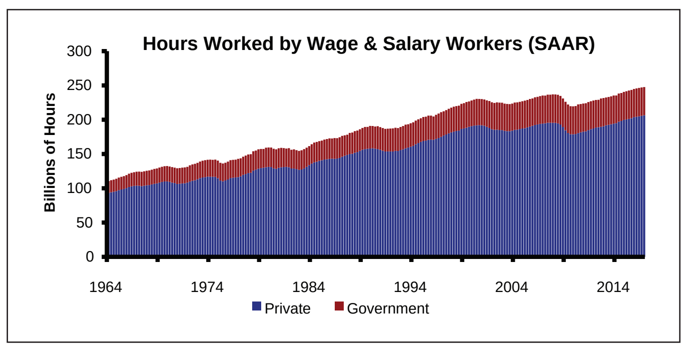

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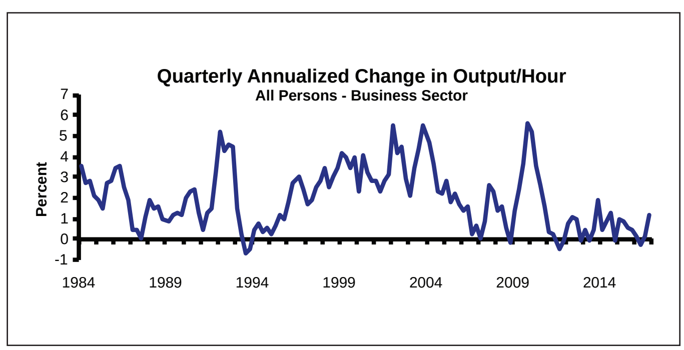

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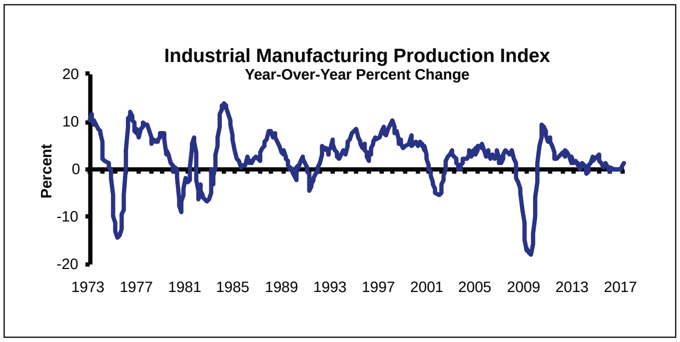

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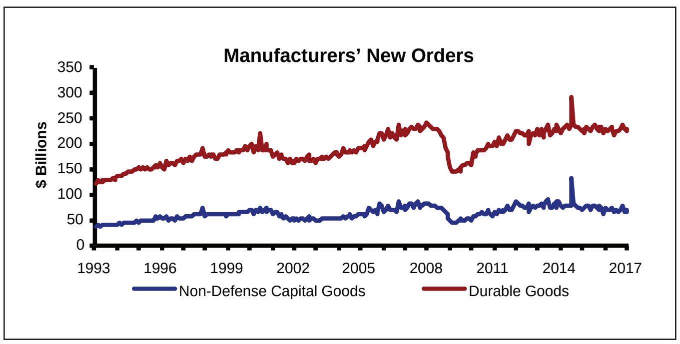

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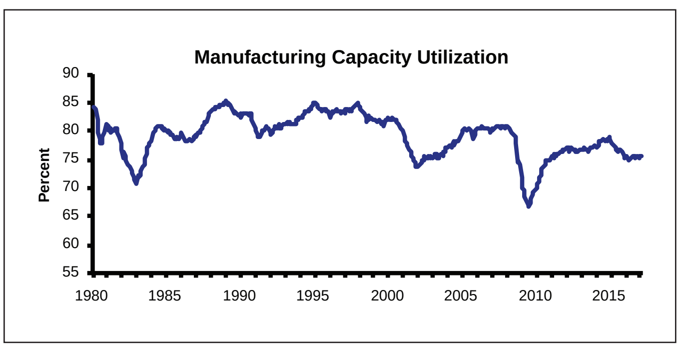


figure 159

The seasonally adjusted production of automobiles and light trucks (on both a dollar-volume and unit basis) is above historical trend. The auto and light truck production index peaked at an all-time high of 134 in July 2015, but retreated to 129 in February 2017, versus the long-term (40+ years) average of 76. A comparable increase was also reflected on a unit basis, with July 2015 production reaching 12.5 million units, but then dropping to a seasonally adjusted annual rate of 11.7 million light cars and trucks in February 2017. Despite above-average production over the last year, the U.S. has under-produced about 6.8 million light trucks and cars on a cumulative basis since 2003 — down by almost 1.2 million units over the last year. This analysis is based on historical (1976-2002) average production levels of 10.6 million units per year.

The average age of autos stood at a record high of 11.6 years in 2016, up from 11.4 years in 2014 and 9.9 years in 2006. IHS Markit attributes the increase to higher quality vehicles being produced. As a percent share of total vehicles on the road, older vehicles are growing disproportionately faster than new vehicles. IHS Markit expects the number of vehicles that are greater than 16-years-old to increase by 30% by 2021.

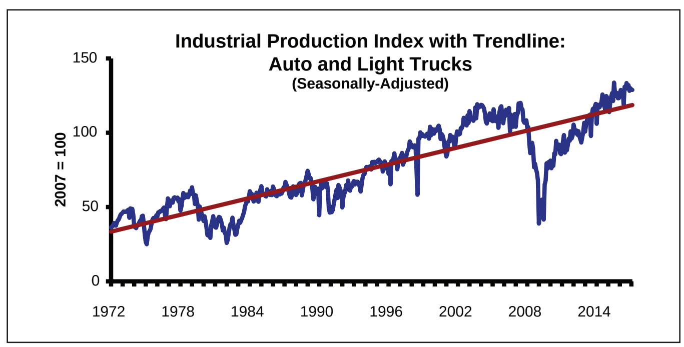
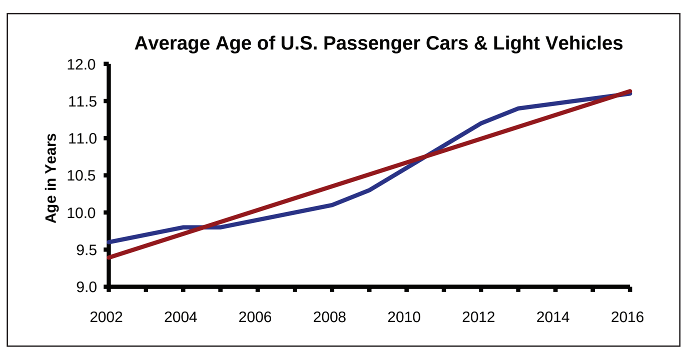


figure 160

Auto Sector. Auto sales remain above historical norms and continue to make inroads into the recession induced pent-up demand. Real auto sales have historically (1992-2006) represented 6.9% of real GDP, versus just 4.1% in 2009, and stood at 5.6% in 2016. As of February 2017, U.S. auto and light truck sales stood at a robust 1.46 million units per month, though down slightly from 1.51 million at year-end 2015. The latest figure far outpaces the recessionary low of just 752,000 units sold in February 2009, and is above the 40-year historical average of 1.25 million units per month.



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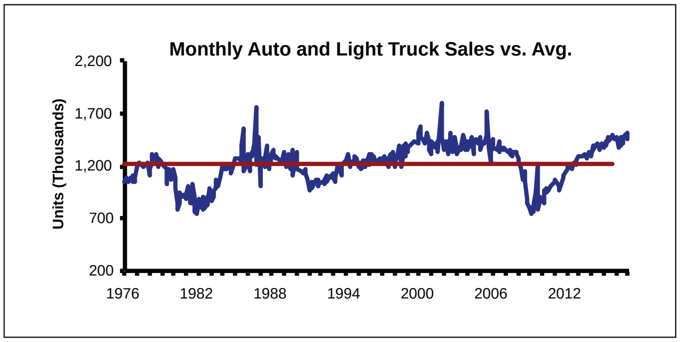

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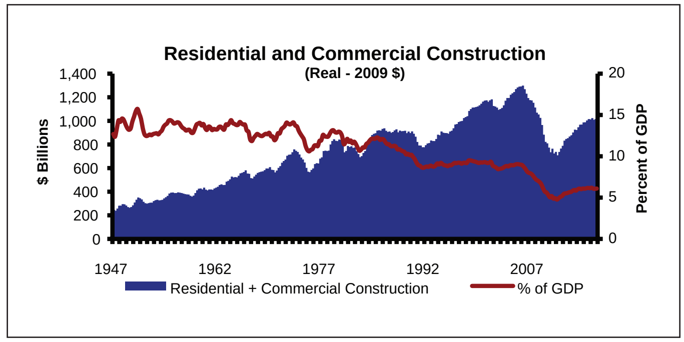

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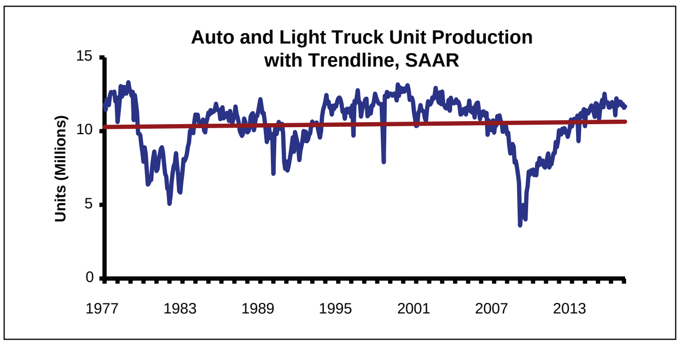

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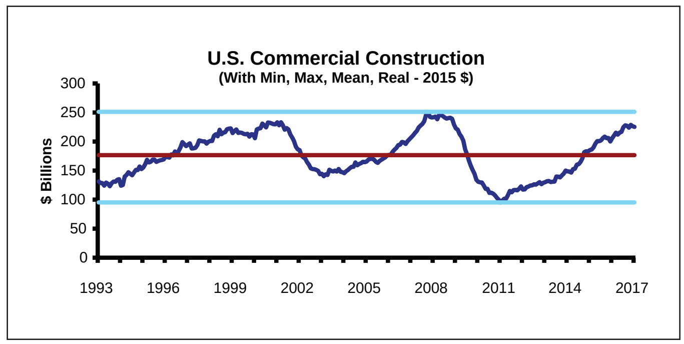

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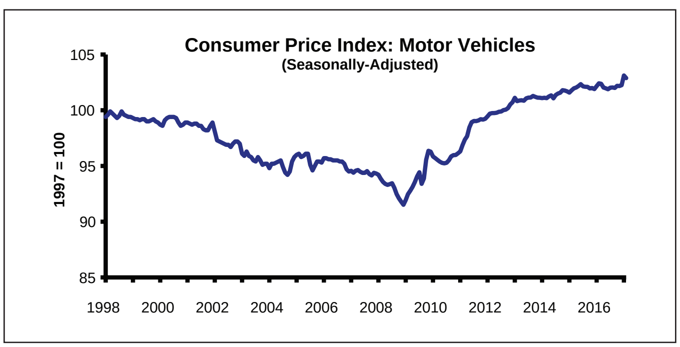

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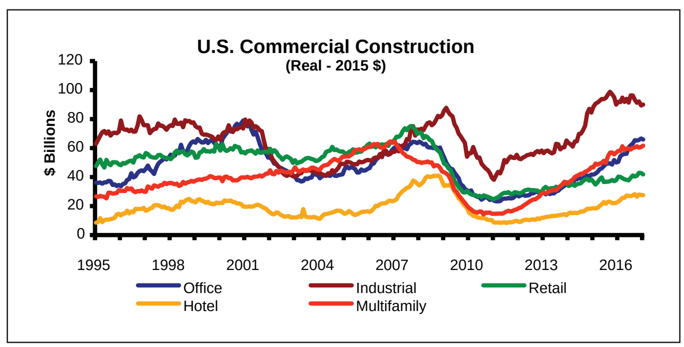

figure 167

New to 5-year-old vehicles are projected to grow by 16%, while those in the 6-11-year range will grow by 5%, and 12+ year-old vehicles will increase by 10% over the same period.

Construction. Seasonally-adjusted real annual office construction is up by nearly $14.5 billion (30.6%) year-over-year through January 2017, and is now 43.9% above its historic norm (1993-present). Real industrial construction (including warehouse and manufacturing facilities) is down by $2 billion or 2.1% year-over-year, still surpassing its historic norm by 40.1%. Real retail construction increased by about $1.6 billion (3.9%) over the last 12 months through January 2017, and remains 13.8% off of its norm, while lodging construction activity is up by more than $4.5 billion (19.6%) over the same period, and is above its historical norm by 52.4%. Real multifamily construction spending grew by $3.6 billion (6.3%) year-over-year through January, and is now also 60.2% above its norm.

Not All Spending Is Equal

Do not worry about the Congressional Budget Office (CBO) deficit forecasts relating to proposals by the new Congress and administration. These forecasts are never remotely close to actual budget deficits. This is partially because they fail to incorporate the many unforeseen economic twists which invariably occur over a 2-3-year window. But it is also because these forecasts are mandated to exclude any feedback between tax rates and the economy. Thus, any proposed tax rate decrease necessarily increases the forecasted deficit because it ignores the additional labor and corporate income increases which result from the increased incentives attributable to lower tax rates. This makes these forecasts "non-political" but hopelessly flawed and over-simplified in terms of forecasting budget deficits. CBO forecasting is like analyzing what would happen to the revenue of a building if you cut rents and ignored the fact that lower rents result in more space being leased.

CBO forecasting is like analyzing what would happen to the revenue of a building if you cut rents and ignored the fact that lower rents result in more space being leased.

This patently nonsensical approach is exactly how the CBO forecasts are created. Ironically, these forecasts use macroeconomic models which assume that government spending ("G") always generates a multiplier effect on economic activity. That is, positive feedback of tax cuts are ignored, but it is always assumed for increased government spending. As we have discussed in the past, such macroeconomic models completely fail to accurately predict economic outcomes because they assume that the response of the economy to government spending is the same whether government spending is completely wasteful or highly productive. It is as if you assume that the impact of capital expenditures on your building's NOI is the same irrespective of whether these capital expenditures are useful. These macro models are equivalent to saying that installing new elevator cabs every day creates as much NOI growth as spending the same amount repairing a very leaky roof. When viewed in this context it is obvious that the underlying macro models used in these forecasts are worthless. Further underscoring this worthlessness is the fact that macroeconomic models in no way incorporate the regulatory burden on businesses and individuals. Do you recall discussing regulatory burdens in your macroeconomics class? No. But everyone knows that economic growth is highly sensitive to having an appropriate regulatory framework. The simple truth is that too much regulation strangles growth, while too little regulation squanders resources. Yet macroeconomic models completely ignore the regulatory framework. Hard to believe, but true.

… too much regulation strangles growth, while too little regulation squanders resources.

As a result of President Trump saying that he plans to allocate $1 trillion for infrastructure spending, these nonsense models spewed out increased GDP growth forecasts, due to the fact that these models mechanically assume that more government spending always creates growth. These forecasts were made without knowing any details as to which specific infrastructure spending will occur. Of course, it requires a careful analysis of each individual infrastructure project to determine whether expected benefits exceed expected costs (including the opportunity cost of using the resources in the private sector). Only after analyzing each specific infrastructure proposal, and summing the results could you have any idea as to whether the $1 trillion infrastructure plan will add to, or subtract from, the economy's growth. For example, what if the entire $1 trillion was used to build, say, a wall? Okay, we won't go there, but what about an eight-lane bridge from San Francisco to Tokyo? That would certainly be infrastructure spending, and it certainly is a lot of "G," but it would waste $1 trillion of scarce resources on a hopeless project, reducing the well-being of the U.S. economy and GDP growth. A $19 trillion economy simply cannot afford to squander $1 trillion. Certainly these resources could be employed far more productively in the private

Saying that greater infrastructure spending increases growth without knowing which infrastructure is involved is like saying a company that invests more will always have greater profit growth, without knowing whether the investment projects are value-creating or value-destroying.