Economic and financial developments in the US since the 2007-2009 crisis

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Weak recovery
US economic growth

Change in real GDP over 4 quarters

Source: BEA, National Income and Product Accounts, Table 1.1.11, Shaded areas show NBER designated recessions
US government current income and expenditure, % GDP

Source: BEA, National Income and Product Accounts, Table 3.1, Shaded areas show NBER designated recessions
US lead interest rates, %

Source: Federal Reserve. Shaded areas show NBER designated recessions.
US monetary authority assets (% GDP)

US consumer price inflation
% change over 4 quarters

Source: BLS, US consumer price inflation. Shaded areas show NBER designated recessions.
Nonfinancial business
US fixed investment, % GDP

Source: BEA, National Income and Product Accounts, Table 1.1.5. Shaded areas show NBER designated recessions.
US: Growth of labour productivity per hour worked (%)
US nonfinancial corporations outstanding debt, % GDP

Source: Federal Reserve, Financial Accounts, Table D3, Series LA104104005.Q. Shaded areas show NBER designated recessions.
US nonfinancial corporations
Dividend payments, equity repurchase & fixed investment (% GDP)

Source: Federal Reserve, Financial Accounts, Table F 103. Shaded areas show NBER designated recessions.
Shiller price-earnings ratio S&P 500

Long-term average
Alternative investments Where US companies are choosing to put their money

Total portfolio comprising cash and equivalents, debt and equity securities, and investments ($bn)

- Corporate debt holdings*

Apple's holdings of $156bn of corporate debt securities are larger than many asset managers
Microsoft's $5bn portfolio of corporate debt and commercial paper pales in comparison to the $112bn of US government and agency securities it owns
Alphabet, the parent company of Google, holds nearly $9bn of debt that matures in more than 10 years

With 80 per cent of its portfolio in corporate debt, eBay is the most exposed to the asset class

Source: FT research from company filings
*The 20 US companies with the largest disclosed portfolios. Corporate debt holdings includes ownership of commercial paper
The debt service burden for the corporate sector as a whole has risen strikingly despite low rates.

1. Corporate Debt Service and Interest Rates

- Debt service ratio (percent of income, right scale)
- Prime lending rate (percent, left scale)
- Recessions

Employment & earnings
US unemployment & involuntary underemployment
(% labour force)

Source: BLS Series LNS14000000 & LNS13327709
US labour force participation rate, %

Source: BLS Series LNS11300000 & LNS12300000
High-wage earners have continued to pull away from everyone else in the 2000s

Cumulative percent change in real hourly wages, by wage percentile, 2000–2016

Note: Sample based on all workers age 18–64. The xth-percentile wage is the wage at which x% of wage earners earn less and (100 - x)% earn more.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

Economic Policy Institute
The male wage at the top shot up in 2016 while wages at the middle and bottom remained near or below their 2000 level.

Cumulative percent change in real hourly wages of men, by wage percentile, 2000–2016

**Note:** Sample based on all workers age 18–64. The xth-percentile wage is the wage at which x% of wage earners earn less and (100 - x)% earn more.

**Source:** EPI analysis of Current Population Survey Outgoing Rotation Group microdata

**Economic Policy Institute**
Women’s wages are more compressed than men’s wages, but inequality among women has increased since 2000

Cumulative percent change in real hourly wages of women, by wage percentile, 2000–2016

Note: Sample based on all workers age 18–64. The xth-percentile wage is the wage at which x% of wage earners earn less and (100 - x)% earn more.

Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

Economic Policy Institute
US pre-tax income share of top 1%, 1915-2014 (%)

Source: World Wealth & Income Database (WID)
US share of corporate-sector income received by workers (%)

Source: EPI analysis of Bureau of Economic Analysis National Income and Product Accounts (Tables 1.14 and 6.16D)
US household debt outstanding, % GDP

US growth of consumption expenditure (% change over 4 quarters)

- Average 3.3%
- Average = 3.6%
- Average = 3.0%
- Average = 1.6%

Source: BEA, National Income & Product Accounts, Table 1.1.11. Shaded areas show NBER designated recessions.
Banks
Industry Concentration

Assets of the 5, 10, and 50 largest firms as % of total industry assets

Source: Federal Reserve Bank of New York, Quarterly Trends for Consolidated U.S. Banking Organizations, Q1 2017, p. 35
<table>
<thead>
<tr>
<th>Name</th>
<th>Banks</th>
<th>Nonbanks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of America</td>
<td>117</td>
<td>166</td>
</tr>
<tr>
<td>JPMorgan Chase</td>
<td>81</td>
<td>97</td>
</tr>
<tr>
<td>Citigroup</td>
<td>5</td>
<td>108</td>
</tr>
<tr>
<td>Wells Fargo</td>
<td>305</td>
<td>244</td>
</tr>
<tr>
<td>Goldman Sachs</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>MetLife</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>U. S. Bancorp</td>
<td>126</td>
<td>96</td>
</tr>
<tr>
<td>PNC Financial Services Group</td>
<td>69</td>
<td>117</td>
</tr>
<tr>
<td>Bank of New York Mellon</td>
<td>6</td>
<td>98</td>
</tr>
</tbody>
</table>

## Largest US bank holding companies, 2016

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name of Institution</th>
<th>Total Assets (Bil USD)</th>
<th>Quarterly Net Income (Mil USD)</th>
<th>Profitability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Annualized Return on Assets</td>
</tr>
<tr>
<td>1</td>
<td>JPMORGAN CHASE &amp; CO</td>
<td>2,491.0</td>
<td>6,727.0</td>
<td>0.08</td>
</tr>
<tr>
<td>2</td>
<td>BANK OF AMER CORP</td>
<td>2,189.3</td>
<td>4,696.0</td>
<td>0.86</td>
</tr>
<tr>
<td>3</td>
<td>WELLS FARGO &amp; CO</td>
<td>1,930.1</td>
<td>5,274.0</td>
<td>1.09</td>
</tr>
<tr>
<td>4</td>
<td>CITIGROUP</td>
<td>1,792.1</td>
<td>3,573.0</td>
<td>0.80</td>
</tr>
<tr>
<td>5</td>
<td>GOLDMAN SACHS GROUP THE</td>
<td>860.2</td>
<td>2,347.0</td>
<td>1.09</td>
</tr>
<tr>
<td>6</td>
<td>MORGAN STANLEY</td>
<td>814.9</td>
<td>1,666.0</td>
<td>0.82</td>
</tr>
<tr>
<td>7</td>
<td>US BC</td>
<td>446.0</td>
<td>1,478.0</td>
<td>1.33</td>
</tr>
<tr>
<td>8</td>
<td>PNC FNCL SVC GROUP</td>
<td>366.9</td>
<td>1,026.0</td>
<td>1.12</td>
</tr>
<tr>
<td>9</td>
<td>CAPITAL ONE FC</td>
<td>357.2</td>
<td>791.5</td>
<td>0.89</td>
</tr>
<tr>
<td>10</td>
<td>TD GRP US HOLDS LLC</td>
<td>343.9</td>
<td>414.8</td>
<td>0.48</td>
</tr>
</tbody>
</table>

### Totals

<table>
<thead>
<tr>
<th></th>
<th>TOP 50</th>
<th>ALL INSTITUTIONS (BHCS AND BANKS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Assets (Bil USD)</td>
<td>16,340.9</td>
<td>19,831.0</td>
</tr>
<tr>
<td>Quarterly Net Income (Mil USD)</td>
<td>32,298.1</td>
<td>40,825.6</td>
</tr>
<tr>
<td>Profitability</td>
<td>0.79</td>
<td>0.82</td>
</tr>
<tr>
<td>Annualized Return on Assets</td>
<td>7.07</td>
<td>7.37</td>
</tr>
</tbody>
</table>

*Source: Federal Reserve Bank of New York, Quarterly Trends for Consolidated U.S. Banking Organizations, Q4 2016, p. 36*
Loan Growth Rate

Year-over-year % change in total loans

Source: Federal Reserve Bank of New York, Quarterly Trends for Consolidated U.S. Banking Organizations, Q1 2017, p. 33
US bank liabilities

% GDP (RHS)

$ trillions (LHS)

Source: Federal Reserve Board, Financial Accounts of the United States, Tables L110
US depository institutions loans, $ trillions

Source: Federal Reserve Board, *Financial Accounts of the United States*, Tables L110, 2016 Q4
Non-performing Commercial and Industrial (C&I) Loans

Source: Federal Reserve Bank of New York, Quarterly Trends for Consolidated U.S. Banking Organizations, Q1 2017, p. 17
Shadow banks
US shadow bank liabilities, % GDP

Source: Federal Reserve Board, Financial Accounts of the United States, Tables L110 & L121 – L130, 2016 Q4, following Poszar et al, 2010
## Shadow credit intermediation

<table>
<thead>
<tr>
<th>Step</th>
<th>Function</th>
<th>Shadow Banks</th>
<th>Shadow Banks' Funding*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step (1)</td>
<td>Loan Origination</td>
<td>Finance companies</td>
<td>CP, MTNs, bonds</td>
</tr>
<tr>
<td>Step (2)</td>
<td>Loan Warehousing</td>
<td>Single and multi-seller conduits</td>
<td>ABCP</td>
</tr>
<tr>
<td>Step (3)</td>
<td>ABS Issuance</td>
<td>SPVs, structured by broker-dealers</td>
<td>ABS</td>
</tr>
<tr>
<td>Step (4)</td>
<td>ABS Warehousing</td>
<td>Hybrid, TRS/repo conduits, broker-dealers' trading books</td>
<td>ABCP, repo</td>
</tr>
<tr>
<td>Step (5)</td>
<td>ABS CDO Issuance</td>
<td>SPVs, structured by broker-dealers</td>
<td>ABS CDOs, CDO-squareds</td>
</tr>
<tr>
<td>Step (6)</td>
<td>ABS Intermediation</td>
<td>LPFCs, SIVs, securities arbitrage conduits, credit hedge funds</td>
<td>ABCP, MTN, repo</td>
</tr>
<tr>
<td>Step (7)</td>
<td>Wholesale Funding</td>
<td>2(a)-7 MMMFs, enhanced cash funds, securities lenders, etc.</td>
<td>$1 NAV shares (shadow bank &quot;deposits&quot;)</td>
</tr>
</tbody>
</table>

*Funding types highlighted in red denote securitized funding techniques. Securitized funding techniques are not synonymous with secured funding.*

*Source: Poszar et al, Shadow Banking, FRBNY Staff Report No. 458, February 2012, p.11*
Shadow bank liabilities, $ trillion

# Federal Reserve’s Emergency Lending Facilities

<table>
<thead>
<tr>
<th>Facility</th>
<th>Aim</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Paper Funding Facility</td>
<td>Backstop of CP and ABCP issuance (steps 1 &amp; 2 of shadow credit process)</td>
<td>Oct 07 – Aug 10</td>
</tr>
<tr>
<td>Term Asset Backed Loan Facility</td>
<td>Backstop of ABS issuance (step 3)</td>
<td>Mar 09 – Jun 10</td>
</tr>
<tr>
<td>Maiden Lane LLC</td>
<td>Backstop Bear Sterns’ ABS</td>
<td>Apr 08 – Jun 10</td>
</tr>
<tr>
<td>Term Securities Lending Facility</td>
<td>Improve quality of broker-dealers securities warehouses (step 4)</td>
<td>Mar 08 – Feb 10</td>
</tr>
<tr>
<td>Maiden Lane III LCC</td>
<td>Backstop AIG financial products (step 5)</td>
<td>Oct 10 – Aug 12</td>
</tr>
<tr>
<td>Term Auction Facility</td>
<td>‘Onboarding’ of off-balance ABS with SIVs &amp; conduits (step 6)</td>
<td>Jul 08 – Mar 10</td>
</tr>
<tr>
<td>Primary Dealer Credit Facility</td>
<td>Backstop tri-party repo system involving MMMF (step 7)</td>
<td>Mar 08 – Feb 10</td>
</tr>
</tbody>
</table>

*Source: Poszar et al, Shadow Banking, FRBNY Staff Report No. 458, February 2012 & Federal Reserve Board, various, for dates*
‘Risks are elevated in the non-bank sector, where “run” and “redemption” risks are increasing as a result of leverage and maturity transformation and deeply interconnected wholesale funding chains ... the protracted low-interest rate environment is again driving the search for yield’

*IMF, US financial system stability assessment, July 2015*

“I worry a little bit about the fact that we in the United States do not have very good mechanisms for dealing with the nonbank sector, the shadow banking system,”

*Stanley Fisher, Federal Reserve Vice Chair, IFF Oct 2016*
Financial markets
Source: Federal Reserve Board, *Financial Accounts of the United States*, Tables L101, 2016 Q4
US nonfinancial business & government debt, % GDP

Source: Federal Reserve Board, Financial Accounts of the United States, Tables L.101 & L.106, 2016 Q4
US net international financial inflows (% GDP)

Source: BEA, International Transactions, Table 1.1 (Current account balance)
‘Draining the swamp’

• Repeal ‘Obama care’

• Major infrastructure investment programme

• End ‘unfair’ trade relations (TPP, NAFTA?)

• Relaxation of financial sector regulation

• Tax ‘reform’
‘A Financial System that creates Economic Opportunities. Banks and Credit Unions’ (June 2017)

- ‘Dodd-Frank created a new set of obstacles to the recovery by imposing a series of costly regulatory requirements on banks and credit unions’

- Threshold for stress tests to be raised from $10bn to $50bn assets; flexibility to exempt those with more than $50bn

- Liquidity coverage ratio narrowed to include only internationally active banks

- Banks with $10bn or less assets exempt from Volcker rule; proprietary trading restrictions not to apply to banks with more than $10bn assets unless exceed threshold amount (!)

- Simplify definition of proprietary trading and allow banks to more easily hedge risks

- Change compliance program requirements to decrease regulatory burden
‘Unified Framework for Fixing Our Broken Tax Code’
(September 2017)

• Corporate taxation
  – Reduce rate from 35% to 20%
  – Investment in equipment to be fully expensed for at least 5 years
  – Adopt territorial system which exempts foreign earnings from US tax
  – TPC estimate: Reduce tax revenue by $2.6tn 2018-27

• Personal taxation
  – Simplify from 7 to 3 rates: 12%, 25% & 35% (currently 39.6%)
  – Increase standard deductions
  – Eliminate most other deductions (except mortgage interest)
  – TPC estimate: Increase tax revenue by $470bn 2018-27
### Proposed income tax bands

<table>
<thead>
<tr>
<th>Income taxed</th>
<th>Current rates</th>
<th>Proposed rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than $418,400</td>
<td>39.6%</td>
<td>35%</td>
</tr>
<tr>
<td>$416,700 to $418,400</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>$191,650 to $416,700</td>
<td>33%</td>
<td>35%</td>
</tr>
<tr>
<td>$91,900 to $191,650</td>
<td>28%</td>
<td>25%</td>
</tr>
<tr>
<td>$37,950 to $91,900</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>$9,325 to $37,950</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>$0 to $9,325</td>
<td>10%</td>
<td>12%</td>
</tr>
</tbody>
</table>

*Income thresholds for current rates are for single filers. Because thresholds were not included in the president’s plan, brackets are combined based on the House Republican plan released in 2016.*

Percent Change in After-tax Income From Proposals in the Unified Framework

By expanded cash income percentile, 2018 and 2027

Summary

• Leading indicators (profit share, investment) suggest expansion could be coming to end

• Corporate sector highly indebted due to large pay-outs to shareholders

• Household indebtedness declined, but exposure to consumer credit rising

• Banking sector has raised capital reserves, but still low and rules very complex; new proposals would relax requirements, especially for big banks

• Shadow banking taking increasing risks; beginning to expand again but vulnerable

• Tax proposals envisage major reductions for corporations and top incomes