The Stock Market and GDP-Traditional Bedfellows?

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spend, and companies that believe sales will be rising may be more likely to invest.

Another possible effect is a temporary decline in inflation expectations. Ordinarily, this would be undesirable. But in the current situation, where nominal interest rates are constrained because they can’t go below zero, a small increase in expected inflation could be helpful. It would lower real borrowing costs and encourage spending on big-ticket items like cars, homes and business equipment.

Even if we went through a time of slightly elevated inflation, the Fed shouldn’t lose credibility as a guardian of price stability. That’s because once the economy returned to the target path, Fed policy—a commitment to ensuring nominal G.D.P. growth of 4½ percent—would restrain inflation. Assuming normal real growth, the implied inflation target would be 2 percent—just what it is today.

Though announcing the new framework would help, it probably wouldn’t be enough to close the nominal G.D.P. gap anytime soon. The Fed would need to take additional steps. These might include further quantitative easing, more forceful promises about short-term interest rates, and perhaps moves to lower the exchange rate. Such actions wouldn’t just affect expectations; they would also be directly helpful. For example, a weaker dollar would stimulate exports.

Nominal G.D.P. targeting would make it more likely that the Fed would take aggressive actions. Today, each Fed move generates controversy and substantial negative dimension. As a result, even though the central bank has taken some expansionary steps, they’ve often been smaller than needed and deliberately limited in duration.

G.D.P. target would do much the

ting prices and incomes back to their pre-Depression levels. Academic studies suggest that this commitment played an important role in bringing about recovery.

President Roosevelt backed up his statements. He suspended the gold standard and let the dollar depreciate. He got Congress to pass New Deal spending legislation and had the Treasury increase a large gold inflow. The result was an end to deflationary expectations, leading to the most impressive swing the country has ever seen from a horrible contraction to rapid growth.

Would nominal G.D.P. targeting work as well today? There would likely be unexpected developments, just as there were in the Volcker period. But the new target would have a better chance of meaningfully reducing unemployment than any other monetary policy under discussion.

Because it directly reflects the Fed’s two central concerns—price stability and real economic performance—nominal G.D.P. is a simple and sensible target for long after the economy recovers.
Nominal GDP and Corporate Earnings Growth of $1

- Nominal GDP: 5.6% / Year
- Nominal S&P 500 Earnings: 4.0% / Year
Real GDP and Corporate Earnings Growth of $1

- **Real GDP**: 3.5% / Year
- **Real S&P 500 Earnings**: 1.9% / Year
Eleven Decades of Returns on U.S. Stocks

Investment Return: Dividend Yield Plus Earnings Growth

Speculative Return: Impact of P/E Change

Market Return (S&P 500)
Market Return vs. Fundamental Return Nominal Basis

- **Investment Return**: 9.4% / Year
- **Market Return**: 9.5% / Year
Actual Stock Market Real Returns versus Investment Returns, Rolling 25-Year Periods (1871-2011)

Avg. -0.1%
Total Return on Stocks, Past and Future

Past 100 Years
- Dividends: 5.0%
- Earnings Growth: 4.5%
- P/E Change: 0.1%

Past 25 Years
- Investment Return: 6.4%
- Speculative Return: 3.4%

Next 10 Years (Reasonable Expectations)
- Investment Return: 6.0%
- Speculative Return: -1.0%
Equity Dividend Yield

Average: 4.6%
Price per Dollar of Dividends
After Tax Corporate Profits Relative to Nominal GDP
### Historical Changes in P/E

Analysis of changes in P/E over 10 year periods, 1871-2008

<table>
<thead>
<tr>
<th>Initial P/E</th>
<th># of periods</th>
<th># of rises</th>
<th># of falls</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>26</td>
<td>24</td>
<td>2</td>
<td>92%</td>
</tr>
<tr>
<td>10 to &lt;14</td>
<td>40</td>
<td>30</td>
<td>10</td>
<td>75%</td>
</tr>
<tr>
<td>14 to &lt;18</td>
<td>40</td>
<td>13</td>
<td>27</td>
<td>68%</td>
</tr>
<tr>
<td>&gt;18</td>
<td>22</td>
<td>4</td>
<td>18</td>
<td>82%</td>
</tr>
</tbody>
</table>
Equity Returns Over the Coming Decade
Assuming 7% Nominal Returns

<table>
<thead>
<tr>
<th>Sources</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dividends</strong></td>
<td><strong>Inflation</strong></td>
</tr>
<tr>
<td>2.0%</td>
<td>2.3%</td>
</tr>
<tr>
<td><strong>Earnings</strong></td>
<td><strong>Expenses</strong></td>
</tr>
<tr>
<td>Growth</td>
<td>2.5%</td>
</tr>
<tr>
<td>6.0%</td>
<td>2.2%</td>
</tr>
<tr>
<td><strong>P/E Impact</strong></td>
<td><strong>Net Real</strong></td>
</tr>
<tr>
<td>-1.0%</td>
<td>Return</td>
</tr>
</tbody>
</table>

**Note:** The P/E Impact is a negative influence on the overall equity returns.
Equity Market Capitalization Relative to Nominal GDP
Fund Annual Returns Relative to Average Equity Fund-1970s vs. 1980s

<table>
<thead>
<tr>
<th>Ranking in 1970s</th>
<th>Quartile 1</th>
<th>Quartile 2</th>
<th>Quartile 3</th>
<th>Quartile 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970s</td>
<td>4.6%</td>
<td>0.9%</td>
<td>-1.2%</td>
<td>4.1%</td>
</tr>
<tr>
<td>1980s</td>
<td>0.7%</td>
<td>0.6%</td>
<td>-0.3%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

1980s Reversion

-3.9%               -0.3%       +0.9%       +4.1%
Fund Annual Returns Relative to Average Equity Fund-1990s vs. 2000s

<table>
<thead>
<tr>
<th>Ranking in 1990s</th>
<th>Quartile 1</th>
<th>Quartile 2</th>
<th>Quartile 3</th>
<th>Quartile 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990s</td>
<td>4.8%</td>
<td>1.2%</td>
<td>-1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>2000s</td>
<td>-3.0%</td>
<td>-0.8%</td>
<td>0.8%</td>
<td>-0.8%</td>
</tr>
<tr>
<td>2000s Reversion</td>
<td>-7.8%</td>
<td>-2.0%</td>
<td>+2.0%</td>
<td>+7.8%</td>
</tr>
</tbody>
</table>