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Statistical Indicators of Business-Cycle Changes

Among the primary leading indicators of business-cycle changes, the index of net business formation increased to a near record during October and continued to expand cyclically then. The net change in inventories on hand and on order in constant dollars also increased slightly during October. However, this series decreased during the preceding 3 months, and there is some doubt that it still is expanding cyclically. Decreasing trends of 4 months' duration in this series have been accompanied by business-cycle contractions in more than 40 percent of the postwar occurrences.

Among other leaders, the inverted layoff rate in manufacturing, new orders for consumer goods in constant dollars, and the percent change in total liquid assets increased during November, but none of these series are appraised as expanding cyclically. The 3-month moving average of the inverted layoff rate has trended downward since February, and we continue to appraise this series as contracting cyclically. The cyclical statuses of new orders for consumer goods in constant dollars and of the percent change in total liquid assets are indeterminate. The 3-month moving average of the new orders series has decreased for 5 consecutive months. Such decreasing trends have been accompanied by business-cycle contractions in slightly more than half of the postwar occurrences. The percent change in total liquid assets has fluctuated erratically for more than a year, and no discernible cyclical trend in this series is apparent.

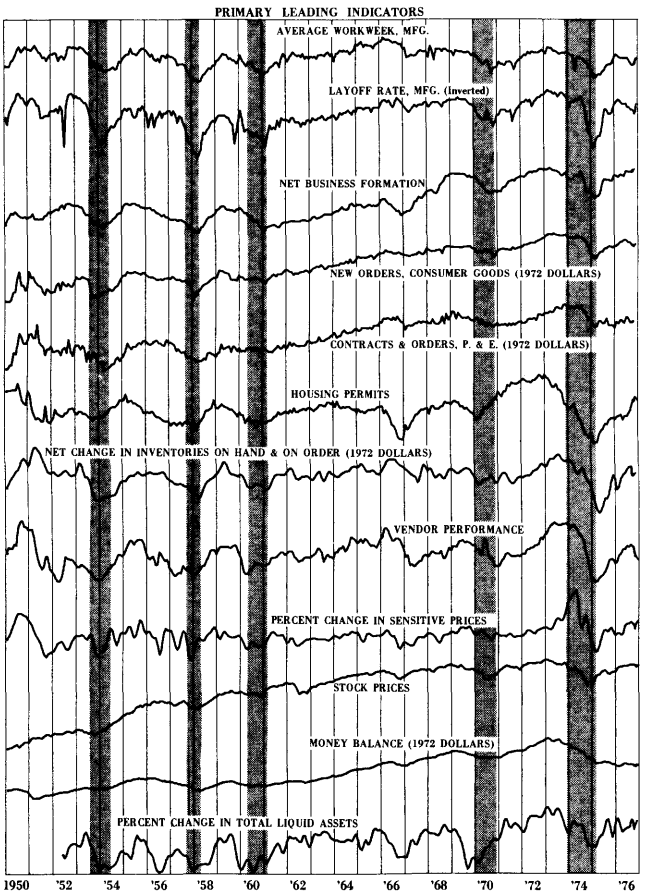
Contracts and orders for plant and equipment in constant dollars and the money supply (M_1) in constant dollars decreased during November. The 4-month moving average of contracts and orders for plant and equipment has decreased for only 1 month; therefore, we continue to appraise this series as expanding cyclically. The money supply in constant dollars has fluctuated within a narrow

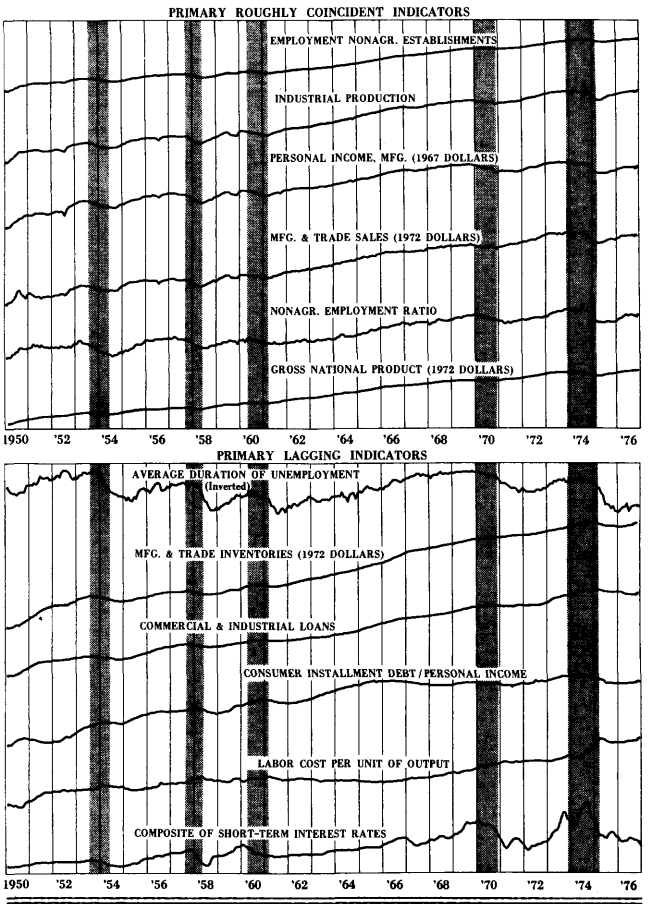
THE STATISTICAL INDICATORS

	Direction of Change					*Apparent Cyclical Status*
Primary Leading	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	
Average workweek, mfg.	–	–	+	+	nc	–?
Layoff rate, mfg.*	–r	–	+r	+		–
Net business formation	nc	+r	+			+
New orders, con. gds.†	–	–	–	+		?
Contracts & ords. p. & e.†	–	+	+	–		+
Housing permits	+	+	–	+	–	+
Chg. invs., hnd. & ord.†	–	–	+			+?
Vendor performance	+	–	–	–	–	?
Chg. in sensitive prices	+	–	–	+	+	+?
Stock prices	–	+	–	–	+	+?
Money balance (M_1)†	–	–	+	–		?
Chg. in liquid assets	–	–	–	+		?
Percent expanding cyclically						50
Primary Roughly Coincident						
Empl'm't. nonagr. estabs.	+	+	–	+	+	+
Industrial production	+	–	–	+	+	+
Personal income, mfg.†	–	+	–	+		+
Mfg. & trade sales†	+	–	–			+
Nonagr. employment ratio	–	–	–	+		+?
Gross National Product†q	+	+	+	+	+	+
Percent expanding cyclically						100
Primary Lagging						
Avg. duration of unempl.*	+	+	nc	–	–	+?
Mfg. & trade inventories†	+	+	+			+
Com'l & industrial loans	–	+	+	+		+
Cons. instal. debt/per. inc.	+	+	+	–		+
Labor cost/unit of output	–	+	+	+		+
Short term int. rates	–	–	–	–	–	–
Percent expanding cyclically						83

nc No change. r Revised. *Inverted. q Quarterly.
†In constant dollars.

Plus and minus signs indicate, respectively, increases or decreases in monthly or quarterly data and expansions or contractions of each series as currently appraised. Blank spaces indicate data not yet available; question marks indicate doubtful or indeterminate statuses of series.





range during recent months, and no cyclical trend in this series is evident at this time.

The percent change in sensitive prices and the index of 500 common stock prices increased during December, and the average workweek for a production worker in manufacturing was unchanged then. In spite of the December increases in the base series, the moving averages of the percent change in sensitive prices and the index of common stock prices have trended downward for 3 months. These trends have raised some doubt that the series have continued to expand cyclically, and we have appraised them as probably expanding cyclically. Although the 3-month moving average of the average workweek series has increased for 2 months, it remains substantially below the peak reached during January 1976. Therefore, we continue to appraise this series as probably contracting cyclically.

Both the index of housing permits and vendor performance decreased slightly during December. However, the 2-month moving average of housing permits extended the increasing trend begun during March 1975, and this index is appraised as expanding cyclically. The 2-month moving average of vendor performance has decreased for 3 consecutive months. Decreasing trends of this duration have been accompanied by business-cycle contractions in about one-half of the postwar occurrences. Therefore, the cyclical status of this series has become indeterminate. It had been appraised as probably expanding cyclically.

The change in status of vendor performance has reduced the percentage of primary leading series appraised as expanding cyclically from 58 to 50. This reduction raises further doubt that the expansion of general business activity will continue. However, only 2 primary leaders are appraised as contracting cyclically, but six series are appraised as expanding. Clarification of the cyclical statuses of the four series that now are indeterminate could increase the percentage of leaders appraised as expanding cyclically but could not reduce this percentage. Therefore, there is not sufficient evidence at this time to warrant the conclusion that a business-cycle contraction will begin soon.

Coincident and Lagging Series

Among the coincident series, manufacturing and trade sales in constant dollars decreased during October. This was the only primary roughly coincident series that decreased during the most recent month for which data are available. The moving average of this series has decreased for only 1 month; thus, the series remains appraised as expanding cyclically. The nonagricultural employment ratio increased substantially during November after having decreased during the preceding 3 months. The 2-month moving average of this series has trended downward for 3 months, which has raised some doubt that it has continued to expand cyclically. The other four roughly coincident series (the number of employees in nonagricultural establishments, the index of industrial production, personal income in manufacturing in constant dollars, and Gross National Product in constant dollars) extended upward trends from their cyclical troughs reached during 1975 and are expanding cyclically. All primary roughly coincident indicators are appraised as expanding cyclically.

Among the primary lagging indicators, manufacturing and trade inventories in constant dollars increased and continued to expand cyclically during October. Commercial and industrial loans outstanding and the index of labor cost per unit of output increased and continued to expand cyclically during November. The ratio of consumer installment debt to personal income decreased during November for the first time since February. However, we continue to appraise this series as expanding cyclically. The inverted average duration of unemployment decreased during December, and the 3-month moving average of this series has decreased for 2 months. This development has raised some doubt that this series has continued to expand cyclically. The composite of short-term interest rates decreased and continued to contract cyclically during December. This is the only primary lagger not appraised as expanding cyclically. The percentage of primary laggers so appraised remains 83.

The decrease from 58 to 50 in the percentage of primary leaders appaised as expanding cyclically has raised further doubt that the cyclical expansion of general business activity will continue. However, there is not sufficient evidence to warrant the conclusion that a business-cycle contraction will begin soon.

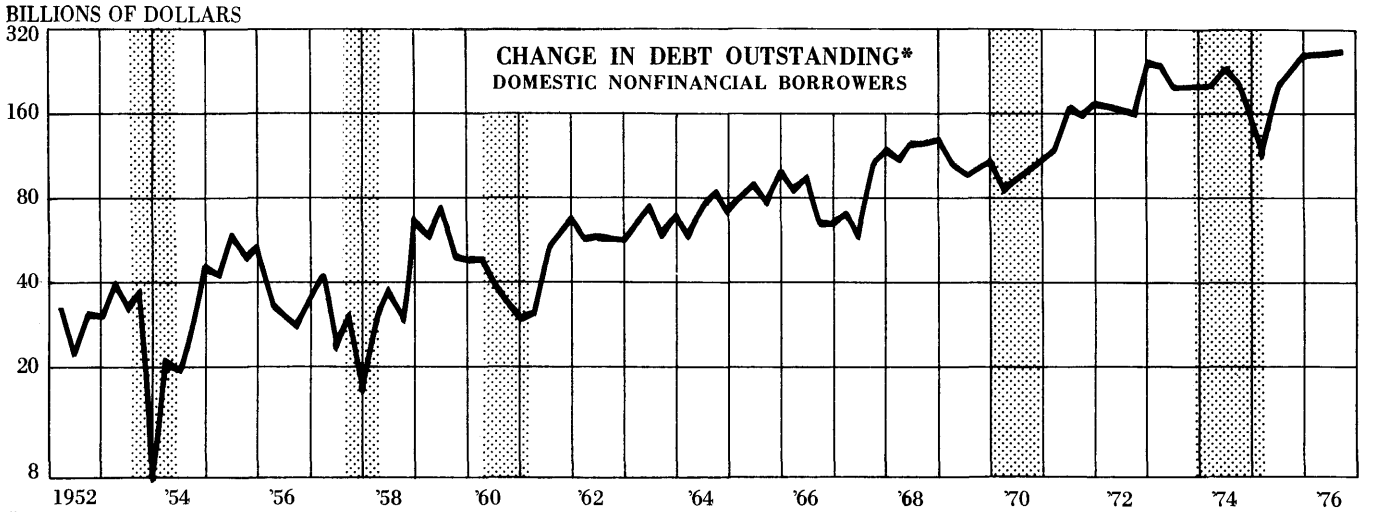
FINANCE

THE FLOW OF FUNDS

Note: All data are seasonally adjusted.

Data recently published by the Federal Reserve Board indicate that the total debts of domestic *nonfinancial* borrowers increased about $67 billion during the third quarter of 1976. (The first accompanying chart shows quarterly changes in such debt at annual rates.) As of September 30, 1976, such debts totaled $2.76 trillion, which was 10.4 percent more than that a year earlier.

The household sector (which includes private nonprofit institutions, personal trusts, and individual consumers, farmers, and unincorporated businessmen) is the largest



*Seasonally adjusted annual rates.

nonfinancial borrowing sector. As of September 30, 1976, debts of this sector totaled $1.06 trillion, which was $85 billion, or 8.7 percent, more than that a year earlier. Net borrowings during the third quarter totaled $26 billion, which represented an annual rate of increase of 10.6 percent. Within this sector, home mortgages account for about one-half of the outstanding debt, and consumer credit and debt of farms and unincorporated businesses each account for roughly 25 percent.

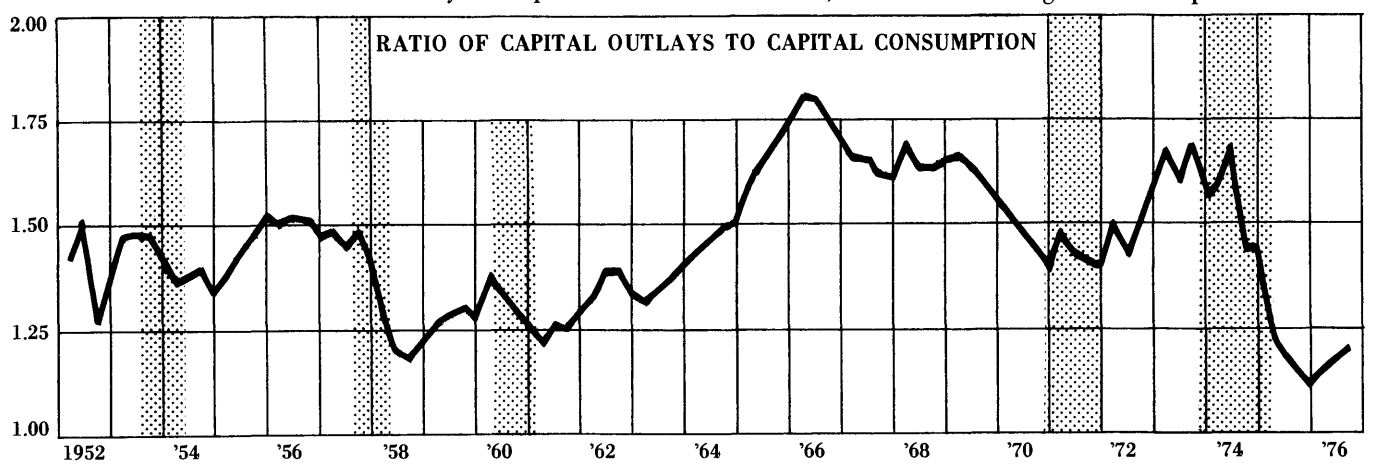
Net borrowings by nonfinancial, nonfarm business corporations totaled $16 billion during the 3 months ended September 1976. The total of such debt outstanding at the end of September was $925 billion, which was $67 billion, or 7.8 percent, more than that a year earlier. The $16-billion increase during the third quarter represented an annual rate of increase of 7.2 percent.

The net borrowings of such corporations during the third quarter ($16 billion) were about equally divided between long-term debt (primarily bonds and mortgages) and short-term borrowing. However, bank and money-market borrowing changed little then, and the $8-billion increase in short-term debt occurred entirely in trade debt (accounts payable) and profit taxes payable.

During the 18 months ended in September, total short-term borrowings by nonfinancial corporations from banks and the money market changed little overall. That these traditional sources of working capital were not used that late into the current business-cycle expansion is unusual. It was attributable to a marked improvement in internal cash flow, large external long-term financings, and a comparatively small amount of capital outlays.

Corporate profits increased very rapidly during the first year of the current expansion and contributed to increased internal cash flow. Moreover, since corporations base their estimated tax payments in a given year on the profit level of the preceding year, profit tax payments lagged behind such accruals. Profit taxes payable, a balance sheet item, increased $3 billion during the 3 months ended in September and $14 billion in total since the expansion began. Since the rate of growth of corporate profits recently has diminished and corporations soon will file tax returns on the basis of recent profit levels, this source of working capital probably will disappear soon, and corporations may need to return to their usual lenders for working-capital funds.

Also for nonfinancial corporations, the large amounts of external financing probably will not continue unless capital outlays increase substantially. As the second accompanying chart shows, capital outlays (fixed investment and the purchase of mineral rights from the U.S. Government) by domestic nonfinancial business corporations through the third quarter of 1976 were small in relation to capital consumption allowances. The recent level of this ratio suggests that capital expenditures have been inadequate to provide much growth. Inasmuch as external long-term financing is substantially more expensive than short-term borrowing under present market conditions, that the managers of corporations will



INCREASE IN DEBTS OWED BY DOMESTIC NONFINANCIAL SECTORS

Sector	1975/IV Amount*	1975/IV Percent†	1976/I Amount*	1976/I Percent†	1976/II Amount*	1976/II Percent†	1976/III Amount*	1976/III Percent†
U.S. Government	$21.9	21.7	$20.6	19.1	$20.1	17.8	$20.2	17.1
State & local governments	4.1	7.1	3.2	5.5	5.6	9.5	5.0	8.2
Nonfinancial corp. businesses	16.2	8.6	17.7	8.3	15.6	7.2	16.0	7.2
Household and noncorp. bus.	22.2	9.5	22.6	9.4	23.9	9.8	26.3	10.6
Total	$64.4	11.0	$64.1	10.4	$65.2	10.3	$67.5	10.4

*In billions of dollars.
†Percent increase in total amount outstanding at annual rate.

continue to finance, in effect, short-term assets with long-term funds seems improbable. As we mentioned in *Research Reports* for October 4, 1976, corporate managers presumably have been raising long-term funds either in the contemplation of increasing capital spending or in an effort to improve the financial liquidity of their firms. With liquidity much improved, managers would be foolish to continue borrowing expensive long-term funds in the absence of needing them for capital expenditures.

The debts of state and local governments increased $5 billion during the third quarter of 1976, to about $254 billion. This amount was $18 billion, or 7.5 percent, more than that a year earlier. The $5-billion increase during the 3 months ended in September represented an annual rate of increase of 8.2 percent.

The total debt of the U.S. Government increased $20 billion during the 3 months ended in September, to about $522 billion. This amount was a marked $83 billion, or 19 percent, more than that a year earlier. Since the first quarter of 1975, U.S. Government debt has increased more rapidly than that of any other borrowing sector, a situation that had not occurred since World War II.

Readers are reminded that the debts of the U.S. Government, of state and local governments, and of nonfinancial business corporations described herein do not include liabilities for unfunded pensions, which amount to several times the amounts reported as debt in some instances for governments.

Although there have been reports in the press that the experience of the 1973-75 recession instilled a cautious attitude in consumers, businessmen, and some government officials, the flow of funds data raise doubt about the accuracy of this assertion. The 10.4-percent increase in the total outstanding debt of domestic nonfinancial borrowers during the 12 months ended in September 1976 was very large compared with the average annual rate of increase during the preceding quarter century, when the average annual increase in such indebtedness was about 6.7 percent. In fact, during the entire period since 1952 (the period for which quarterly data are available), the percent increase in such debt from that at the end of the year-earlier quarter exceeded 10.4 percent only four times: at the end of each quarter of 1973.

Although the rate of debt accumulation slowed somewhat during the 1973-75 recession, the recent rate of accumulation was relatively large, and continued accumulation seems probable.

DEMAND

RETAIL SALES

Estimates of retail sales during the most recent week and 4 weeks compare with such sales during the corresponding periods a year earlier as follows:

Period	*Percent change*
Week ended January 8	+ 8
Four weeks ended January 8	+ 9

SUPPLY

INDUSTRIAL PRODUCTION

Production of steel, automobiles, and electric power (1) in the 1- and 4-week periods ended on the indicated dates in the current year and (2) in the corresponding periods of earlier years was as follows:

Steel	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*
Ingots (million tons)						
1 week: January 15	2.31	2.74	2.84	2.56	2.24	2.11
4 weeks: January 15	8.41	10.72	11.43	10.06	8.29	8.28
Automobiles						
Vehicles (thousands)						
1 week: January 15	176	204	131	68	168	190p
4 weeks: January 15	498	579	348	236	386	536p
Electric Power						
Kilowatt-hours (billions)						
1 week: January 15	32.3	38.1	36.6	38.0	40.1	45.5
4 weeks: January 15	125.3	140.8	140.1	141.8	154.6	170.8
Percent change from 4 weeks a year earlier:						+10.5

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PRICES

COMMODITIES PRICES

Index	*1976 Jan. 12*	*1977 Jan. 3*	*1977 Jan. 10*
Spot-market, 22 commodities*	495	526	530
Commodity-futures	624	770	776
Steel-scrap	$71.50	$72.17	$72.17
	Jan. 22	*Jan. 13*	*Jan. 20*
Gold	$126.15	$132.20	$133.10

*For the preceding Tuesday.
Note: The indexes are, respectively, those of the U.S. Bureau of Labor Statistics, Dow-Jones, and *Iron Age*. The spot-market and futures indexes are converted so that their August 1939 daily averages equal 100. The steel-scrap index is a composite price for No. 1 heavy melting scrap. The gold price is the final fixing in London.

BRIEFLY NOTED

According to Nicholas Wade, a staff writer for *Science*, a meeting of the U.S. Senate labor and health appropriations subcommittee that was recorded as having taken place on February 3, 1976 never occurred. The transcript of the meeting apparently was fabricated by some staff member from written testimony sent in by those that were to appear before the subcommittee.

The implications of such actions are frightening. How many steps removed from this practice would be those of editing or in other ways altering alleged transcripts? Reliable reports of events already are rare. The alteration of official records is inexcusable and should not be tolerated.

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