State of the Markets: Strategies for Trumpanomics

Alan Brazil April 2017

SOM Macro Strategies State of the Markets: Strategies for Trumpanomics

• Step 1: Macro Theme: Trumpanomics

- The goal of Trump's economic policy is to push real growth up to 3.5-4% and add 25 MM new jobs in the next 10-years

• Step 2: Fundamental Economic Framework

- Growth in the US is below historical norms because of slowing investment and productivity
- Investment growth reflects in part the headwinds of US corporate tax policy and Dodd-Frank
- Demographics and the impact of retiring baby boomers is a headwind to labor growth
- Any policy must be massive to offset these hurricane force economic headwinds

• Step 3: Find Potential Catalyst

- If fully implemented, Trump economic policy would be massive enough to move the needle of economic growth
- Corporate tax reform could push economic growth above 3% all by itself with relatively small increase in Federal debt
- Dodd-Reform could push growth even higher by unleashing bank lending in housing and small businesses
- Energy and infrastructure policy could add to this growth through a build out of US shale energy, particularly nat gas

• Step 4: Find Asymmetric Trade

- Trade 1; Buy US Equities
- Trade 2: Buy US Regional Bank
- Trade 3: Buy Mortgage Insurers
- Trade 4: Buy Home Builders
- Trade 5: Buy a Basket of Energy Infrastructure Equities
- Trade 6: Higher Rates—Buy Payer Swaptions
- Trade 7: Stronger Dollar—Buy Worst-of-Puts on Euro and Yen vs USD

asr 2

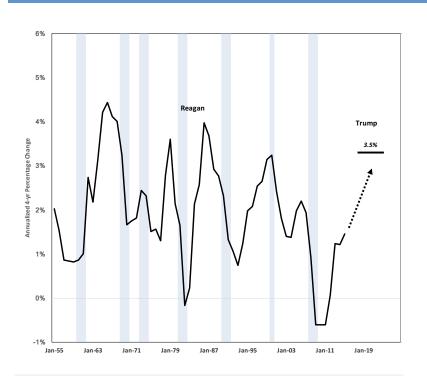
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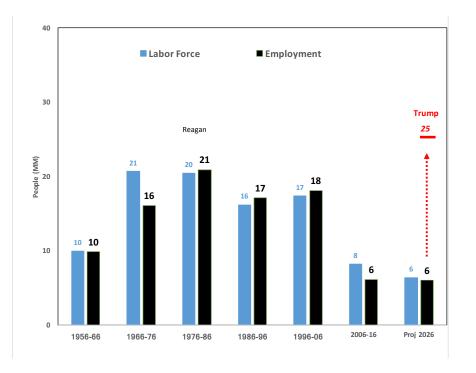
Step 1: Macro Theme

Trump's Economic Plan Is Reaganomics: Create 25 million new jobs and 3.5-4% real GDP Growth

Achieving Real Capita GDP of Reagan Era Looks Daunting 1

Reaching 25 mm New Jobs Looks Nearly Impossible ^{2,3,4}





- 1. St.Louis Federal Reserve (FRED)
- 2. Author uses and average of BLS/CBO projections
- 3. BLS Projections 2014-2024
- 4. CBO Projections 2016-2017

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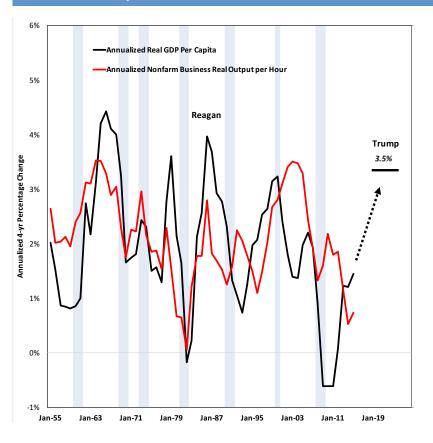
Step 2: Fundamental Economic Framework

Achieving Growth Targets Means Reversing the Decline in Investments and Productivity¹

Fall In Productivity Driven In Part By Fall in Net Investment

6% Reagan 5% 3% Annual Growth Rate (%) Annual Growth Rate(%) 3% 1% Net Fixed Investment (LHS) Real Output Per Hour (RHS) 1985 1988 1991 1994 1997 2000 2003 2006 2009 2012 2015

Fall in Productivity Has Lead To A Decline in Economic Growth



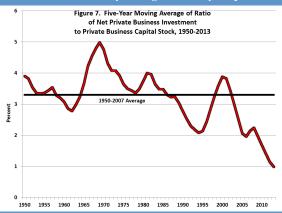
1. St. Louis Federal Reserve (FRED)

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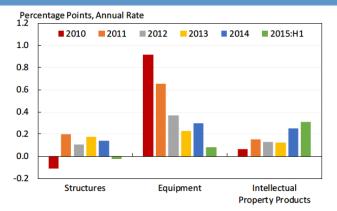
Step 2: Fundamental Economic Framework

Technology Investment Not Enough To Offset Impact of Fall in Fixed Investment on Productivity

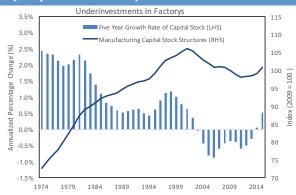
Gross Investment Is Mostly Being Offset By Depreciation ¹



Clearly A Transition From Fixed Investment to Software ³



Factory Capital Has Actually Shrunk ²



But Business Productivity Has Still Ground to A Halt ¹



¹ Gordon, "Secular Stagnation on the Supply Side", Presented at the Conference on the Underwhelming Global Post-Crisis, June 2015

^{2.} BEA

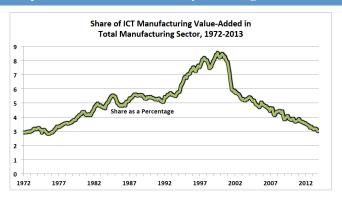
^{3.} Furman, "Business Investment in the United States: Facts, Explanations, Puzzles and Policies", Remarks to the Progressive Policy Institute, September 2015

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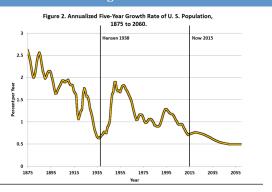
Step 2: Fundamental Economic Framework

The Tailwinds From Tech and Population For Economic Growth Have Turned Into Headwinds

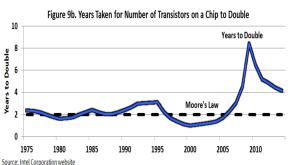
The Impact Of Tech on the Economy Is Ebbing As...²



Population Growth is Declining ²

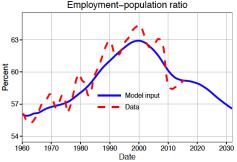


Moore's Law is Failing ²



Compounding the Impact of The Fall in Participation Rate ¹

Figure 9: Dynamic simulation under baseline demographics: other variables



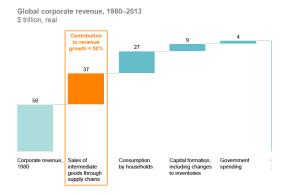
² Gordon, "Secular Stagnation on the Supply Side", Presented at the Conference on the Underwhelming Global Post-Crisis, June 2015

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Step 2: Fundamental Economic Framework

New "Tech" Economy Creating Many Issues And Potential Headwinds To Sustainable Economic Growth

"Tech" Economy Takes Advantage of Offshoring Production 2



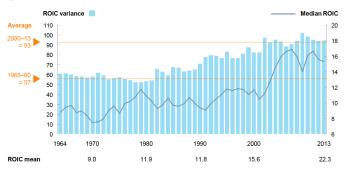
This Has Lead to Substantial Job Losses In Manufacturing ³



- 1. IMF, USA Article IV Report, June 2016
- 2. Mckinsey Global Institute, "Playing To Win" September 2015
- B. Data access through Fred, St. Louis Federal Reserve

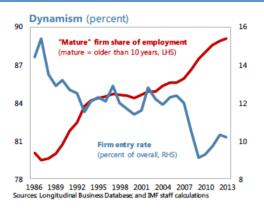
It Has Also Created A Winner Take All Economy ¹

Variance in return on invested capital (ROIC) for North American firms, 1964–2013



1 Firms included in this analysis had more than \$200 million in revenue in at least one year during this period as well as ROIC between zero and the 95th percentile. "Variance" is defined as the ratio of standard deviation to mean

Creating Bigger Firms From Winners But Fewer Small Ones 1



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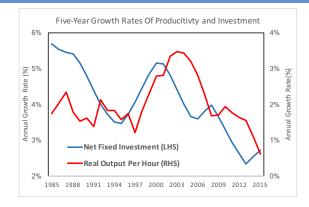
Step 2: Fundamental Economic Framework

Trump Policies Must Spur Investment to Offset These Issues And Recreate The Growth of The 1960s

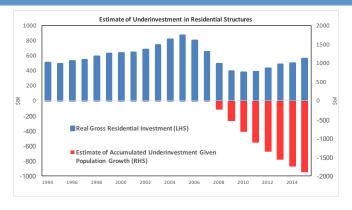
Investment Has Fallen Substantially Since the GFC ¹

Net Investment As % of GDP 10% 9% Percent of GDP (%) 4% Net Fixed Investment ---Average 1950-1990 3% 1980 1985 1995 2005 2010 2015 1990 2000

Not Surprisingly, Productivity Has Fallen As Well ¹



Fall Is Measured In The Trillions (Example of Housing) 1,2



Data Access through Fred, Federal Reserve Bank of St. Louis

^{2.} Authors calculations

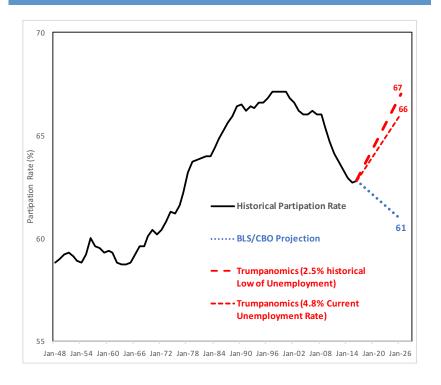
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Step 2: Fundamental Economic Framework

Demographics Are A Huge Headwind to Achieving Reagan Era Labor Growth^{1,2,3,4}

Population Growth Will Not Enough To Replace Baby Boomers

Only Path Leads To Getting Participation Rate Back to Peaks



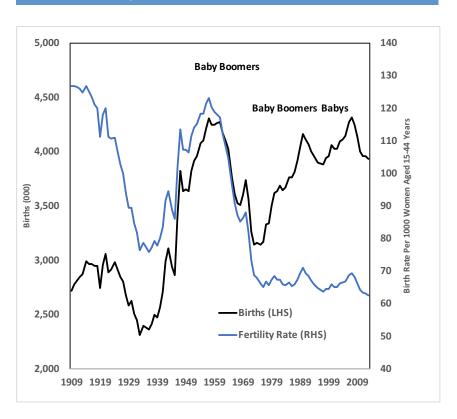
- US census
- 2. Author uses and average of BLS/CBO projections
- BLS Projections 2014-2024
- 4. CBO Projections 2016-2017

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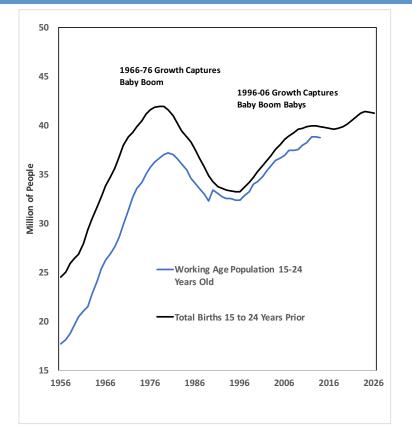
Step 2: Fundamental Economic Framework

Focus On 25 MM Jobs Misses The Distortion of The Past By The Baby Boomer Generation

Births and Fertility Rates USA 1909-2015 ¹



Path of the 15-24 Year Old Working Age Pop and Births 1,2



CDC Vital Statistics

BLS

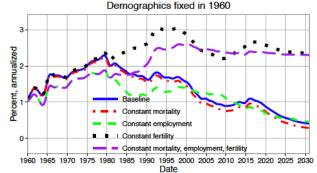
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Step 2: Fundamental Economic Framework

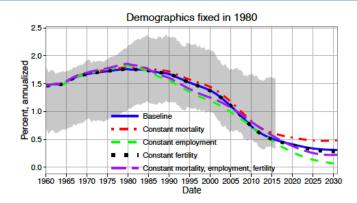
The Headwinds To Higher US Growth Is a Hurricane... So, The Offsetting Force Must Be Even Stronger

With the Demographics of the 1960s, There Would Be Hope 1

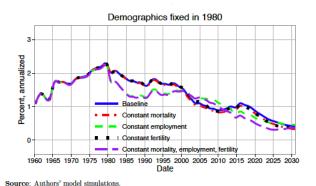
Figure 13: Real GDP growth rate with demographic variables fixed in either 1960 or 1980 onward



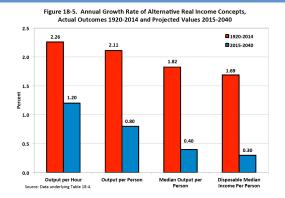
Demographics Could Push Rates Even Lower Form Here ¹



However, It May Already Be Too Late 1



The Headwinds to Growth Are Large Without Productivity Growth ²



1.Gagnon, Johannsen, Lopez-Salido, "Understanding the New Normal", Federal Reserve Working Paper, 2016-080

2 Gordon, "Secular Stagnation on the Supply Side", Presented at the Conference on the Underwhelming Global Post-Crisis, June 2015

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Step 2: Fundamental Economic Framework

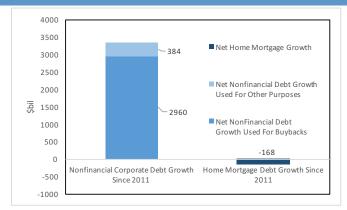
Lows Level of Fixed Investment and Anemic Credit Growth

Investment and Credit Have Not Rebounded From the GFC •Credit Growth To The Private Sector / GDP (LHS) Private Fixed Investment / GDP (RHS) 15% 10% 20% Percent of GDP (%) Percent of GDP (%) 0% 15% -5% -10%

The Housing Sector Has Been Almost Flatlined Even With Low Rates



Corporations Are Buying Back Stock Not Investing ²



- 1. Federal Reserve Bank of St. Louis (FRED)
- 2. Board of Governors of The Federal Reserve, Flow of Funds Report

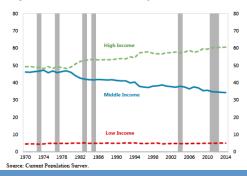
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Step 2: Fundamental Economic Framework

New Economy Has Created Wealth and Income Inequality While Creating the Rust Belt in The Midwest

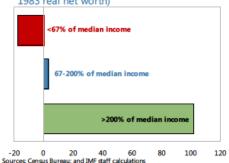
Income Inequality Is Growth 1

Figure 5. Income Shares, 1970-2014 (percent of total) /1 Low Income: Households with less than 50 percent of median income Middle Income: Households with 50-150 percent of median income High Income: Households with more than 150 percent of median income

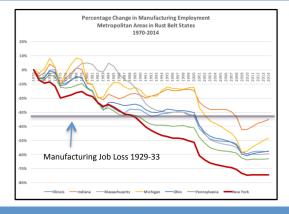


Wealth Inequality is Growing As Well 1

Household Real Net Worth (percent of 1983 real net worth)



The Rust Belt Job Lost Worse than The Great Depression ²



Median Income Has Fallen Substantial In The Rust Belt ³

Real Median Income (000)

City	1970	2015	Change
Pittsburgh	41.3	40.7	-1%
Cleveland	45.9	26.2	-43%
Buffalo	42.3	31.9	-25%
Detroit	51.1	25.7	-50%
USA	41.3	51.4	24%

- 1. IMF, USA Article IV Report, June 2016
- Bacheller, "The Decline of the Manufacturing in New York and the Rust Belt", Blog, October 2016
- 3. Census

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Step 3: Find Potential Catalyst

And That Force Could Be Trumpanomics

Massive tax reduction in combination with regulatory relief, trade reform, and lifting restrictions on American energy's

• Middle Class Tax relief and Simplification Act

- Number of personal income brackets reduce from seven to three, and with simplified tax forms
- Corporate tax rate reduced from 35% to 15%

Regulatory Reform

- Reduce the number of regulations
- Reform Dodd-Frank

• End of Offshoring Act

- Seven point trade policy
- Establishes tariffs to discourage companies from laying off workers in order to relocate in others countries and ship back to the US tax-free

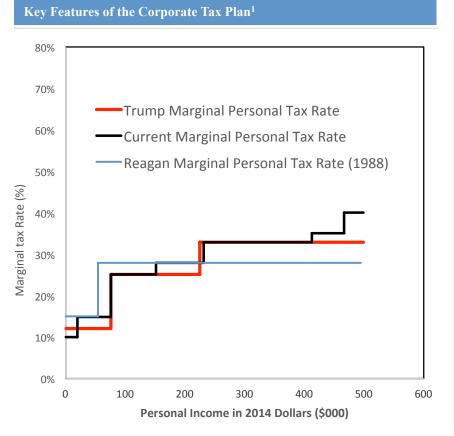
American Energy and Infrastructure Act

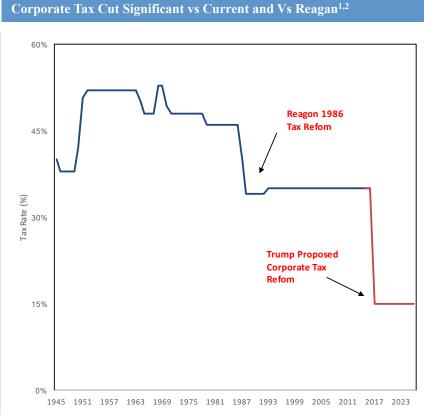
- Leverages public-private, and private investments through tax incentives, to spur \$1 trillion infrastructure investment over ten years
- It is revenue neutral

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Step 3: Find Potential Catalyst

Trade 1: Buy US Equities--Catalyst of Corporate Tax Reform as Trump Becomes Reagan





^{1.} https://www.donalditrump.com/policies/tax-plan/

[.] OMB

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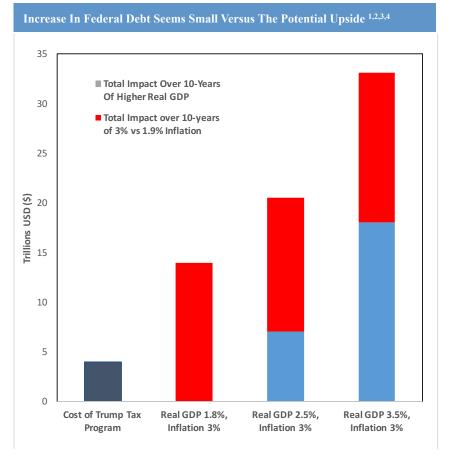
Step 3: Find Potential Catalyst

Trade 1: Buy US Equities--Catalyst of Corporate Tax Policy Could Achieve Reagan Era Growth

Tax Policy Of Trumpanomics Could Get Growth Over 3% 1,2,3,4

- Policy could increase the Federal Debt by \$4.3 Trillion over the next 10-years
- Upside is that this could also increase real GDP by 68 bp per year and reduce the debt growth by 40%
 - Adding two of the House plan could achive another 46 bp of growth with little increase in cost
- Taken together this could bring real GDP growth to almost 3% per year vs projections of 1.8%

		Cost In Federal Tax Rev Total Next 10 Years (\$bil)		
Trump Tax Plan 9/2016	Static	Dynamic After Impact on GDP	Increase in Annual Real GDP	
Individual Tax Cut	-1400	-1200	0.09%	
Corporate Tax Cut	-2100	-1000	0.40%	
Partial expensing of capital investments	-300	-200	0.06%	
Other	-500	-200	0.13%	
Total	-4300	-2600	0.68%	
Potential Provisions From House Republican Plan	Static	Dynamic After Impact on GDP	Increase in Annual Real GDP	
Allow 100% expensing of capital investments vs Trump Plan	-1900	-700	0.50%	
Border Adjust Business Tax	1000	900	-0.04%	
Total With Provisions	-5200	-2400	1.14%	



^{1.} Cole, "Details and Analysis of the Donald Trump Tax Reform Plan, September 2016", Tax Foundation, Sept. 2016

^{2.} Pomerleau, "Details and Analysis of the 2016 House Republican Tax Reform Plan", Tax Foundation, July 2016

^{3.} CBO Projections 2016-2027

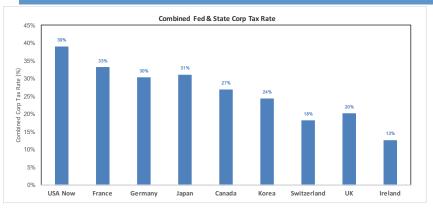
^{4.} Authors calculation

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Step 3: Find Potential Catalyst

Trade 1: Buy US Equities--Current Tax Policy Is A Significant Headwind For Investing In The US

US Corporate Taxes Are The Highest in The Developed World ¹



And Encouraged US Companies to Kept Their Profits Overseas ²

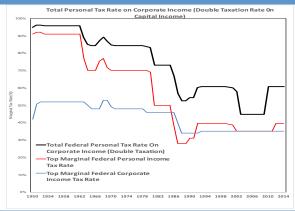


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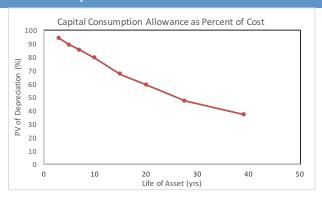
3. IRS

I. Entin, Fellow, "the Tax Treatment of Capital Assets and Its Effect on Growth", Tax Foundation Background Paper, April 2013

The Cost of Capital Is High Given Double Taxation ³



Deprecation Tax Policy Reduces the Incentive To Invest⁴



^{2.} Credit Swiss Equity Research, "Parking A-lot Overseas", March 2015

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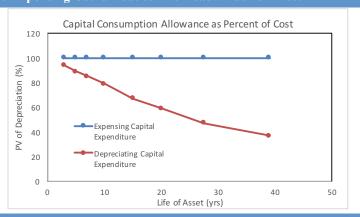
Step 3: Find Potential Catalyst

Trade 1: Buy US Equities--Corporate Tax Reform Could Remove Headwind And Spur Investment

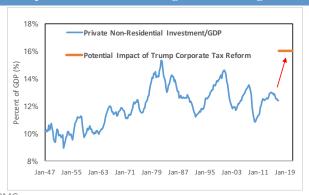
Trumpanomics Substantially Reduces Cost of Capital Investment¹

Category	Current law	Revised Trump plan	Change (percentage points)	
Business investment	22.0	6.7	-15.3	
Corporate	24.0	9.5	-14.5	
Equipment	19.9	10.0	-9.9	
Structures	27.9	10.0	-17.9	
Intellectual property products	-0.1	5.1	5.2	
Inventories	38.4	10.0	-28.4	
Pass-through	18.9	2.6	-16.3	
Equipment	15.5	3.2	-12.3	
Structures	22.3	3.2	-19.1	
Intellectual property products	-3.4	-2.5	0.9	
Inventories	31.6	3.2	-28.4	
Addendum				
Corporate (equity financed)	30.8	9.3	-21.5	
Corporate (debt financed)	-7.4	10.1	17.5	
Variation (s.d.) across assets	12.2	1.8		
Variation (s.d.) across industries	6.1	0.9		

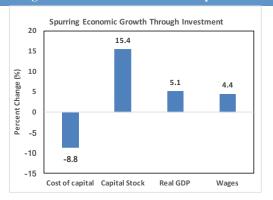
100% Expensing Could Reduce The Headwinds To Invest³



This Could Spur Investment Even Higher Than Reagan ²



100% Expensing Could Provide Substantial Upside to Growth ⁴



- KPMG
- 2. Hufbauer and Lu, "Lessons for US Business Tax Reform from International Tax Rates", Policy Brief, Peterson Institute for International Economics, PB17.2, January 2017
- 3. Entin, Fellow, "the Tax Treatment of Capital Assets and Its Effect on Growth", Tax Foundation Background Paper, April 2013
- . McBride, "the Economic and Budgetary Effects of Full Expensing of Investment", Tax Foundation Blog, April 2014

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Step 4: Find Asymmetric Trades

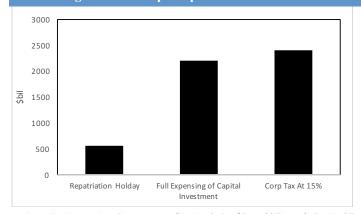
Trade 1: Buy US Equities

If Passed, Trump's Corporate Tax Reform Will Reprice Equities

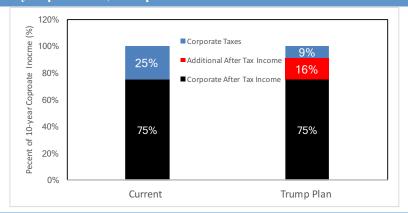
- Tax plan could add as much as \$5 trillion to after tax corporate income over the next 10-years
 - Tax repatriation holiday, \$0.5 trillion
 - Full expensing of capital investment, \$2.1 trillion
 - Tax cut from 35% to 15%, \$2.4 trillion
- Tax cut would add as much as 21% to after tax income
 - Could be more if economy grows faster from program
- Tax cuts could push equities substantially higher
 - Also push credit market tighter, particularly high yield

Risk is that nothing gets done

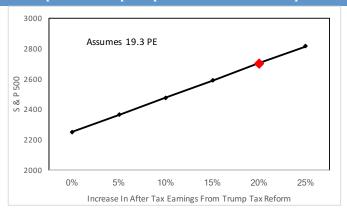
Tax Savings From Trump Corporate Tax Plan Over 10 Years 1,2



Fully Implemented, Trump Tax Plan Adds 20% to After Tax Income 1,2



Potential Impact of Trump Corporate Tax Reform on Equities



- 1. Jim Nunns, Len Burman, ect, "An Analysis of Donald Trump's Revised Tax Plan", Tax Policy Center, October, 2016
- 2. Entin, Fellow, "the Tax Treatment of Capital Assets and Its Effect on Growth", Tax Foundation Background Paper, April 2013

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Step 3: Find Potential Catalyst

Trade 2: Buy Regional Banks—Reforms Could Reverse Lending and Investment Slowdown

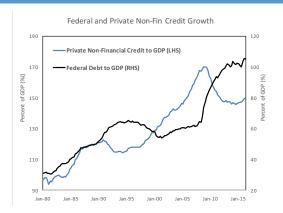
Financial Reform

- Reform Dodd/Frank
 - Reform the Financial Stability Oversight Council (FSOC)
 - Reform Systematically Important Financial Institution (SIFI)
 - Would the failure of a regional bank pose a systemic risk to the US economy?
 - Reform the Consumer Financial Protection Board (FCPB)
 - Change the penalties for a non-qualified mortgages
- GSE reform, FHA/VA Reform

Housing Investment Low Even With Low Rates ¹



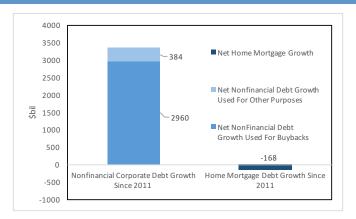
Reform Necessary To Spur Lending For Investment 1



1. Data Access Through Fred, Federal Reserve Bank of St. Louis

2. Board of Governors of The Federal Reserve, Flow of Funds Report

Corporations Are Buying Back Stock Not Investing ²

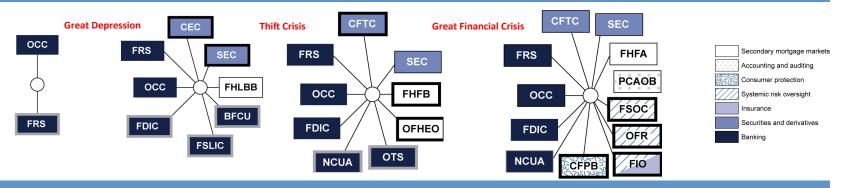


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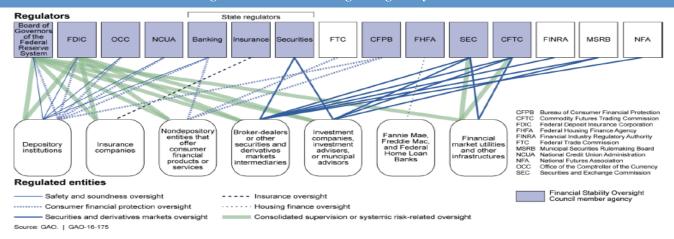
Step 3: Find Potential Catalyst

Trade 2: Buy Regional Banks--Dodd-Frank Has Created Regulatory Headwinds To Credit Growth¹

Every Crisis Creates More Regulatory Bodies Fighting the Last Crisis Not The Potential New Ones



In the Current Iteration of "Reform" All Regulators Seem to Be Regulating Every Institution



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Step 3: Find Potential Catalyst

Trade 2: Buy Regional Banks--Dodd-Frank Has Pushed Banks To Grow Capital Not Assets

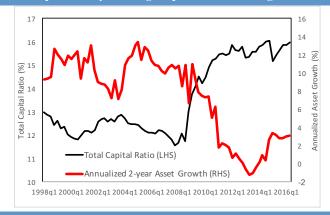
Severely Adverse Scenario Is Driving the Derisking of Banks

- Banks with 10+ balance sheet are covered
 - DFAST is the stress testing (75 + Banks)
 - Banks with \$10 50 billion balance sheet added in 2016
 - CCAR covers the capital plan (33 bank holding companies)
- Main stress comes from the Severely Adverse scenario (SAS)
 - Deep Recession
 - Sharp rise in credit spreads and market volatility
 - Trading positions at largest banks subject to severe global market shock
 - Default of largest counterparty at 8 large BHC after global market shock
- Binding constraint is tier 1 capital in SAS > 4.5%
 - \$490 billion in projected losses in 2015

The Severely Adverse Scenario For CCAR Is Too Severe 1

Projected Scenario Losses Federal Model Loan Type **Based** Reserve Ratio Prime Residential 1st Liens 178.4 3.7 6.6 **HELOCs** 7.7 9.1 118.2 Commercial and Industrial 4.0 6.9 172.5 8.2 Commerical Real Estate 4.4 186.4 Credit Cards 15.0 16.8 112.0 Other Consumer 5.8 6.9 119.0

Banks Responded By Raising Capital And Slowing Growth ²



The Result is Safer Banks But Lower Risk Appetite ³

Loan type	2013	2014	2015	2016
Total loan losses	7.5	6.9	6.1	6.1
First-lein mortgages	6.6	5.7	3.6	3.2
Junior liens and HELOC	9.6	9.6	8.	8.1
C&I	6.8	5.4	5.4	6.3
CRE	8.	8.4	8.6	7.0
Credit cards	16.7	15.2	13.1	13.4
Other comsumer	6.1	6.	5.8	5.7
Other loans	1.8	2.7	2.9	3.4

- 1. Moody's Analytics: Stress testing and Capital Planning", April 9, 2013
- 2. FDIC Data
- 3. EY. 2013-16 CCAR/DFAST results

22

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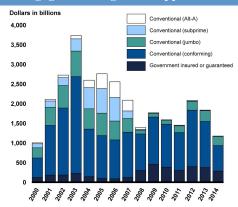
Step 3: Find Potential Catalyst

Trade 2: Buy Regional Banks--DF Has Lead To a Slowdown in Non-Prime Mortgage Lending

Lenders Are Only Lending To Prime Borrowers Given Legal Risk

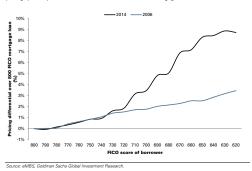
- Qualified Mortgage (QM)
 - DTI < 43% or underwritten by FHA or purchased by
 - Safe Harbor against borrower/regulator lawsuits
- Non-Qualified Mortgage
 - DTI > 43%, 5% risk retention for securitization
 - No safe harbor
 - Defaulting borrower can sue lender for not knowing they could not payback their mortgage, and the lender pays expenses if borrower wins

Non-Prime Mortgages Lending Has Stopped ²



Prohibited Cost of Non-Prime Mortgages Has Slowed Lending ¹

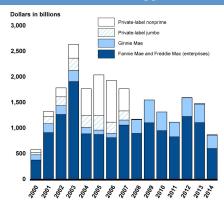
Exhibit 6: The differential between high- and low-FICO mortgage borrowing has widened, even for government-guaranteed loans pricing spread by borrower's FICO score over an 800 FICO mortgage loan



Goldman Sachs, Global Market Instituted, "Who pays for bank regulation?". June 2014

GAO, "Mortgage Reforms: Actions Needed to Help Asses effects of New Regulations", GAO 15-185, June 2015

Non-Prime Securitization Has Stopped ²



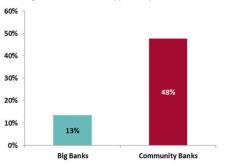
State of the Markets: Strategies for Trumpanomics

Step 3: Find Potential Catalyst

Trade 2: Buy Regional Banks—DF Has Lead to a Slowdown in Small Business Lending By Banks

Community Banks Are Crucial For Small Loans 1

Figure 1: Community Banks More Likely to Make Small Business Loans Percentage of Small Firm Loans Approved by Bank

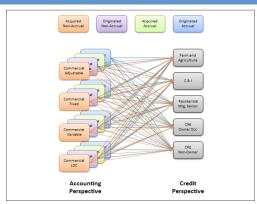


Source: Biz2Credit Small Business Lending Index (As of May 2014).

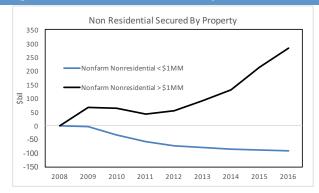
As Result Small Business Lending Has Flatlined ³



Regulatory Burden of DFAST/CCAR For Mid-sized Banks ²



Also Lending For Small Fixed Investment Projects ³



- 1. Mills, McCarthy, "The State of Small Business Lending" Harvard Business Scholl Working Paper, July 2014
- 2. Faenza, "DFAST and CCAR: One size does not fit all" FNB Corporation Report, 2014
- 3. FDIC

State of the Markets: Strategies for Trumpanomics

Step 3: Find Potential Catalyst

Trade 2: Buy Regional Banks--Dodd-Frank Has Put US Banks At a Disadvantage to European Banks 1

US CCAR Severely Adverse Scenarios More Severe European Stress

- The European bank stress tests are less onerous than the Feds CCAR/DFAST
- Using CCAR/DFAST on European banks shows a substantial need for capital
 - European banks would need \$134 billion of addition capital vs US banks
 - Or US banks have too much capital
- More difficult for US banks To Compete

Comparison of Market Prices in SAS vs Europe ¹

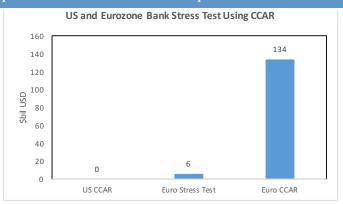




Comparison of Real Economic Shocks in SAS vs Europe



European Banks Need To Hold Less Capital 1



State of the Markets: Strategies for Trumpanomics

Step 4: Find Asymmetric Trades

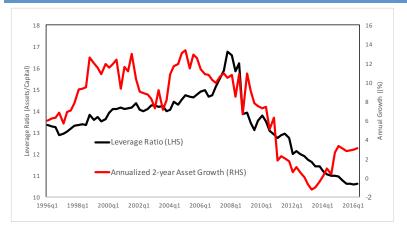
Trade 2: Buy Regional Banks—Trumpanomics Increases Regional Bank ROEs

Regulatory Reform Could Push Up Regional Bank Prices

- DF reform could would help all banks but may focus on non-big 7
 - The criteria of "TBTF" does not seem to apply to regional banks
 - Reform could be either reduce the severity of the extreme scenarios or remove them from DFAST
- Trumpanomics increases earnings of banks
 - Lower tax rates would benefit domestic banks since they pay the full statutory rate
 - Banks could increase lending to riskier but higher margin borrowers
- Upside thesis is that banks price to tangible book would go up as banks used the reduction in regulation and lower taxes to increase their ROE
 - Extra capital that could be used to grow assets, particularly higher spread but riskier loans

Risk is that reform does not happen

Asset Growth Has Slowed As Bank Leverage Has Fallen ¹

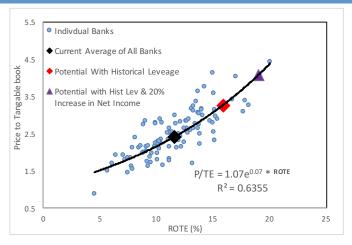


- 1. FDIC
- 2. Yahoo Finance

Reduction of Capital Needs From Loser Regulatory

- Return on Tangible Capital a prime driver of bank pricing
- Last year is an example of this pricing
 - Data covers 113 banks that are not G-SIB
 - Exponential regressions illustrates the relationship between ROTE, and Price to tangible book (PTB)
 - Historical leverage is based on data from 2000-2005
- As shown below, banks could rally substantially from current levels
 - Another 35% from current levels if leverage went back to historical norms
 - Another 60% if leverage went back to historical norms and net income grew by 20%

Banks Could Rally If Reforms Allows More Leverage And Risk ²



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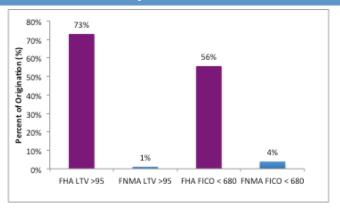
Step 3: Find Potential Catalyst

Trade 3: Buy Mortgage Insures—GSEs/FHA/VA Represent A Bigger Risk to The Public Than US Banks

GSEs In An Severely Adverse Scenario Would Need A Fed Bailout 1

Category Results 30.2 Revenue 2016-18 -66.2 Credit loss/provisions -11.0 Mark-to-market -24.6 Global market shock/counterparty Reestablishing Value adjustment -55.9 -127.5 Scenario loss Current capital 1.7 Treasury funding draw 125.8

FHA/VA Has Even Greater Exposure to The Same Scenario ^{2,3}



This Scenario Risk Has Already Driven Up Guarantee Fees ²



Actual Credit Losses Would Be 4 Times The Loss of The GSEs 4,5

Current FHA Balance (\$bil)	1500
2007 vintage default	25%
Loss serverity	50%
Hypothetical Loss	-188
FHA CCAR Actual Credit Losses	-115
GSE CCAR Actual Credit Losses	-27

- 1. OIG of the FHFA, "GSE Dodd-Frank Act Stress Tests Severely Adverse Scenario", Aug 2016
- 2. OIG of the FHFA, "The Continued Profitability of Fannie Mae and Freddie Mac is Not Accrued", Report, March 2015
- 3. FHA Annual Report to Congress, 2016
- 4. Committee on Oversight and Government Reform May 2013
- 5. FHA Single Family Loan Performance Trends, 2016

State of the Markets: Strategies for Trumpanomics

Step 4: Find Asymmetric Trades

Trade 3: Buy Mortgage Insurers—Public Sector Mortgage Risk is Transferred to The Private Sector

Financial Reform And Mortgage Insurers

- Financial reform could involve pushing the substantial amount of public sector mortgage risk into the private sector
 - GSEs and FHA/VA have more risk to the severely adverse scenario than large banks
- Reform could restart the private mortgage securitization market, both prime and non-prime
- Mortgage insurers would benefit substantially from both

Risk is no GSE reform

Privatizing GSE Risk ¹

- Pushing more of the GSE guarantee business to private sector
 - Deep Coverage: GSE would need to cover all high LTV loans to 50%
 - Deep coverage would increase private MI fees by 27%, but reduce borrower total fees by 18%
 - Deep coverage would transfer 75% of losses in the DFAST adverse severity scenarios
- Closing down of the GSE's opens up the pool insurance market for prime mortgages
 - 80% or lower LTV is x% of GSE market
 - Fees are ... a year
 - Securitization would replace GSE guarantee with subornation or MI pool insurance

Privatizing Some of The Risk of FHA/VA

- 400 to 500 billion year of high LTV lending with low FICOs
- FHA/VA do not incorporate MI
- Expansion to MI could mitigate the \$115 billion adverse scenario risk

MI Are Cheap Vs History And If Financial Reform Happens ²



2. Shuster, "Intro to National MI", NMI Holdings Investor Day, 2016

^{1.} Bjurstrom, et all 'Analysis of Deep Coverage Mortgage Insurance", Milliman Client Report, October 2015

State of the Markets: Strategies for Trumpanomics

Step 4: Find Asymmetric Trades

Trade 4: Buy Home Builders---Reforms Could Spur a Surge In For-Sale Home Construction

Dodd-Frank and Mortgage Reform Could Spur A Housing Boom

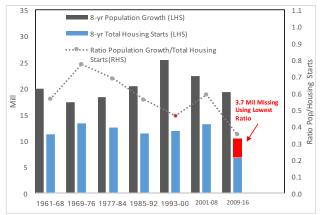
- Financial Regulatory Reform could open up non-prime lending
 - Non-prime lending has dried up given Dodd-Frank
 - Non-prime borrows one reason housing starts are so low vs historical norms
 - These borrowers have been going to for rent vs for sale
- For sale housing could surge if these non-prime borrowers get access to credit
 - There is already a deficit of 3.7 million new homes that need to be built
- Home builders have substantial convexity to the upside in this scenario

Risk is that structural issues are driving lower housing starts

Starts Are Low As Non-Prime Borrowers Cannot Get Loans ²

	Missing Purchase Loans Given Underwriting Standards of 2001			Total Missing	Market Value of Missing Home Purch
FICO	2012	2013	2014	2012-2014	(\$bil)
660 and below	592,691	876,223	1,007,062	2,475,976	\$681
660-720	607,851	369,007	191,791	1,168,649	\$321
720 and above	-	-	-		\$0
Total	1,200,542	1,245,230	1,198,853	3,644,625	\$1,002

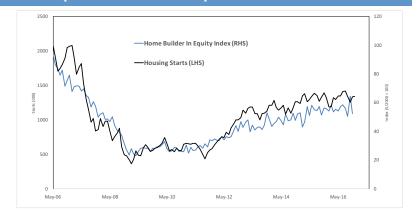
Home Building Is Low Given Population Growth 1,2



L. Data Access Through Fred, Federal Reserve Bank of St. Louis

- Authors calculation
- 3. Bai, Goodman, Zhu, "Tight credit standards prevent 5.2 million mortgages between 2009 and 2014", Urban Institute, Urban Wire, Jan 2016
- Yahoo Finance

Builders Upside If Reforms Start Up The Non-Prime Market 1,4



SOM Macro Strategies State of the Markets: Strategies for Trumpanomics

Step 3: Find Potential Catalyst

Trade 5: Buy Equities Exposed to Energy Investment---Turing Investment In Energy Into Growth¹

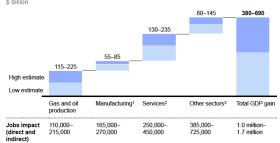
Infrastructure and Energy Policy: Low Cost/High Reward

- Make America energy independent
 - Tap \$50 trillion in untapped shale, oil and Nat gas
 - Build pipelines and ports using American steel
 - Open offshore leasing on federal lands and eliminate moratorium on coal leasing and open shale deposits
 - Encourage the use of natural gas and other American energy resources that will also reduce the price of energy and increase our economic output
- Approve private sector energy infrastructure projects

Impact of Shale on The Economy

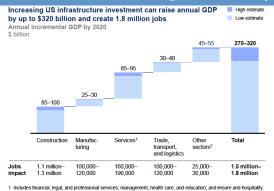
By 2020, shale gas and oil could boost US GDP by \$380 billion to \$690 billion annually and create up to 1.7 million jobs

Annual incremental GDP impact by 2020



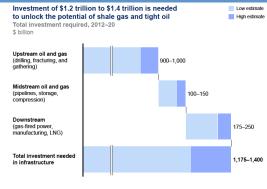
- Includes chemicals, metals, paper and pulp, and rubber and plastics manufacturing.
- Includes professional services, management, real estate, health care, education, leisure, and hospitality.
 Includes wholesale and retail trade, construction, transport and warehousing, agriculture, mining, and government.

Impact of Infrastructure Investing on the Economy



2 Includes real estate; agriculture and forestry; mining; and government.

Combine The Two



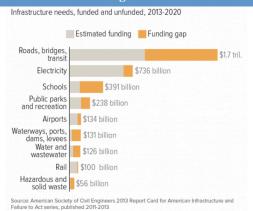
SOURCE: McKinsey & Company; INGAA Foundation; McKinsey Global Institute analysis

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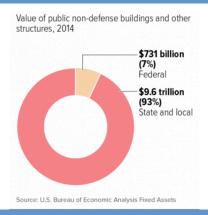
Step 3: Find Potential Catalyst

Trade 5: Buy Equities Exposed to Energy Investment---Need Is Substantial, Funding Sources Are Not

Public Infrastructure Has Been Neglected ¹



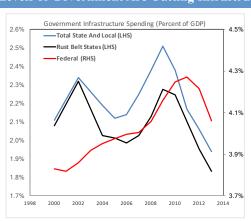
Investment is Mostly Funded By State And Local Government ¹



US Infrastructure Poor Versus Other Developed Countries ²

The World Economic Forum ranks US infrastructure behind that of most other comparable advanced nations Overall infrastructure quality index, 2012-13 Top 15 of 144 countries Scale: 1 = Extremely underdeveloped: 7 = Extensive and efficient by international standards 1 Hong Kong 2 Singapore indexes, 2012-13 3 Germany 4 France Ports United States 5 Switzerland 6.2 6 United Kingdom 6.2 #19 7 Netherlands 6.2 8 United Arab Emirate 6.1 Roads 9 South Korea 5.9 United States 5.9 #20 5.9 11 Japan 12 Luxembourg 5.8 Power and telephony United States 13 Canada 5.8 #21 14 United States 15 Austria

Problem Is All Levels of Government Are Cutting Infrastructure 1,3



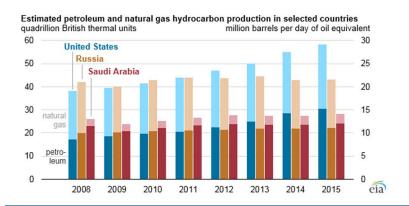
- 1.Mcnichol, "It's Time for States To Invest in Infrastructure", Center on Budget and Policy Priorities, Feb, 2016
- 2. Mckinsey Global Institute, "Game Changers: Five opportunities for US growth and renewal" July 2013
- 3. OMB

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Step 3: Find Potential Catalyst

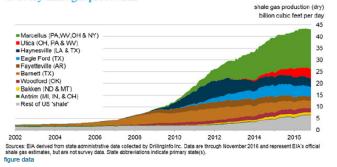
Trade 5: Buy Equities Exposed to Energy Investment--Unlocking US Energy Resources

US Has Substantial Energy Resources ¹



Rust Belt Has A Significant Share, Particularly of Nat Gas ²

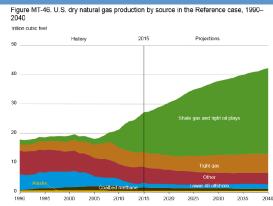
U.S. dry shale gas production



. LIA

3. Vidas, "U.S. LNG Exports: Impacts on Energy Markets and the Economy", ICF Report, May 2013

Projected Growth of Nat Gas Production ²



Turning Nat Gas Into LNG Creates Even More Economic Upside³

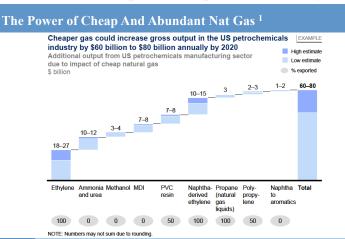
	LNG Exports Per Year			
_	4 Bcfd	16 Bcfd		
Employment Change (No.)	145,000	230,000	450,000	
GDP Change (2010\$ Billion)	\$23	\$37	\$74	

^{2.} EIA, "Energy in Brief, Shale in the United States" December 2016

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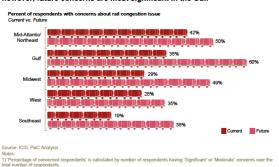
Step 3: Find Potential Catalyst

Trade 5: Buy Equities Exposed to Energy Investment--Potential Growth of The Chemical Industry



Growth of Chemical Industry Needs Trains²

Figure 5: Rail concerns are growing across the network; however, future concerns are most significant in the Gulf

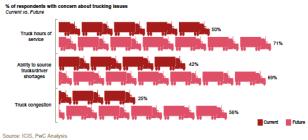


1. Mckinsey Global Institute, "Game Changers: Five opportunities for US growth and renewal" July 2013

2. "transporting Growth: Delivering a chemical manufacturing renaissance", PWC Report, September 2016

And Roads....²

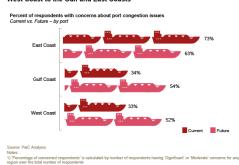
Figure 3: Chemical companies expect trucking service issues to become more acute by 2020



Notes: 1) 'Percentage of concerned respondents' is calculated by number of respondents having 'Significant' or 'Moderate' concerns for any region over the total number of respondents.. 2) "Future" is defined as 2020 for this analysis

And Ports... It Needs Infrastructure ²

Figure 4: Concerns over port congestion appears to be shifting from the West Coast to the Gulf and East Coasts



2) 'Future' is defined as 2020 for this analysis

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Step 4: Find Asymmetric Trade

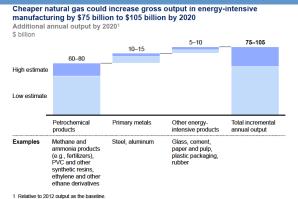
Trade 5: Buy Equities Exposed to Energy Investment--- The Manufacturing Renaissance of the Rust Belt

Trump Delivers On Campaign Promises To The Rust Belt

- The Rust Belt elected Trump
- Trumpanomics could solidify that vote by focusing on fostering a manufacturing renaissance of the Rust Belt based on nat gas
 - Marcellus is the new coal fields of the rust belt
 - Industry and cities can be rebuilt based on cheap and abundant Nat gas
 - 100% expensing of capital investment could turbo charge growth
- Buy equities that would benefit from this focus
 - Both upstream and downstream Nat gas companies
 - US steel related companies that will build the infrastructure
 - Chemical and other downstream companies that will use it

Risk is that Nat gas prices fall further

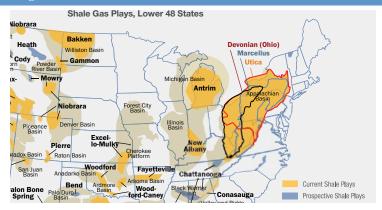
Nat Gas Develop 1



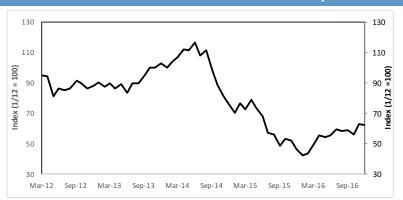
Mckinsey Global Institute, "Game Changers: Five opportunities for US growth and renewal" July 2013

API, "Hydraulic Fracturing: Unlocking America's Natural Gas Resources" July 2016

The Largest Source of Nat Gas is the Rust Belt: The New Coal 2



Portfolio Focused on These Industries Has Substantial Upside



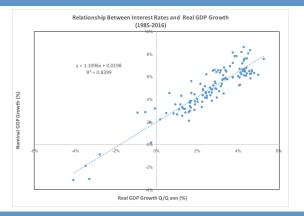
State of the Markets: Strategies for Trumpanomics

Step 3: Find Potential Catalyst

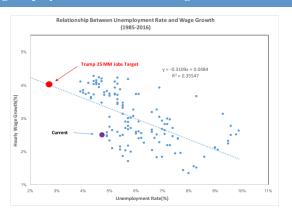
Trade 6: Higher Rates--Trumpanomics Leads To Higher Rates Through Real Growth and Inflation

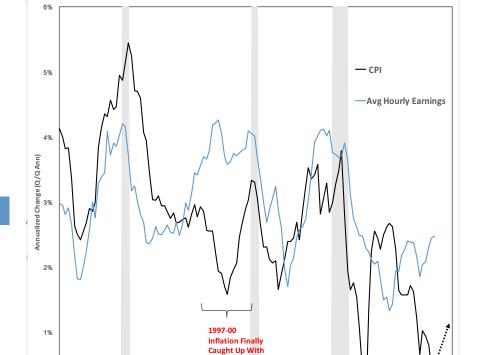
Apr-85

Historically Real GDP Leads To Higher Nominal GDP Growth 1,2



Increasing Employment Will Lead To Wage Growth 1,2





Wage Growth

Apr-03

Apr-06

Apr-09

Inflation Could Rebound As Wage Growth Accelerates 1

Authors Calculation

^{1.} Federal reserve Bank of St. Louis, Access Through FRED

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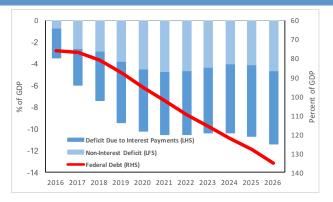
Step 4: Find Potential Catalyst

Trade 6: Higher Rates--Trumpanomics May Fail And Drive Rates Even Higher Due to Inflation

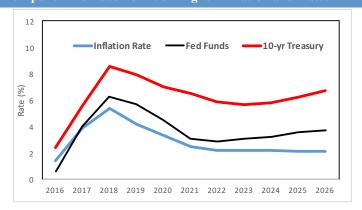
Some Argue that His Polices Will Fail And Push US Into Recession 1,2

- Tax policies fail to deliver enough economic growth to offset loss of tax revenue
 - Potentially these policies could push down real GDP growth over time
- US deficits grow leading to higher funding rates for the Federal Government leading to even higher deficits and rates
- Policies unleash inflation, which also grow the deficit
- Fed raises rates to combat inflation pushing the economy into a recession

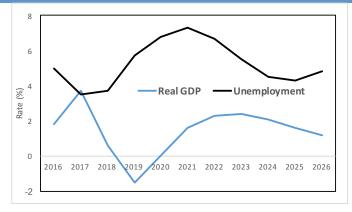
While Deficit and Debt Grow and The Fed Acts...1



Trumpanonmic Lead To Much Higher Inflation and Rates... 1



Pushing The Economy Into A Recession with Rising Unemployment ¹



- 1. Zandi, et al, "The Macroeconomic Consequences of Mr. Trump's Economic Polices", Moody' Analytics, June 2016
- 2. Nunns, et al, "An Analysis of Donald Trump's Revised Tax Plan", Tax Policy Center, October 2016

State of the Markets: Strategies for Trumpanomics

Step 4: Find Asymmetric Trade

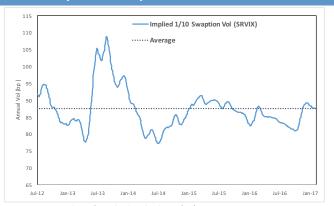
Trade 6: Higher Rates--Buy Out-of-The Money 1/10yr Payer Swaptions

Trade Thesis: All Paths Lead To Higher Rates

- Trump polices could work or fail and both paths lead to higher rates
- Payer Swaptions are compelling
 - Vol is reasonable vs history so it misprices the tail of significantly higher rates from Trumpanomics
 - Payouts could be north of 3 to 1
 - Trump policy will likely be implemented within the next year

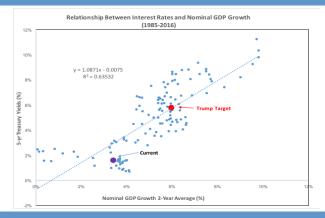
Risk is that policies are too little and too late to offset cyclically slower GDP and lower Rates

Implied Volatility Not Rich By Historical Standards¹

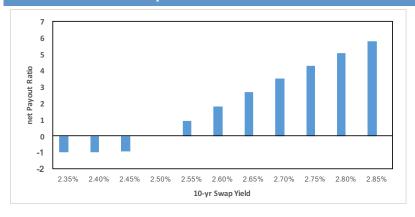


- 1. CBOE, SRVIX Index of Implied Volatility of 1/10 Swaptions
- St. Louis Federal Reserve (FRED)
- 3. Authors analysis

Nominal Growth Will Push Rates Higher 1,2



Performance of 1/10 Swaption ³



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Step 4: Find Potential Catalyst

Trade 7: Stronger USD--Trumpanomics Could Strengthen The Dollar

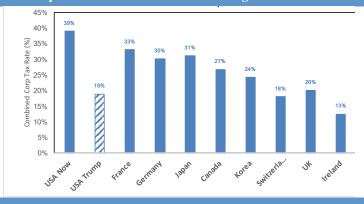
Fed Should Have Already Pushed Rates Higher Even Before Trump 1



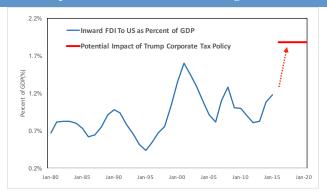
USD Could Strengthen From Rising US Interest Rates ^{2,3}



US Corporate Tax Rates Would Be Amongst the Lowest In the World ⁴



Trump Cut in Corporate Tax Could Create a Surge In FDI 3,5



- 1. Atlanta Federal Reserve, Taylor Rule Utility Using FOMC Targets and CBO Unemployment Variable
- Central Bank of New Zealand, SSR stands for shadow short rates, which adjust policy rates for the impact of QE and ZRP.
- St. Louis Federal Reserve (FRED)
- OECD Data Portal
- 5. Hufbauer and Lu, "Lessons for US Business Tax Reform from International Tax Rates", Policy Brief, Peterson Institute for International Economics, PB17.2, January 2017

State of the Markets: Strategies for Trumpanomics

Step 4: Find Potential Catalyst

Trade 7: Stronger Dollar--Border Adjustment Taxation Could Lead to A Substantially Stronger Dollar

Push For Border Tax Driven By The Search For Tax Rev Not Trade ¹

- Border tax has the potential of raising as much as \$1 trillion of corporate tax revenue over the next 10-years without affecting consumers or trade
- Simple to implement
 - Expense of buying foreign inputs cannot be deducted against revenue
 - Revenue from exports is not taxed
- The USD would strengthened to offset completely the impact on exporters and importers
 - 20% tax rate would imply a 25% appreciation of the USD

This Tax Could Have Added Almost \$1 Trillion to Corp Tax Revenue ²

	2006	2012	2004-13
Income Tax Base	1,079	1,031	9,320
Remove Exports	(234)	(321)	(2,600)
Add Imports	640	869	7,212
Border Adusted Tax Base	1,485	1,579	13,932
Larger Tax Base From Border Adjustment	406	548	4,612
Additional Corporate Tax Revenue @ 20%	81	110	922

USD Would Need To Appreciate to Offset Impact on Trade

- Historically, implementation of a border type taxes has resulted in a FX appreciation
- Forces that created stronger USD
 - Domestic demand for imports falls as tax cost passed to us consumers.
 USD appreciates as supply of dollars available externally falls.
 - Foreign demand for US exports increases reflecting the lower tax. USD appreciates as demand for dollars
 - USD appreciates until after tax profits for both importers and exporters return to pretax period turning off the cost driven repricing of exports/ imports

Example Of the Impact of The Border Tax on the USD ³

	Without Border Tax Adjustment		With Border Tax Adjustment		With Border Tax Adjustment After 25% Dollar Appreciation	
Category	Importer	Exporter	Importer	Exporter	Importer	Exporter
Revenue	100	100	100	100	100	80
Expenses	60	60	60	60	48	60
Net Income	40	40	40	40	52	20
Revenue for Tax Calculation	100	100	100	0	100	0
Expense for Tax Calculation	60	60	0	60	0	60
Net income for Tax Calculation	40	40	100	-60	100	-60
Corporate Taxes at 20%	8	8	20	-12	20	-12
After Tax Income	32	32	20	52	32	32

- 1. Pomerleau, "Details and Analysis of the 2016 House Republican Tax Reform Plan", Tax Foundation, July 2016
- Patel, McClelland, "What Would a Cash Flow Tax Look Like for US Companies. Lessons from a Historical Panel", Working Paper 116, Office of Tax Analysis, Dept of Treasury, January 2017
- 3. Pomerleau, "Exchange Rates and The Border Adjustment", Tax Foundation, January 2017

State of the Markets: Strategies for Trumpanomics

Step 4: Find Asymmetric Trade

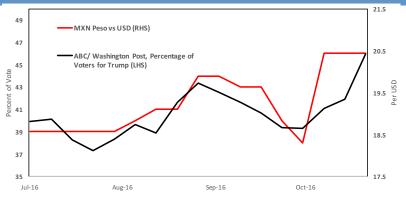
Trade 7: Stronger Dollar--Buy Worst-of-Puts With Yen and Euro vs USD

Trade Thesis: Trumpanomics Drives USD Stronger

- Foreign Capital flows into the US
 - Investment opportunities grow
 - Relative interest rate differentials widen
- Border tax pushes the USD higher to offset impact of the tax
- Worst of Euro and Yen puts vs the USD is attractive because correlation is less than one
 - Euro and Yen should both be highly correlated under Trumpanomics

Risk is that Trump could want a weaker USD to boast US exports

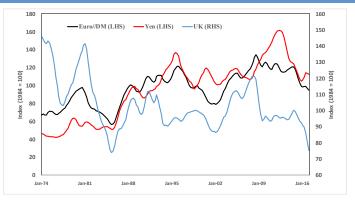
USD Could Strengthen Rapidly In The Event of A Border Tax ^{2,3}



Demographics Are Worse In Japan/Euro With No Trump ¹

Figure 15: U.S. versus global demographic changes Working—age population growth United States OECD countries World

The Euro/Yen Could Follow The GBP Back to Their Lows Vs USD ²



- 1. Gagnon, Johannsen, Lopez-Salido, "Understanding the New Normal", Federal Reserve Working Paper, 2016-080
- 2. St. Louis Federal Reserve (FRED)
- Washington Post

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