Cost of Capital: Equity Bubble Elevates Risk of a Jarring Correction

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Don't Expect Much From Revenue-Neutral Fiscal Stimulus ... Despite 2009's More than $800 Billion of Fiscal Stimulus That Approximated 9.8% of GDP, 2010’s Real GDP Grew by Only 2.5%
Not Much of a "Crowding Out" Effect Despite How US Treasury Debt Soared from 2007's 35% to Recent 77% of GDP

Recessions are shaded
Publicly-Held US Treasury Debt as % GDP: actual & projected (CBO)
US Non-financial Corporate Debt as % GDP
## Potential Impact of Proposed Corporate Tax Reform Across Broad Rating Groups

<table>
<thead>
<tr>
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<th>Investment-Grade Issuers</th>
<th>Speculative-Grade Issuers (High Yield)</th>
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</thead>
<tbody>
<tr>
<td><strong>number of companies sampled</strong></td>
<td>350</td>
<td>1,300</td>
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*Lowering Maximum Corporate Income Tax Rate from 35%:*
- Median Tax Rate: 28%  
- Percent of Companies Paying Tax: 91%  
- Taxes Incurred in 2015: $240 billion

*Eliminate Tax Deductibility of Interest Expense:*
- Median Interest Rate: 4.10%  
- Median Ratio of EBIT/Interest Expense: 9.3x

*Acceleration of Tax Deductibility of Capital Spending:*
- Median: Capital Spending as % of Revenue: 4.2%
Reasons for Today’s Subpar Upturn

- Aging workforces and populations of most advanced economies.

- Global slack – supply exceeds demand.

- Loss of global competitiveness.

- Technological progress that does more to shrink payrolls than to create jobs.

- Lack of new product breakthroughs that create new industries and new jobs.
Comparing Moving 5-Year Average Annual Economic Growth Rates of 2007 and 2016 Shows Drops from (i) 2.7% to 1.7% for Advanced Economies and from (ii) 7.7% to 4.4% for Emerging Markets

yy % change of economic activity, source: IMF, Moody’s Capital Markets
World Suffers from Deceleration by Long-Term Average Annual Growth of US' Real Imports from 2001's Record 9.5% to Recent 1.6%

10-year average annualized growth rates

Recessions are shaded
Real Exports
Real Imports

85Q3 87Q4 90Q1 92Q2 94Q3 96Q4 99Q1 01Q2 03Q3 05Q4 08Q1 10Q2 12Q3 14Q4 17Q1

Moody's ANALYTICS
US Economy and Real Consumer Spending Are Expected To Grow By Roughly 2% Annually, on average, Through 2027

10-year average annual growth rates, actual & predicted by Blue Chip Consensus
Modest Long-Term Outlooks for Both Corporate Gross-Value-Added (revenue proxy) and Profits from Current Production

10-yr average annualized growth rates, actual & predicted

Recessions are shaded
- Profits from Current Production
- Corporate Gross-Value-Added (revenues)
Profound Shift in Age Distribution of US Population May Influence Financial Markets for Years to Come

actual & predicted annual change in millions of people; source: US Bureau of the Census, Moody's Analytics
Prolonged Deceleration by Labor Productivity Slows Real Disposable Personal Income

10-year average annualized growth rates in %
Prolonged Subpar Pace for Real Business Investment Spending Only Partly Explains Latest Slump by Labor Productivity

10-year average annualized growth rates
Fed Policy Seems Unlikely to Risk an Inverted Yield Curve
... Last Three recessions Averaged a Five Percentage Point Drop by Fed Funds

Recessions are shaded  10-Year Treasury Yield: %  Federal Funds Rate Target: %
Federal Reserve Holds 20% of Outstanding US Treasury Notes & Bonds and 17% of Home Mortgage Debt

$ trillions
Price Inflation Lacks Breadth

1. March’s annual rate of inflation was 2.4% for the CPI.

2. March’s 2.0% annual rate of core CPI inflation (excludes food & energy) was skewed higher by core consumer service inflation of 2.9%. Core consumer goods showed price deflation of -0.6%.

3. Core CPI inflation slowed to 1.0% after excluding a 3.5% annual jump by shelter costs that supply 42% of core CPI.

4. February’s PCE price index (the Fed’s preferred inflation metric) rose by 2.1% yearly.

5. February’s 1.7% rate of core PCE price index inflation included -2.4% price deflation for consumer durable goods.

6. PCE price index for consumer services grew 2.4% annually.
Age Distribution of Employment Goes From Being Inflation-Prone in the 1970s to Disinflationary Today

*age cohort as % of household survey employment*

- Workers Aged 55 years and Older
- Workers Aged 16 to 24 years

Moody’s Analytics

April 2017
Inevitable Correction of an Overvalued Equity Market Will Drive Treasury Bond Yields Lower
Assuming 4.5% Employment Costs Growth, Projected 5% Growth by 2017's Profits Implies Annual Increase of Corporate Gross-Value-Added Needs to Quicken from 2016's 2.9% to 4.4% for 2017 (correlation = 0.86)
Since 1993, a higher default rate followed each deeper than a 10% drop from prior high by market value of common stock.

Marketable Value of US Common Stock: $ billions; source: Dow Jones Total Market Index (nee Wilshire Index) (L)

US High-Yield Default Rate: %, act & proj (R)
Throughout Much of 2016, VIX Index Correctly Hinted of a Thinner High-Yield Bond Spread ... Recent VIX Index Favors a 470 bp Midpoint for High-Yield Spread Versus Actual 415 bp (correlation = 0.90)
Strong Correlation of 0.91 Between High-Yield and Long-Term Baa Bond Yield Spreads ... Recent Baa Spread of 168 bp Statistically Implies a Nearly 500 bp Midpoint for High-Yield Spread in basis points
Markets Sense Profits Will Again Outrun Corporate Debt

yy % changes of yearlong averages for US nonfinancial corporations

Profits from Current Production

Corporate Debt

Recessions are shaded
Recession May Be Present When Unemployment Rate's Moving Three-Month Average Turns Higher Amid a Mature Economic Recovery