Predicting the Markets: Chapter 5 Charts: Predicting Business Cycles

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thinking outside the box
Predicting Business Cycles 1-27
Figure 1.

REAL GDP
(trillion 2012 dollars, saar, ratio scale)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.

Figure 2.

REAL GDP
(quarterly percent change, saar)

Note: Business cycle peaks (P) and troughs (T) according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.
Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.

* After-tax profits as reported to IRS, excluding IVA and CCAdj
Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.
Figure 5.

S&P 500 & RECESSIONS
(ratio scale)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Standard & Poor’s.

Figure 6.

S&P 500 BULL & BEAR MARKETS
& THE BUSINESS CYCLE
(monthly, ratio scale)

Note: Shaded green areas denote S&P 500 bull markets, while red areas are bear market declines of 20% or more.
Business cycle peaks (P) and troughs (T) according to the National Bureau of Economic Research.
Source: Standard & Poor’s.
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Figure 7.

US TREASURY 10-YEAR BOND YIELD (percent, weekly)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Federal Reserve Board.

Figure 8.

INVESTMENT-GRADE CORPORATE BOND YIELD MINUS US TREASURY 10-YEAR BOND YIELD* (basis points)

* Corporate bond yield is average of Moody’s Aaa and Baa yields through 1996, then average of BoA Merrill Lynch data for AA-AAA and BBB-A yields.
Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Federal Reserve Board and Haver Analytics.
Figure 9.

COMPONENTS OF COINCIDENT ECONOMIC INDICATORS (ratio scale)

Payroll Employment (millions, sa)

Real Personal Income Less Transfer Payments (trillion 2012 dollars, saar)

Manufacturing & Trade Sales (billion 2012 dollars)

Industrial Production 2012=100, sa

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
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Figure 10.

COINCIDENT ECONOMIC INDICATORS
(2016=100, sa, ratio scale)

May

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Conference Board.

Figure 11.

REAL GDP & COINCIDENT ECONOMIC INDICATORS
(yearly percent change)

CEI

Real GDP

May

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis and Conference Board.
Figure 12.

REAL GDP: GOODS
(trillion 2012 dollars, saar, ratio scale)

Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.

Figure 13.

REAL GDP: SERVICES
(trillion 2012 dollars, saar, ratio scale)

Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.
Figure 14.

LEADING & COINCIDENT ECONOMIC INDICATORS
(2016=100, sa, ratio scale)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Conference Board.

Figure 15.

RATIO LEADING TO COINCIDENT ECONOMIC INDICATORS

Note: Shaded areas are recessions according to the National Bureau of Economic Research
Source: Conference Board.
Figure 16.

ADP NONFARM PRIVATE PAYROLL EMPLOYMENT BY COMPANY SIZE
(millions, sa)

Company Size (by employees)
- Small (1-49)
- Medium (50-499)
- Large (over 500)

Source: ADP.

Figure 17.

ADP NONFARM PRIVATE PAYROLL EMPLOYMENT BY COMPANY SIZE*
(as a percent of total ADP payrolls)

Company Size (by employees)
- Small
- Medium
- Large

* Company size by employees: Small (1-49), Medium (50-499), and Large (over 500).
Source: ADP.
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Figure 18. NFIB SMALL BUSINESS SURVEY: EARNINGS & EMPLOYMENT PLANS
(12-month average percent)

* Earnings Over Past 3 Months* (higher minus lower)
* Expecting To Increase Employment* (next 3 months)

Source: National Federation of Independent Business.

Figure 19. NFIB SMALL BUSINESS SURVEY: EARNINGS & CAPITAL SPENDING PLANS
(12-month average, percent)

* Earnings Over Past 3 Months* (higher minus lower)
* Capital Spending Plans* (next 3 to 6 months)

Source: National Federation of Independent Business.
**Figure 20.**

CORPORATE PROFITS AFTER-TAX AS REPORTED TO IRS*
(trillion dollars, saar, ratio scale)

* Excluding Inventory Valuation Adjustment and Capital Consumption Adjustment.
Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.

**Figure 21.**

CORPORATE PROFITS AFTER-TAX vs PAYROLL EMPLOYMENT EX GOVERNMENT
(ratio scale)

* Excluding Inventory Valuation Adjustment and Capital Consumption Adjustment.
Note: Shaded areas are recessions according to the National Bureau of Economic Research.
CORPORATE PROFITS MARGIN IN GDP* (after-tax profits as a percent of nominal GDP)

* Using after-tax corporate profits reported to IRS. Excluding Inventory Valuation Adjustment and Capital Consumption Adjustment.

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.

AFTER-TAX CORPORATE PROFIT MARGIN & COSTS

* After-tax profits reported to IRS (excluding Inventory Valuation Adjustment and Capital Consumption Adjustment).
Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.
Figure 24.

RESOURCE UTILIZATION RATE*
(percent)

* Average of all industries’ capacity utilization rate and employment rate, i.e., percentage of labor force that is employed.
Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Labor Statistics and Federal Reserve Board.

Figure 25.

RESOURCE UTILIZATION RATE COMPONENTS
(percent)

* Percentage of labor force that is employed.
Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Labor Statistics and Federal Reserve Board.
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Figure 26.

CORPORATE PROFITS MARGIN IN GDP* & RESOURCE UTILIZATION RATE
(after-tax profits as a percent of nominal GDP)

* After-tax profits reported to IRS (excluding Inventory Valuation Adjustment and Capital Consumption Adjustment).
** Average of all industries’ capacity utilization rate and employment rate, i.e., percentage of labor force that is employed.

Note: Shaded areas are recessions according to the National Bureau of Economic Research.

Figure 27.

LEI / CEI vs. RESOURCE UTILIZATION RATE

* Average of all industries’ capacity utilization rate and employment rate, i.e., percentage of labor force that is employed.

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Figure 28.

S&P 500 FORWARD EARNINGS & AGGREGATE WEEKLY HOURS
(yearly percent change)

Forward Earnings*

Aggregate Weekly Hours**

* Time-weighted average of consensus operating earnings estimates for current and next year.
** Production & nonsupervisory employees.
Source: Bureau of Labor Statistics and Thomson Reuters I/B/E/S.

Figure 29.

S&P 500 FORWARD EARNINGS & REAL CAPITAL SPENDING
(yearly percent change)

Forward Earnings*

Real Capital Spending**

** Nonresidential fixed investment in real GDP.
Source: Bureau of Economic Analysis and Thomson Reuters I/B/E/S.
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**Figure 30.**
COINCIDENT ECONOMIC INDICATORS: RECOVERIES & EXPANSIONS*
(2016=100, sa, ratio scale)

* Red horizontal lines span cyclical peaks through subsequent cyclical recoveries. Green horizontal lines are expansion periods following recoveries. Source: Conference Board, Haver Analytics, and YRI calculations.

**Figure 31.**
PERSONAL CONSUMPTION EXPENDITURES IN REAL GDP: TOTAL
(billion 2012 dollars, saar, ratio scale)

Note: Shaded areas are recessions according to the National Bureau of Economic Research. Source: Bureau of Economic Analysis.
Figure 32.

PERSONAL CONSUMPTION EXPENDITURES IN REAL GDP: DURABLE GOODS
(billion 2012 dollars, saar ratio scale)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.

Figure 33.

CONSUMER CREDIT
(billion dollars outstanding, nsa)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Federal Reserve Board.
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Figure 34.

**HOUSING STARTS**
(million units, saar)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Census Bureau.

Figure 35.

**PRIVATE RESIDENTIAL INVESTMENT IN REAL GDP**
(billion 2012 dollars, saar, ratio scale)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.
Figure 36.

UNEMPLOYMENT RATE (percent, sa)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.

Figure 37.

PRIVATE NONRESIDENTIAL FIXED INVESTMENT IN REAL GDP (trillion 2012 dollars, saar, ratio scale)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.
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**Figure 38.**

REAL BUSINESS INVENTORIES-TO-SALES RATIO

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Census Bureau.

**Figure 39.**

INVENTORY INVESTMENT IN REAL GDP
(billion 2012 dollars, saar)

Note: Business cycle peaks (P) and troughs (T) according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.
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Figure 40.

NONFARM PRODUCTIVITY
(2012=100, sa, ratio scale)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Federal Reserve Board.

Figure 41.

NONFARM UNIT LABOR COSTS
(2012=100, sa, ratio scale)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Federal Reserve Board.
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Figure 42.

FEDERAL FUNDS RATE & BUSINESS CYCLE (percent, weekly)

Note: Shaded areas are recessions according to the National Bureau of Economic Research. Source: Federal Reserve Board.

Figure 43.

FEDERAL FUNDS RATE & FINANCIAL CRISSES (percent, weekly)

Note: Blue shaded areas denote periods of monetary easing between cyclical peaks and troughs in the federal funds rate. Red shaded areas denote monetary tightening periods. Source: Federal Reserve Board.
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*US YIELD CURVE* & BUSINESS CYCLE (basis points, weekly)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Federal Reserve Board.

*10-year US Treasury yield less federal funds rate.

Source: Federal Reserve Board.
Figure 46.

US FEDERAL GOVERNMENT EXPENDITURES & RECEIPTS
(as a percent of nominal GDP)

Expenditures
Receipts

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.

Figure 47.

US FEDERAL GOVERNMENT BUDGET DEFICIT
(as a percent of nominal GDP)

Note: Shaded areas are recessions according to the National Bureau of Economic Research.
Source: Bureau of Economic Analysis.
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Figure 48.
US FEDERAL GOVERNMENT OUTLAYS
(as a percent of nominal GDP)

- Total
  (12-month sum)
- Federal Government Spending in GDP
  (saar)

Source: US Treasury Department and Bureau of Economic Analysis.

Figure 49.
US FEDERAL GOVERNMENT OUTLAYS
(as a percent of total outlays)

Health, Medicare,
Income Security, Social Security

Source: US Treasury Department.
**Figure 50.**

DEBT OF FINANCIAL SECTORS
(as a percent of total debt)

Source: Federal Reserve Board.

**Figure 51.**

US DEBT
(as a percent of nominal GDP)

Debt/GDP
- Total
- Nonfinancial
- Financial

Source: Federal Reserve Board Financial Accounts of the United States.
Figure 52.

**GDP, GDI, & NATIONAL INCOME**
(trillion dollars, saar, ratio scale)

- **Gross Domestic Product**
- **Gross Domestic Income**
- **National Income**

* GDI is Gross Domestic Income, which equals National Income plus Consumption of Fixed Capital.

Source: Bureau of Economic Analysis.

Figure 53.

**GDP LESS GDI: STATISTICAL DISCREPANCY**
(billion dollars, saar)

* GDI is Gross Domestic Income, which equals National Income plus Consumption of Fixed Capital.

Source: Bureau of Economic Analysis.
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