Reflections on Secular Stagnation

Dr. Lawrence H. Summers

February 19, 2015
I. Problematic post-crisis economic performance in the industrial world

II. The secular stagnation hypothesis

III. Why have real interest rates fallen?

IV. Issues raised by secular stagnation hypothesis?

V. What is to be done?
Downward Revision in Potential GDP, USA

Actual and Potential GDP

Year Estimated:
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014

Potential GDP Estimates

Actual

Sources: Congressional Budget Office, Bureau of Economic Analysis
Downward Revision in Potential GDP, Eurozone

Eurozone Actual and Potential GDP

Potential GDP Estimates

Sources: IMF World Economic Outlook Databases, Bloomberg
Europe Mirrors Japan’s Experience

Japan and Euro Area, Forecast Versus Reality

Falling Potential - A Global Phenomenon

Change in 2013 Potential Output Estimate Since 2007

Sources: Laurence Ball “Long-Term Damage From The Great Recession in OECD Economies”, IMF WEO 2008 & 2014
Recent U.S. Business Cycles Financially Unsustainable

U.S. Household Debt To Disposable Income

Percent of Disposable Personal Income

Sources: Federal Reserve, Bureau of Economic Analysis
European Credit Boom

Euro Area Private Credit To GDP

Sources: World Bank, Bloomberg
Real Yield Curve Before and After Crisis

US TIPS Yield Curve

2008 - Jan
2015 - Jan

Sources: Federal Reserve Refet S. Gürkaynak, Brian Sack, and Jonathan H. Wright, Bloomberg
Expected Rates Have Plunged

<table>
<thead>
<tr>
<th>Rate Five Year/Five Years Forward</th>
<th>Now</th>
<th>Year Ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal</td>
<td>2.3</td>
<td>4.2</td>
</tr>
<tr>
<td>Inflation</td>
<td>1.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Real</td>
<td>0.6</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Sources: Federal Reserve Refet S. Gürkaynak, Brian Sack, and Jonathan H. Wright, Bloomberg (End of January 2015 vs. 2014)
“Secular Stagnation” Dates To The 1930s

“This is the essence of secular stagnation - sick recoveries which die in their infancy and depressions which feed on themselves and leave a hard and seemingly immovable core of unemployment.”

- Alvin Hansen, 1939

Liquidity Trap Framework
Possible Savings/Investment Curves

Nominal Interest Rate

Investment

Savings

Full Employment

Saving and Investment
Private Investment Shortfall

Sources: IMF 2014 WEO Database
World Rates Have Fallen Steadily

Sources: Mervyn King “Measuring the World Real Interest Rate”
As Have U.S. TIPS

U.S. Ten Year TIPS Real Yield

Sources: Bloomberg
Large Rate Cuts Are Common

Fed Easings Since 1954

<table>
<thead>
<tr>
<th>Size of Easing</th>
<th>Occurrences</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Pct +</td>
<td>13</td>
<td>4.6 Yrs</td>
</tr>
<tr>
<td>4 Pct +</td>
<td>8</td>
<td>7.5 Yrs</td>
</tr>
<tr>
<td>5 Pct+</td>
<td>5</td>
<td>12 Yrs</td>
</tr>
</tbody>
</table>

Sources: Brad DeLong, Federal Reserve
Demographics Challenging

Advanced Economy Change in Working Age Population

Contribution By Region (At Annual Rate)

Sources: United Nations Population Division, IMF
Capital Investment Has Gotten Cheaper

Relative Price of Fixed Investment vs GDP

Sources: Bureau of Economic Analysis
### Fastest Growing* Fortune 50 Company

<table>
<thead>
<tr>
<th>Year</th>
<th>Company</th>
<th>Fortune Rank</th>
<th>Cash (Millions)</th>
<th>Capex (Millions)</th>
<th>Cash/Capex Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>1956</td>
<td>Republic Steel</td>
<td>21</td>
<td>80</td>
<td>107</td>
<td>9</td>
</tr>
<tr>
<td>1963</td>
<td>ITT</td>
<td>41</td>
<td>78</td>
<td>123</td>
<td>8</td>
</tr>
<tr>
<td>1973</td>
<td>Beatrice Foods</td>
<td>42</td>
<td>59</td>
<td>90</td>
<td>8</td>
</tr>
<tr>
<td>1983</td>
<td>General Dynamics</td>
<td>46</td>
<td>159</td>
<td>215</td>
<td>9</td>
</tr>
<tr>
<td>1993</td>
<td>Motorola</td>
<td>32</td>
<td>1,244</td>
<td>2,187</td>
<td>7</td>
</tr>
<tr>
<td>2003</td>
<td>Walgreen</td>
<td>45</td>
<td>1,017</td>
<td>795</td>
<td>15</td>
</tr>
<tr>
<td>2013</td>
<td>Apple</td>
<td>6</td>
<td>40,546</td>
<td>9,572</td>
<td>51</td>
</tr>
</tbody>
</table>

* Fortune 50 nonfinancial company with the largest one year increase in Fortune ranking without a merger or major acquisition
Rising Reserve Accumulation

World Foreign Exchange Reserves

Percent of Global GDP

Emerging Economies

Advanced Economies

Sources: International Monetary Fund’s COFER Database, IMF
Increased Demand For Safe Assets

Incremental drivers of demand for high quality collateral include the following:

1. Prudential Regulation
   - Increased prudential liquidity requirements
   - $1.0-2.5tt²

2. Market Regulation (Derivative Clearing)
   - Increased IM requirements for cleared derivatives
   - $0.8-2.0tt (normal)³
   - $1.8-4.6tt (stressed)³

3. Market Regulation (Bilateral Margin)
   - Increased IM requirements for non-cleared derivatives
   - $0.8-1.2tt (normal)⁴
   - $1.8-4.1tt (stressed)⁴

4. Economic Environment / Uncertainty
   - Cyclical HQC investment demand (FTQ flows)
   - Varies (multi-$trillions)

Total “phased-in” potential incremental HQC demand (normal market conditions):
- $2.6-5.7tt

Total “phased-in” potential incremental HQC demand (stressed market conditions):
- $4.6-11.2tt + FTQ

Sources: Treasury Borrowing Advisory Committee 2013 Q2 Discussion Charts, p.60
Rising Inequality

Income Share of Top 1%

Sources: World Top Incomes Database
And Rising Corporate Profit Share

Sources: Bureau of Economic Analysis
Lower Inflation and Tax Effects

- Consider investor in 40% tax bracket
- Pre-Tax Real Rate = \( i - \pi \)
- Post-Tax Real Rate = \( (i)(1-\tau)-\pi \)

<table>
<thead>
<tr>
<th></th>
<th>Case 1 (inflation = 3%)</th>
<th>Case 2 (inflation = 1%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Rate</td>
<td>5%</td>
<td>1.67%</td>
</tr>
<tr>
<td>Pre-Tax Real Rate</td>
<td>2%</td>
<td>0.67%</td>
</tr>
<tr>
<td>Post-Tax Real Rate</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Rising Financial Intermediation Cost

Additional Bank Loan Spread From New Rules

Sources: IMF October 2014 Global Financial Stability Report
Issues Raised By The Secular Stagnation Hypothesis

• Can equilibrium real interest rates really be subzero?

• Is the issue on the supply or demand side?

• Past fears of secular stagnation proved unfounded

• Isn’t the United States approaching full employment?
Inflation Expectations

Breakeven Inflation Rates, 10 Years

Sources: Bloomberg
Large Rate Cuts Are Common

Fed Easings Since 1954

<table>
<thead>
<tr>
<th>Size of Easing</th>
<th>Occurrences</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Pct +</td>
<td>13</td>
<td>4.6 Yrs</td>
</tr>
<tr>
<td>4 Pct +</td>
<td>8</td>
<td>7.5 Yrs</td>
</tr>
<tr>
<td>5 Pct+</td>
<td>5</td>
<td>12 Yrs</td>
</tr>
</tbody>
</table>

Sources: Brad DeLong, Federal Reserve
Alternative Strategies

• Structural Reform
• Reduce Real Rates
• Increase Spending
Monetary Policy

• How much scope at liquidity trap?
• More effective in conjunction with other measures
• Risks of bubbles and financial instability
• Backward bending supply of saving?
• Need for international coordination
Focus On Structural Reform

• Has been tried for years
• Risk of destabilizing deflation
• Inverse Say’s Law – Lack of demand reduces potential supply
• Political economy issues
• Increased competitiveness is a zero sum game
Focus On Increases In Spending

• Operates to raise equilibrium real interest rates
• Rational response to low real borrowing costs
• Major public investment gaps
• Investments likely to reduce debt burdens
• Remove barriers to private investment
• Measures to promote consumption and housing investment
• Measures to promote external adjustment in surplus countries
Infrastructure Investment Can Boost GDP 3 For 1

Increase In GDP For Each $1 of Debt-Financed Infrastructure Investment

<table>
<thead>
<tr>
<th>Years From Investment</th>
<th>Increase in GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>$0.87</td>
</tr>
<tr>
<td>2nd</td>
<td>$1.43</td>
</tr>
<tr>
<td>3rd</td>
<td>$2.04</td>
</tr>
<tr>
<td>4th</td>
<td>$2.57</td>
</tr>
<tr>
<td>5th</td>
<td>$2.91</td>
</tr>
</tbody>
</table>

Sources: IMF October 2014 World Economic Outlook Ch.3 “The Macroeconomic Effects of Public Investment”
While Making Debt More Sustainable

Effect of 1%/GDP Debt-Financed Infrastructure Investment

Sources: IMF October 2014 World Economic Outlook Ch.3 “The Macroeconomic Effects of Public Investment”
But Has Been Hit By Austerity

Net Public Investment

Percent of GDP

Sources: US Bureau of Economic Analysis, Eurozone AMECO database
Other Possible Responses

• Public equity investments
• Work sharing
• Population and immigration policies