Back to the Future

September 15, 2021
Delta’s Speed Bump …

Sources: Haver Analytics; U.S. Department of Labor; Homebase. Updated through August 11, 2021 (Homebase) and August 2021 (BLS).
Number of travelers passing through TSA security lines

Sources: Haver Analytics; Transportation Security Administration. Updated through September 12, 2021.
We Hope It’s Cresting

Covid-19 cases per day

Note: Scales chosen to reflect the difference in population sizes, with the U.S. population roughly five times that of the UK.

Sources: Haver Analytics; Johns Hopkins University. Updated through September 10, 2021.
### NBER-Designated Business Cycles

<table>
<thead>
<tr>
<th>National Economy Bottom (Month)</th>
<th>National Economy Peak (Month)</th>
<th>Duration of Expansion (Months)</th>
<th>Duration of Next Downturn (Months)</th>
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<tbody>
<tr>
<td>December 1854</td>
<td>June 1857</td>
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<td>June 2009</td>
<td>February 2020</td>
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</tbody>
</table>

Source: Haver Analytics; NBER. Updated through July 2021.
Business Cycle Views …

Loan loss provisions (millions of dollars)

Sources: Haver Analytics; FDIC. Updated through March 31, 2021.
... Misread the Nature of the Crisis

Status of bank loans (number of people)

Sources: Haver Analytics; FDIC. Updated through March 31, 2021.
Same Idea Applies to the Bottlenecks …

Real final sales and real GDP (chained 2012 dollars)

Sources: Haver Analytics, U.S. Department of Commerce. Updated through 2021 Q2.
Real goods versus services GDP (billions of chained 2012 dollars)

Sources: Haver Analytics; U.S. Department of Commerce. Updated through 2020 Q2.
Back to the Future

Ratio of the value of the U.S. stock market to Gross Domestic Income

Valuation versus current earnings ...

Valuation versus future earnings ...

The global population outside the U.S. is 21 times the U.S. population, implying that a full-scale development abroad would in theory expand outside economic opportunities by five fold relative to U.S. GDP.

Sources: Haver Analytics; Federal Reserve Board; U.S. Department of Commerce. Updated through 2021 Q2 (GDI) and September 13, 2021 (Wilshire 5000).
Echoes of the ‘Roaring Twenties’?

Ratio of the value of the U.S. stock market to Gross Domestic Product

Sources: Haver Analytics; Federal Reserve Board; U.S. Department of Commerce. Updated through 2020 Q3 (GDI) and May 11, 2021 (equities).
Falling equilibrium real risk-free rates
   Demographics
   Global saving

Falling risk premia
   Declining inflation risk
   The Fed’s 2% inflation target and political risk in monetary policy
   The Fed’s new reaction function

Geopolitical
   The EU experiment lives on
   The rise of China and elephants and lions

Technology shock and the non reversion to normal profit margins

Global wakeup expands economic opportunity
Declining Equilibrium Real Interest Rates

The Equity Risk Premium

R-star (percent)

Sources: Haver Analytics; Federal Reserve Board; Standard and Poor’s. Updated through August 2021.

Real total return on the S&P 500

Real 10-year yield

Sources: Haver Analytics; Federal Reserve Board; Standard and Poor’s. Updated through August 2021.
Inflation Risk

Chain price index for PCE excluding food and energy (% oya)

Sources: Haver Analytics; U.S. Department of Commerce; U.S. Department of Labor. Updated through July 2021 (inflation and August 2021 (unemployment.)
Europe’s Turbulent History Recedes

Real trade weighted U.S. dollar and Euro indexes (January 2010 = 100)

Sources: Haver Analytics; BIS. Updated through November 2020.

European Monetary System Created, March 1979

EuroIntroduced, January 1, 1999

U.S. dollar

Euro
The Elephant and the Tiger

Real GDP of selected countries (chained 2012 dollars PPP basis)

Sources: Haver Analytics; U.S. Department of Commerce, CIA. Updated through 2020 Q4.
A Productivity Shock

Real GDP per hour (chained 2012 dollars per hour)  Growth of real GDP per hour (annual percent change)

Sources: Haver Analytics; U.S. Department of Commerce. Updated through 2020 Q3.

Thick line represents real GDP per hour (left scale)

Thin red line represents the growth of real GDP per hour over the most recent five years, annualized (right scale)

Annualized growth over matching colored segments:  1.2%   2.3%   1.2%
Socially Disruptive for a While

Gini coefficient (0=everyone earns the same, 1=the king earns all income)

Sources: Haver Analytics; NBER-designated recessions; Census Bureau. Updated through 2019.
The Result …

After-tax profits of nonfinancial corporations (percent of the sector’s value added)

Sources: Haver Analytics; U.S. Department of Commerce. Updated through 2020 Q3.
... When There’s No Reversion

Selected measures of business profits (percent of Gross Domestic Income)

Pre-tax GDP profits from current production
After-tax GDP profits of nonfinancial corporations
After-tax GDP profits of all businesses

Sources: Haver Analytics; U.S. Department of Commerce. Updated through 2021 Q1.
GDP Is Back

Real GDP (billions of chained 2012 dollars)

Top dashed line approximates the level of potential real GDP that may be required to reach maximum employment, if the 2020 labor productivity surge is permanent.

Second dashed line approximates the counterfactual level of potential real GDP had the economy continued to expand at the 1.8% annual rate of the past decade (i.e., had there been no Covid-19 crisis).

Actual real GDP through April (grey area), dots represent May and June estimates, and the yellow area represents a real GDP forecast.

Sources: Haver Analytics; IHS Markit. Updated through July 2021.
Jobs Aren’t

Nonfarm payrolls (thousands)

Sources: Haver Analytics; IHS Market. Updated through August 2021.

Actual NFP employment (shaded orange areas), projected NFP employment (shaded blue area), "maximum employment" (thin dashed green line)

Sources: Haver Analytics; IHS Market. Updated through August 2021.
Beyond the shores of the U.S. (ratio of global real GDP to U.S. real GDP)

Sources: Haver Analytics; IMF. Updated through 2019 Q3.
That’s Only Begun

Relative real GDP per capita (ratio to U.S. real GDP per capita, 2016 dollars)

Sources: Haver Analytics; International Monetary Fund. Updated through 2020.
Slowing Population … all Across the Nation …

U.S. population growth (annual percent change over two-year rolling intervals)

A Challenge for Businesses

Unfilled job postings, number (left scale)

Unfilled job postings, percent of employment plus unfilled postings (right scale)

Sources: Haver Analytics; U.S. Department of Labor. Updated through April 2021.
Pain for Some …

Annual population growth since 1999 (percent change)

Sources: Haver Analytics; Census. Updated through 2020.
... Gains for Others

Annual percent change since 2018 (percent)

Sources: Haver Analytics; Census. Updated through 2020.
‘Slow’ Is About Demographic Realities …
… When An Ageing Workforce …

Sources: Haver Analytics; U.S. Department of Labor. Updated through December 2020.
... Follows the Classic Work Profile Script

Age profile of job market participation (% of respective population cohort)

Sources: Haver Analytics; U.S. Department of Labor. Updated through December 2020.
Growth Isn’t the Issue …

Real GDP of selected regions (ratio to 2007 Q4 level, 2012 US dollars)

Sources: Haver Analytics; U.S. Department of Commerce, Eurostat; Bank of Japan. Updated through 2021 Q1.
Real GDP per capita of selected regions (ratio to 2007 Q4, 2012 US dollars)

Sources: Haver Analytics; U.S. Department of Commerce, Eurostat; Bank of Japan. Updated through 2021 Q1.
‘Secular Stagnation’ Is Only a Budget Issue

Unemployment (percent of the labor force)

Adjusted unemployment rate (to include those the BLS believes are misclassified as employed when they should be classified as unemployed)

Official unemployment rate

Sources: Haver Analytics; U.S. Department of Labor. Updated through April 2021.
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