

Voice

of
the Federal Reserve Bank of Dallas
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November 1981

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The Large Monetary Aggregates as Intermediate Policy Targets

By Patrick J. Lawler

The Federal Reserve Board publishes two broad monetary aggregates, M2 and M3, and an even broader measure of liquid assets, L. Four-quarter growth rates of M2 and M3 are targeted semi-annually by the Fed and reported to the Congress. Two- to four-month growth rates of M2 are also used as short-term targets in the Fed's directives to its Trading Desk after each meeting of the Federal Open Market Committee.

These aggregates generally get little attention compared with the narrower definitions of money, M1-A and M1-B. The M1's have usually outperformed the larger aggregates in statistical tests and are easier for the Fed to control. But the extension of NOW (negotiable order of withdrawal) accounts nationwide this year has made the M1 aggregates much harder to interpret and has led many to suggest placing greater emphasis on the broader measures, especially M2. This article considers some of the problems with doing so, looks at some evidence concerning the past behavior of the aggregates, and discusses a recently developed set of alternatives.

The article concludes that the large aggregates are, of necessity, arbitrarily constructed and would be difficult for the Fed to control as intermediate targets. Furthermore, reduced-form estimates indi-

cate these money measures have had weak relationships with GNP (gross national product) growth. Divisia indexes of the large aggregates represent a substantial theoretical improvement, but empirical results using these new measures are disappointing. The large aggregates do not appear to be well qualified as intermediate targets.

The M-1B aggregate has been distorted by nationwide spread of NOW accounts . . .

The stock of money and its rate of change play a major part in virtually all theories of how the economy works. Two aspects of money are usually considered critical to its effects on prices, interest rates, and production. It is the medium of exchange in most business transactions, and it is a store of liquid wealth. Unfortunately, no one financial asset has exclusive possession of these characteristics. They are shared by many assets in varying degrees. Thus, it is difficult to determine precisely which assets should be included in measures of money that correspond to the concepts of money in economic theories.

Two measures currently used focus separately on these principal aspects of money. M1-B is a measure of assets that can be used as media of

exchange. L is a measure of all liquid financial assets. There are conceptual problems with both. Before the late 1970's the distinction between assets that were media of exchange and other liquid assets was relatively sharp. The former could be used directly as a means of payment, but they earned no interest and so were held only to meet transaction needs. The latter earned interest but could not be used to buy things before being converted to something else first.

In the last half dozen years, however, high interest rates, along with changes in law and regulation, have resulted in the development of several assets that can be used as exchange media but also pay interest and, therefore, are closely related to some of the "other" liquid assets. M1-B attempts to strike a balance. Money market mutual fund shares, on which checks may be drawn, are excluded because data indicate that few checks are actually drawn on them. Interest-earning checkable deposits allowed before 1981 at commercial banks and thrift institutions are included.

However, the legal change permitting the nationwide spread of NOW accounts since December 31, 1980, is not so easily handled. Interest-earning checkable deposits jumped \$39 billion in the first four months of this year. Most of the deposits shifted into these accounts have come from checking accounts and are apparently held for transaction purposes. But a large portion has also come from savings accounts, either to meet high minimum-balance requirements, to consolidate accounts, or to take advantage of the extra flexibility of NOW accounts, which pay about the same interest as savings accounts but also allow checking. Accordingly, an attempt has been made by the Federal Reserve Board to estimate, mainly on the basis of survey information, the portion of the increase in NOW deposits that is used primarily for transaction purposes. Only this amount is included in "shift-adjusted" M1-B, the measure currently used for the narrow money growth targets.

The amount excluded is small, less than a fortieth of M1-B, but critical for policymaking. Through the first nine months of 1981, M1-B, which includes all NOW accounts, grew at an annual rate of 5.2 percent, while the shift-adjusted measure grew at a rate of only 1.7 percent. The estimated size of the shift is subject to error. Some analysts believe the error is probably sufficiently large to greatly reduce the usefulness of any transactions-based monetary aggregate this year.

... but the large aggregates have other problems

The difficulty of knowing what to include is also a problem for the broadest aggregate, L. It includes currency plus all deposits and RPs at depository institutions, money market mutual fund shares, and other liquid assets.¹ Some quite liquid assets are excluded, such as high-rated corporate and municipal bonds due to mature in the near future. And some fairly illiquid assets are included, such as fixed-rate time deposits at commercial banks with remaining maturities of more than four years.

Both M1-B and L also suffer from another compositional problem. All funds included are treated equally, regardless of the type of asset or the holder. For M1-B, a dollar of currency held by a consumer is given the same weight as a dollar held in a checking account by a corporation. Their relationships to economic activity are unlikely to be the same, however. The problem is particularly severe for L, which is a veritable hodgepodge.

The other two large aggregates are neither fish nor fowl. They include all transaction accounts but only some of the other liquid financial assets. M3 excludes all money market assets except money market mutual fund shares; M2 adds to those exclusions time deposits larger than \$100,000 and RPs with maturities longer than one day.

Ideally, aggregates should include assets that are close substitutes for one another and exclude other assets. Different types of transaction balances may be thought of as close substitutes. More broadly, all liquid assets may be considered substitutes. But aggregates that contain transaction deposits plus some, although not all, other liquid assets are arbitrary. M2 primarily includes assets that are media of exchange or easily convertible into exchange media. Yet it also includes small-denomination time deposits, since they have proved to be substitutes for savings deposits in the past. However, because time deposits carry substantial penalties for early withdrawal, they are much less liquid than the other components. M3 includes large certificates of deposit (CDs) but excludes their close substitute, commercial paper.

1. RPs are short-term loans to banks from customers and are collateralized by U.S. Treasury securities. "Other liquid assets" includes the nonbank public's holdings of U.S. savings bonds, short-term Treasury securities, commercial paper, and bankers acceptances plus Eurodollar deposits issued by Caribbean branches of U.S. banks to U.S. nonbank customers. Holdings of these assets by money market mutual funds are netted out.

While the large aggregates have serious conceptual problems, they currently have one advantage over M1-B in that they should be virtually unaffected by shifts in deposits due to the nationwide establishment of NOW accounts. However, they may be affected by other institutional changes. In recent years the development of money market mutual funds and the inauguration of six-month money market CDs and 2¹/₂-year variable rate CDs at depository institutions have undoubtedly drawn some funds out of the money market and into assets counted in M2. This year, M2 has been affected by the uncapping of the maximum yield on the 2¹/₂-year CDs, the sharp rise in retail RPs in August and September and their subsequent decline, and the introduction of the tax-free "all-savers" certificates, which may draw funds from municipal bonds and money market assets.

The large aggregates rate poorly as portents of the future economy . . .

Current Federal Reserve policy attempts to achieve long-run economic goals, such as price stability and steady economic growth, by adjusting weekly reserve operating targets so as to meet intermediate monetary targets. An indirect procedure is necessary because the Fed cannot control production and purchasing decisions directly. Rather, the Fed influences such decisions by buying or selling U.S. Government securities, using data on reserves and the money stock as guides.

To be a good guide, a monetary aggregate used as an intermediate target should bear a close relationship with current and future economic goals. Results from some very straightforward tests will be presented here. GNP growth rates were regressed on current growth rates and five lagged rates of the different aggregates. The closeness of fit of these regressions indicates to what extent variation in GNP growth has been related to the behavior of one or another of the aggregates. The equations differ from many reduced-form estimates in the literature in that the lag structures are freely estimated, all nonmonetary variables are excluded, and no adjustments for autocorrelation are made. The number of lags was chosen arbitrarily without investigating alternatives, although it is a commonly used number in the literature and roughly corresponds to the length of the policy horizon of the Federal Open Market Committee.

The simplicity of such tests has some well-

known costs. On the other hand, simplicity is after all a prime reason for using intermediate monetary targets. They lead to a more understandable and more easily accountable policy. If an aggregate has only a very complex relationship with economic activity, it is comparatively difficult to explain how targets are chosen or why they are missed.

Among the costs are the following. Money growth in the current period may not be exogenous, as assumed by the regression technique; under past policies of targeting interest rates, money growth was often a by-product, not a control variable. Furthermore, the change to new policy procedures may have led to a different relationship. The equation also estimates a constant lag structure, but many structural models imply a changing lag pattern depending on the amount of slack in the economy.² Finally, many important influences upon GNP growth have been excluded from consideration. Coefficients of money growth variables may be biased to the extent that they are proxies for excluded variables. If, for example, money growth was manipulated so as to stabilize the economy in response to nonmonetary economic shocks, the coefficients would be biased downward.

With those provisos in mind, the evidence in Table 1 is still instructive. In three sets of regressions, one covering the nearly 20 years for which data are available and the others covering two subperiods, M1-B consistently outperforms the large aggregates. The sum of coefficients is generally more nearly equal to 1 for M1-B than the others. A sum of 1 implies that an increase in the money stock leads to a proportionate increase in GNP in the long run, a common theoretical proposition. The \bar{R}^2 measures, indicating the proportion of the variance of GNP growth explained, are uniformly highest for M1-B. The F statistic is a measure of the statistical power of the estimated relationships. It is significant at the 5-percent level for each equation except that for M2 in the latest period and is highest for the M1-B equations. Finally, the standard errors of estimate are lowest for M1-B throughout. Among the large aggregates, L is generally the best, although M3 has a higher \bar{R}^2 in the second period.

2. Patrick J. Lawler, "Today's Monetary Policy Affects Tomorrow's Economy," *Voice of the Federal Reserve Bank of Dallas*, September 1978, pp. 1-10, discusses such changes in the MIT-PENN-SSRC model.

Table 1

REDUCED-FORM REGRESSIONS OF GNP GROWTH ON CURRENT AND LAGGED MONEY GROWTH

	M1-B	M2	M3	L
1960:Q3 through 1980:Q4				
Sum of coefficients on money . . .	1.15	.91	.85	.90
\bar{R}^2 . . . . .	.41	.26	.23	.33
F	10.41	5.63	4.98	7.73
DW	2.00	1.88	1.76	1.92
SEE	3.27	3.68	3.75	3.48
1960:Q3 through 1973:Q4				
Sum of coefficients on money . . .	1.02	.86	.65	.79
\bar{R}^2 . . . . .	.38	.25	.24	.33
F	6.40	3.88	3.77	5.42
DW	2.05	1.81	1.78	1.98
SEE	2.95	3.25	3.27	3.06
1974:Q1 through 1980:Q4				
Sum of coefficients on money . . .	.90	.75	1.34	.90
\bar{R}^2 . . . . .	.55	.17	.47	.36
F	6.55	1.90	4.96	3.53
DW	2.00	1.97	1.62	1.59
SEE	3.15	4.30	3.44	3.77
Chow F for differences between regressions	2.89	1.40	3.90	2.24

NOTE: \bar{R}^2 is the correlation coefficient adjusted for degrees of freedom.
 F is a test statistic for regression significance.
 DW is the Durbin-Watson autocorrelation test statistic.
 SEE is the standard error of the estimate.

The break between periods was chosen on the basis of widespread agreement in the literature that the money-GNP relationship changed about 1974, probably because of improved techniques of cash management. Indeed, a Chow F test shows a statistically significant difference between the two periods for M1-B, M3, and L. The low statistic for M2 is accounted for by the weakness of the relationship in the second period.³

The effect of the changed relationships is illustrated in Table 2, which shows errors in GNP growth predictions from fourth quarter to fourth quarter in each of the past seven years based on the relationship estimated for the earlier regression period and the actual money growth during the year. Again, M1-B does noticeably better.

These exercises confirm that prior to this year, M1-B was the superior monetary aggregate. But

3. The poor showing for M2 in this period may be partly due to the distorting effects of disintermediation. As deposit ceiling rates are deregulated, the M2-GNP relationship may strengthen. One would expect M2 to behave more and more like M3 and L.

how successful has the adjustment for NOW accounts been in 1981? Table 3 shows the 1981 GNP prediction errors based on the equations estimated with the data from 1974 on. Using M1-B data, the reduced-form estimates would have substantially underpredicted GNP growth in the first three quarters of this year. M2 would have done little better; only M3 and L have matched GNP growth well.

... and are hard to control

A second critical quality of intermediate targets is that they be controllable by the Federal Reserve. Since 1979 the Fed has been using reserve targets as the means of control, and this gives the smaller aggregates an apparent advantage. Required reserve ratios are highest on demand deposits. Ratios on time and savings deposits are much lower and are being phased out for deposits in accounts held by individuals. Nondeposit liquid assets are generally not reservable at all.

One would expect, therefore, that the variability of the ratio of monetary aggregates to reserves

Table 2**OUT-OF-SAMPLE ERRORS IN FOUR-QUARTER
AVERAGE GNP GROWTH PREDICTIONS
BASED ON REDUCED-FORM ESTIMATES**

(In percent)

Year ended in fourth quarter	M1-B	M2	M3	L
1974	-0.3	0.5	-1.9	0.6
1975	2.6	1.9	2.5	2.8
1976 .....	.2	-3.2	.6	1.9
1977 .....	.7	.4	2.3	3.5
1978	3.1	5.2	4.5	3.7
1979	-.5	1.6	.9	2.5
1980	-.4	.3	1.0	1.3
Mean error .....	.7	1.0	1.4	2.3
Mean absolute error	1.1	1.6	2.0	2.3
Root-mean-square error ...	1.6	2.5	2.3	2.6

would be higher the larger the aggregate. However, a recent study found monthly and quarterly standard deviations of multipliers for M2 to be about equal to those for M1-B in the decade ended last year.⁴ Still, the increasing portion of nonreservable money market mutual fund shares in M2, in addition to the deposit shifts to NOW accounts, may have diminished M2 multiplier stability somewhat.

Certainly, the mechanics of money control using reserves as the operating target do not appear as effective for the large aggregates as for M1-B. They are not as fast or as automatic. If a surge in the economy stimulates unexpected growth in demand deposits, demand for reserves rises. If the Fed is following a fixed non-borrowed-reserve path, banks will have to borrow more from the Fed. Their reluctance to do so will raise market interest rates and thereby reduce depositors' desired holdings of demand balances, which are now more costly in terms of lost interest earnings. But if the asset growth stimulated by the economy is in money market mutual funds, there is no increase in reserve demand, no automatic increase in interest rates, and, therefore, no counterbalancing effect on the demand for liquid assets. Money control in this case requires judgmental adjustments in

the reserve path after the data on the mutual funds are compiled.

An alternative would be to switch back to an interest rate operating target. But recent and future institutional changes reduce the responsiveness of the large aggregates to interest rate changes.

The behavior of the aggregates earlier this year may reflect this development. A large increase in interest rates in early May sharply reduced M1-B growth. It actually declined at a compound annual rate of 1.7 percent from April to September, after increasing at a 13.6-percent rate in March and April, when interest rates were lower. But M3 growth was little affected by the interest rate change, increasing at an 11.5-percent rate in March and April and a 10.6-percent rate in the following five months. After growing at a 16-percent rate in March and April, M2 did slow down sharply in May and June. One reason is that changes in rates paid by money market mutual funds lag changes in other market rates since their portfolios hold past issues. By July the funds' shares started zooming again, pushing M2 growth back to a double-digit rate in the three months ended in September. The rate would have been higher had it not been for the rapid growth of retail term RPs, which are not included in M2.

The problem is simply that, unlike in the 1960's and 1970's, households have access to assets earning market rates of return. The opportunity cost

4. David Lindsey and others, "Monetary Control Experience Under the New Operating Procedures," Table 2, in *New Monetary Control Procedures*, a Federal Reserve Staff Study (Washington, D.C.: Board of Governors of the Federal Reserve System, February 1981), vol. 2.

Table 3**OUT-OF-SAMPLE FORECAST
ERRORS FOR 1981 GNP
GROWTH BASED ON
REDUCED-FORM ESTIMATES**

(In percent, at annual compound rates)

	Average prediction error, first three quarters of 1981 ¹
M1-B (shift-adjusted)	4.4
M2	3.0
M3	-.7
L ²	-.8

1. Sample period of reduced-form estimates was 1974:Q1 through 1980:Q4.

2. Error for only the first two quarters of 1981; later data were not available.

of holding liquid assets during a period of high yields is much less than before, so the aggregate size of these assets is much less responsive to interest rate changes.

There is currently another problem in controlling the large aggregates. Information on their levels is available with a longer lag than for M1-B. In the case of L, the lag is much longer, up to three months or more—too long to make it of much use as an intermediate target. But if there were greater interest in using L that way, the lag could perhaps be shortened, although at the cost of an increased reporting burden.

Divisia aggregates offer great promise . . .

In several papers over the past four years, William Barnett, with the help of Paul Spindt and Edward Offenbacher, all members of the Federal Reserve Board staff, has developed a new series of large aggregates that attempts to correct a major deficiency of the existing series.⁵ That is the problem that the large aggregates treat all component asset types equally. It is unlikely that savings bond holdings have the same relationship to economic activity as currency holdings.⁶ These assets are hardly perfect substitutes in the eyes of their holders.

One striking aspect of liquid assets is their wide range of yields. Standard micro theory holds that, at the margin, the last dollar invested in each different asset must yield the same benefits to the

investor, ignoring transaction costs. Those assets with nominal yields less than the best available alternative must be providing other benefits. The differences between yields of the various liquid assets and the yield of the highest paying alternative are measures of the relative costs, in terms of forgone interest earnings, of holding those assets.

Suppose the top-yielding asset, corporate bonds for example, pays 10 percent, while another asset, savings deposits, pays 5 percent and a third asset, currency, has no nominal yield. An optimizing asset holder must be roughly indifferent between two extra dollars in his savings account, on the one hand, and an extra dollar of currency plus an extra dollar's worth of corporate bonds, on the other hand. The holding costs of these alternatives are equal. If an investor preferred one to the others, he presumably would have moved his funds accordingly. Yet any monetary aggregate that excluded corporate bonds would be affected by which of the two alternatives an investor chose. Worse, a monetary aggregate that included all three assets would treat a dollar of currency and a dollar of corporate bonds equally, while an asset holder clearly would not.

A solution is to construct a quantity index of the noninterest benefits arising from holding liquid assets, using the relative holding costs of different asset types as weights. If those noninterest benefits are what characterize money, the resulting index should be a far truer measure of money growth in a period in which there are substantial shifts of funds between assets.

Barnett makes a further refinement. Large and frequent shifts in the relative holding costs of different assets, caused by interest rate swings,

5. See, especially, William A. Barnett, "Economic Monetary Aggregates: An Application of Index Number and Aggregation Theory," *Journal of Econometrics* 14 (September 1980):11-48, and William A. Barnett, Paul A. Spindt, and Edward K. Offenbacher, "Empirical Comparisons of Divisia and Simple Sum Monetary Aggregates," NBER Conference Paper Series, no. 122 (Cambridge, Mass.: National Bureau of Economic Research, August 1981). Data are available in William A. Barnett and Paul A. Spindt, *Divisia Monetary Aggregates: Compilation, Data, and Historical Behavior*, Staff Studies (Washington, D.C.: Board of Governors of the Federal Reserve System, forthcoming).

6. P. A. Tinsley, P. A. Spindt, and M. E. Friar, "Indicator and Filter Attributes of Monetary Aggregates: A Nit-picking Case for Disaggregation," *Journal of Econometrics* 14 (September 1980):61-91, provide supporting evidence.

create problems for the common Laspeyres and Paasche indexes, which use holdings in one particular period as weights. He uses a chained index called the Tornquist-Theil Divisia index. It has the property that the growth rate of the index from one period to the next is a weighted average of the growth rates of the component asset types. The weights are averages of the first- and second-period shares of total holding costs accounted for by the different assets.⁷ The weights change gradually over time and so keep up to date.

Suppose now that commercial paper has the largest available yield over a period of time. Then the growth rate of this component would be assigned a zero weight. The weight of commercial bank savings deposits, paying 5¹/₄ percent, would be the product of the quantity of these deposits and the difference between the commercial paper yield and 5¹/₄ percent, divided by the sum of all such products for all the different liquid assets included in the aggregate.

While the result is a clear-cut theoretical improvement over the existing aggregates, some technical problems remain. For one, it is not clear that all the yield given up to hold an asset is offset by what may be called "monetary services." For example, corporations holding large checking balances often get free or low-priced financial services—reduced loan rates, investment advice, and so forth.⁸ Service charges are a related problem. If a per-check service charge or minimum balance for a checking account changes, the net flow of benefits to the holder changes but is not captured by looking at the nominal yields. Nor is the distinction between NOW deposits and savings deposits captured. Both deposit types have the same nominal yields. But NOWs typically have service charges and minimum balances, so they must provide more monetary services.

7. The index, Q_t , is defined as:

$$Q_t = Q_{t-1} \prod_j (m_{jt}/m_{j,t-1})^{1/2} [(v_{jt}/\sum_j v_{jt}) + (v_{j,t-1}/\sum_j v_{j,t-1})],$$

so its growth rate is computed as:

$$\% \Delta Q_t = \sum_j 1/2 \left[\frac{v_{j,t}}{\sum_j v_{j,t}} + \frac{v_{j,t-1}}{\sum_j v_{j,t-1}} \right] \% \Delta m_{jt}.$$

The i th component asset (m_i) is weighted by the v 's, where v_i equals the difference between the return on the benchmark asset and that on the i th asset times the dollar value invested in that component.

8. To adjust for this, the Divisia aggregates have added an imputed yield to business demand deposits.

High transaction costs may also be a problem with respect to some of the more illiquid assets. When relative yields change rapidly, it may be difficult for asset holders to adjust their holdings to desired levels. For example, if rates rise sharply, consumers can only withdraw funds from low-yielding fixed-rate time deposits if they are willing to pay a substantial interest penalty.

Divisia aggregates share an important conceptual problem with their traditional counterparts. They give no special treatment for the differing character of medium-of-exchange services and other liquidity services. It is this last distinction that undoubtedly accounts for the persistently better performance of M1-B, standard or Divisia. Although asset holders may value both money aspects equally at the margin, the medium-of-exchange quality seems more closely related to GNP.

... but their behavior so far has been somewhat erratic

The charts compare the historical behavior of Divisia aggregates and the standard aggregates. Differences between M1-B and Divisia M1-B in both charts are negligible since the yields on all the assets included in this aggregate are very low. At higher levels of aggregation, the differences become more notable. The larger Divisias follow the growth pattern and trend of GNP more closely than the others until 1978. After that, the growth rates of the Divisias plummet, and their income velocities soar. It is not clear exactly why. Evidently, they are more interest-sensitive than their standard counterparts.

But why didn't the same thing happen in 1974, when rates were also high? The answer probably lies in the introduction of money market CDs in 1978 and in the increased popularity of money market mutual funds starting about the same time. These new assets have dramatically improved the investment opportunities available to households in periods of high interest rates. Shifts in deposits from savings accounts to either of the two new assets reduce the Divisia aggregates. Since the relative advantage of these assets over traditional deposits, such as savings accounts, varies with the level of interest rates, they may well have made the Divisia aggregates more sensitive to changes in interest rates.

In addition, the creation of a new asset type leads to a one-time adjustment of funds to take

Comparison of Growth Rates of Monetary Aggregates and GNP

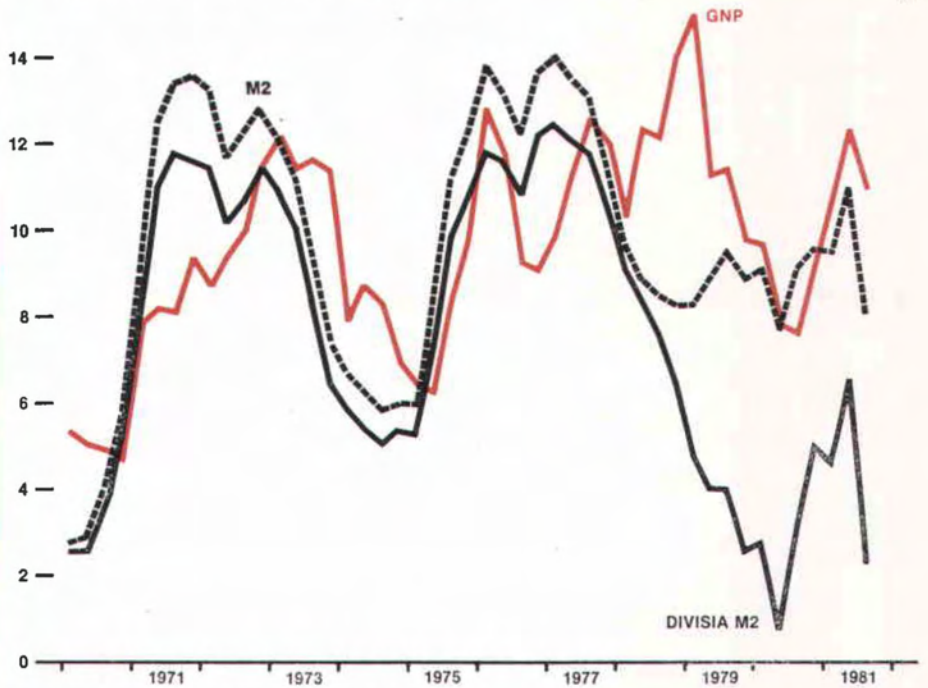
16 PERCENT CHANGE FROM FOUR QUARTERS EARLIER

(A)

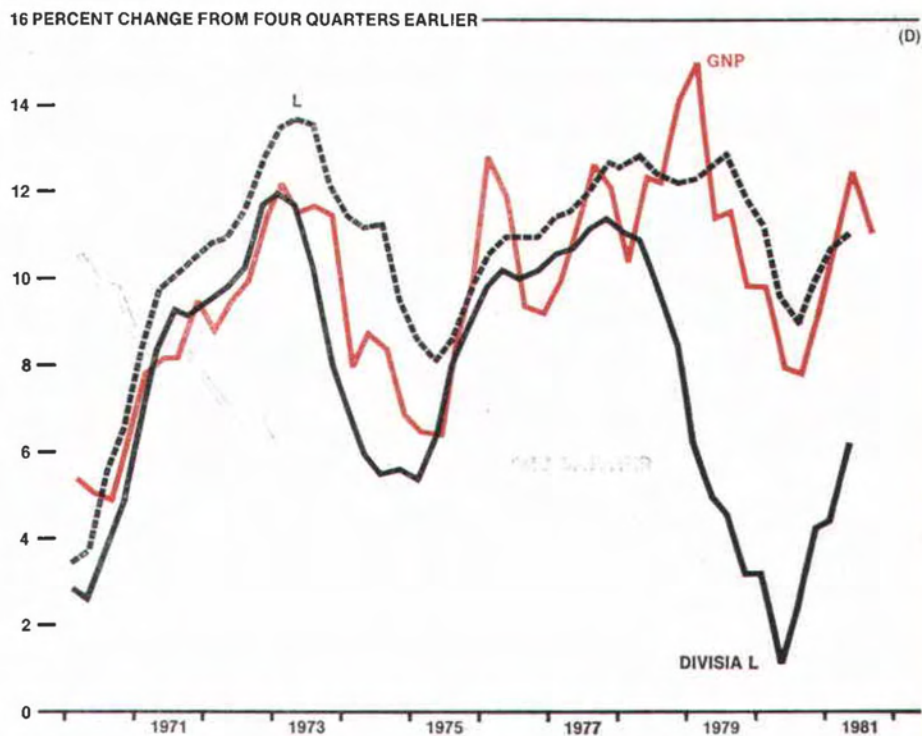
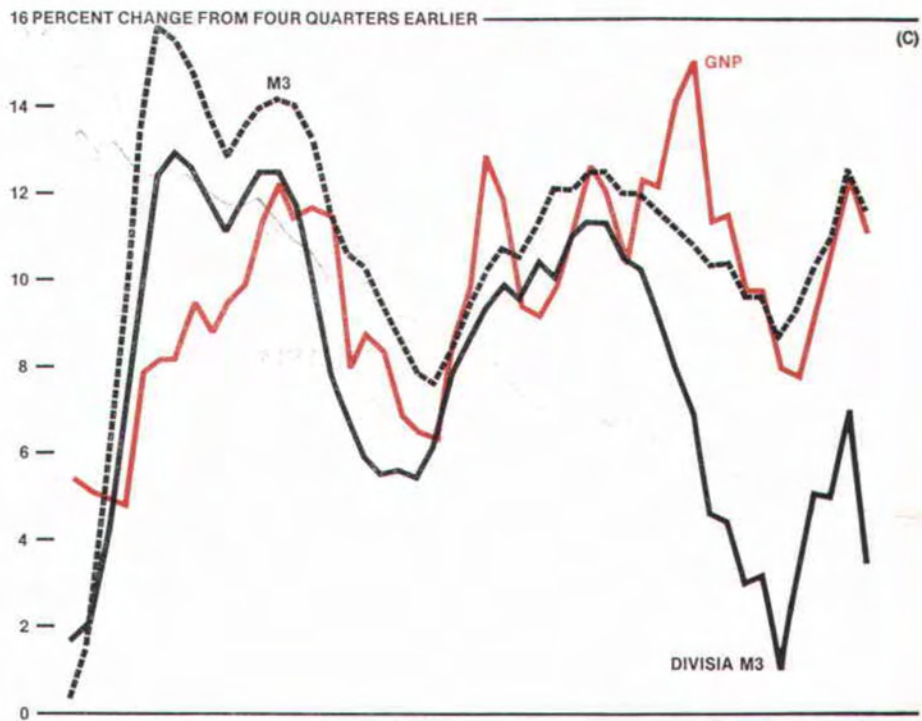


16 PERCENT CHANGE FROM FOUR QUARTERS EARLIER

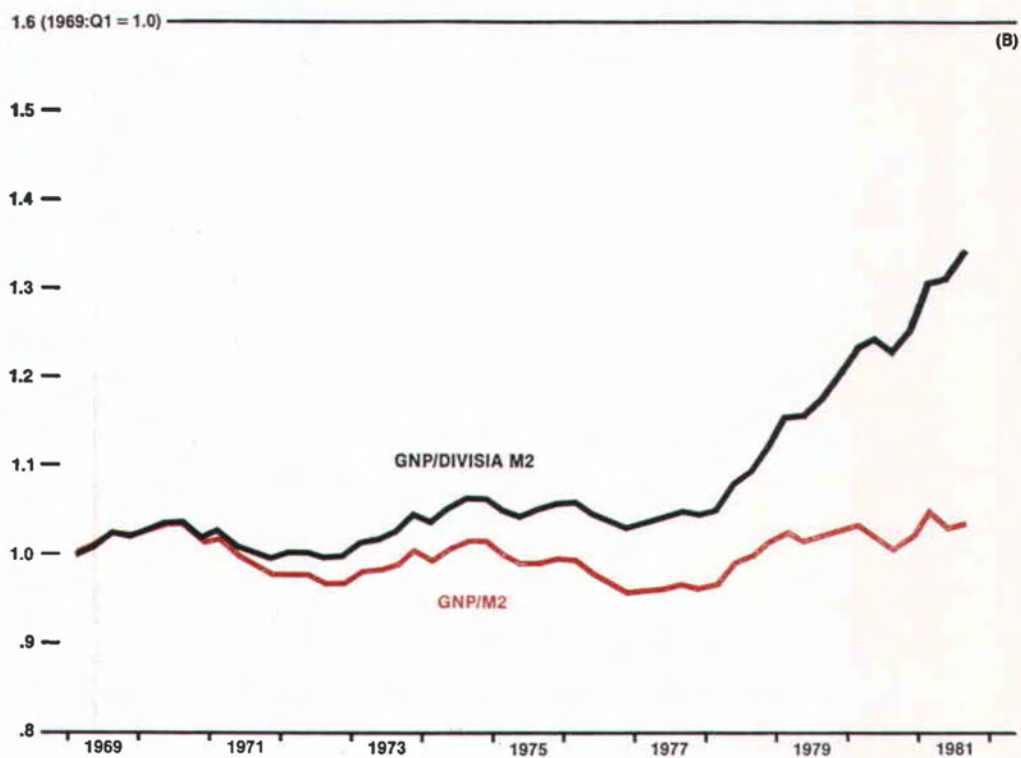
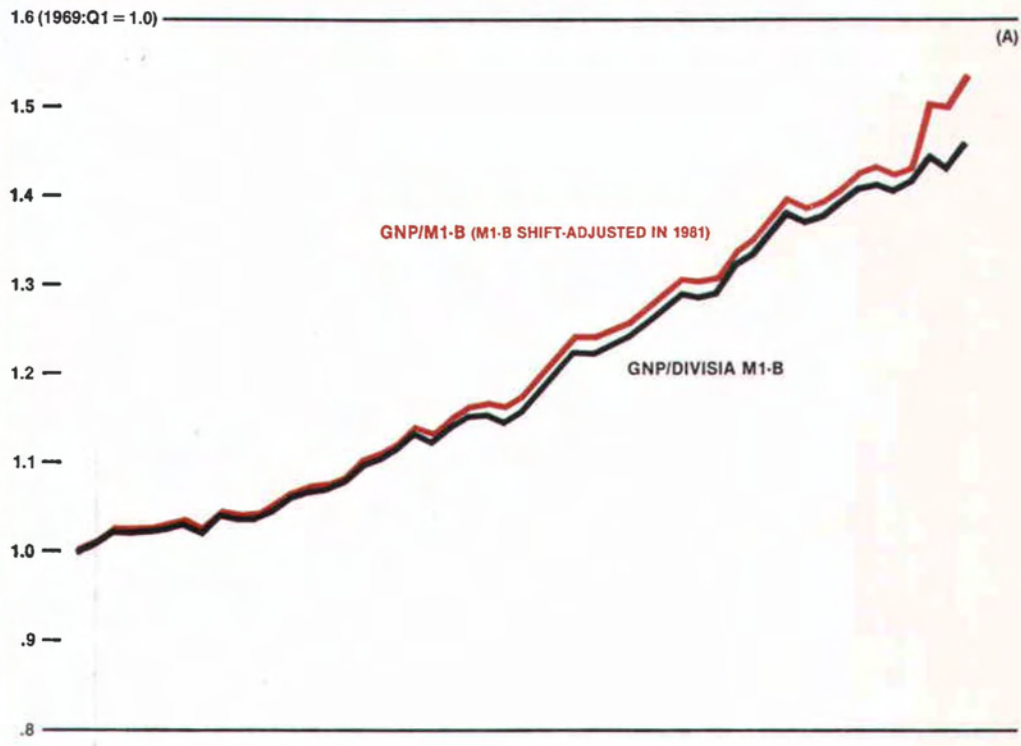
(B)



SOURCES: Board of Governors, Federal Reserve System.
U.S. Department of Commerce.



Income Velocity Behavior of Standard and Divisia Monetary Aggregates



SOURCE: Board of Governors, Federal Reserve System.

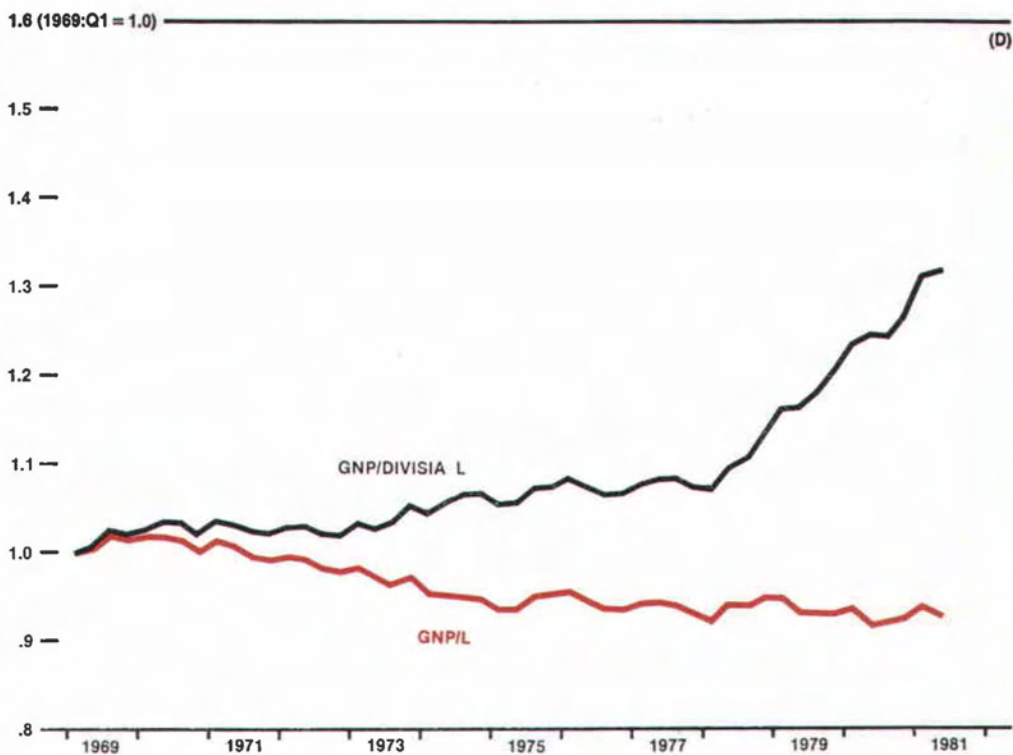
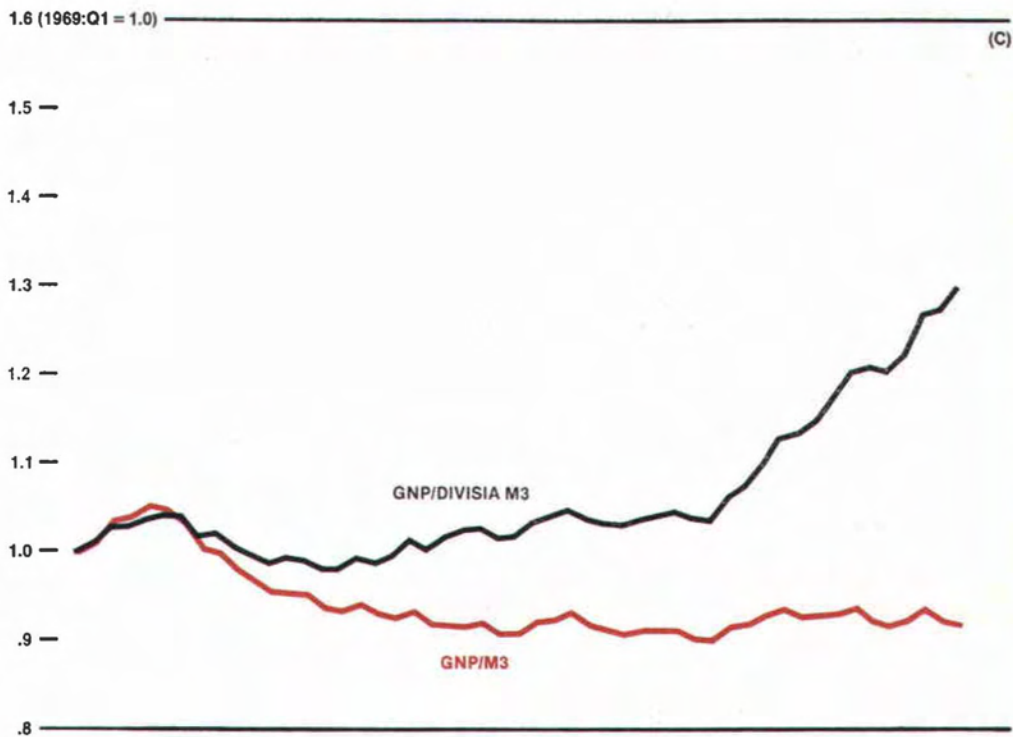


Table 4**REDUCED-FORM REGRESSIONS USING DIVISIA AGGREGATES**

(1974:Q1 through 1980:Q4)

	Divisia M1-B	Divisia M2	Divisia M3	Divisia L
Sum of coefficients on money . . .	1.05	.49	.69	.79
\bar{R}^2 . . . . .	.56	.16	.30	.31
F	6.68	1.84	2.89	3.05
DW	2.03	1.67	1.42	1.31
SEE	3.13	4.33	3.96	3.91

NOTE: \bar{R}^2 is the correlation coefficient adjusted for degrees of freedom.
 F is a test statistic for regression significance.
 DW is the Durbin-Watson autocorrelation test statistic.
 SEE is the standard error of the estimate.

advantage of the new opportunity it provides. If the adjustment is spread over time, Divisia growth rates can be lowered for a prolonged period before returning to normal. This adjustment effect probably makes the Divisias seem much more interest-responsive now than they will be in the future.

The adjustment to the new asset types may be responsible for the unimpressive Divisia reduced-form results as well (Table 4). Comparing them with the corresponding results for the standard aggregates (Table 1) shows the results to be roughly equivalent. Table 5 shows the predictive success of these equations for the large aggregates in the first three quarters of 1981. As could be expected given the apparent change in the behavior of the Divisia aggregates since 1978, the results for Divisia M2 and Divisia M3 are clearly poorer than the predictions of the standard aggregates. Although Divisia L does well for the first two quarters, existing data indicate that its error for the first three quarters will likely be at least as large as the others.⁹

9. Barnett, Spindt, and Offenbacher, "Empirical Comparisons of Divisia and Simple Sum Monetary Aggregates," report a large number of tests comparing Divisia aggregates with the traditional ones. The Divisias generally do about as well as or slightly better than their counterparts; the authors' interpretation of their results is more favorable to the Divisias.

Table 5**OUT-OF-SAMPLE FORECAST ERRORS FOR 1981 GNP GROWTH BASED ON DIVISIA REDUCED-FORM ESTIMATES**

(In percent, at annual compound rates)

	Average prediction error, first three quarters of 1981
Divisia M2	5.9
Divisia M3	7.1
Divisia L ¹ . . . . .	.5

1. Error for only the first two quarters of 1981.

Summary and conclusions

Simple tests with historical data, based on reduced-form equations, show a consistent superiority of M1-B over the larger aggregates. Monetary control procedures also seem best adapted to the narrow aggregate. But problems arising from the nationwide spread of NOW accounts have complicated the interpretation of M1-B estimates, and recent high interest rates may have led to a new round of improvements in cash management techniques, much as in 1974. However, their arbitrary construction, potential control problems, and weak statistical relationships with economic activity argue against use of the larger aggregates as intermediate targets. Furthermore, the large aggregates, especially M2, are also affected by institutional changes, such as the legislation permitting all-

savers certificates.

The large Divisia aggregates are, in theory, a substantial improvement over the current large aggregates. Unfortunately, recent institutional changes allowing small investors to earn high rates of interest have apparently distorted the behavior of the Divisias. They may well be unsurpassed in a world where depositors have fully adjusted to all their new opportunities. But with the establishment of the all-savers certificates and with deregulation of ceiling rates on savings accounts, that world may be far away. Alternatively, improved implementation of the theoretical principles of the Divisia index may yet lead to a more attractive set of aggregates. In the meantime, none of the large aggregate measures, traditional or Divisia, measure up well.

New State Member Bank

Citizens Bank & Trust, Manvel, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business October 5, 1981, as a member of the Federal Reserve System. The new member bank opened with capital of \$500,000 and surplus of \$500,000. The officers are: Joe H. Harwell, Chairman of the Board and President; James H. Phillips, Vice President and Cashier; and Janet B. Hall, Assistant Cashier.

“Fed Quotes”

Brief Excerpts from Recent Federal Reserve Speeches, Statements, Publications, Etc.

“Today, we face extraordinarily high interest rates. Those interest rates are a particularly heavy burden on credit-dependent sectors of the economy—the homebuyer and builder, the car dealer, many small businesses and farmers. Financial markets are distorted, bond financing impaired, and part of our institutional structure under heavy strain. Other sectors seemingly are able to shrug off high interest rates, at least for a time—the rapidly expanding energy sector, high technology and defense industries, to take some examples. And, of course, Federal borrowing continues unabated.

“Interest rates are ultimately set in the market—by individuals and businesses acting upon their own judgments of their current needs and the future. The influence of the Federal Reserve on interest rates is limited and short-term—except as our policies bear on the future course of the economy and inflation. If anyone still doubts that proposition, look at market developments in recent months. Viewed broadly, the money supply has been under satisfactory control in terms of our basic policy objectives of restraint. In those circumstances, and consistent with the operating techniques I discussed with this group last year, pressures on bank reserve positions have been less intense in recent weeks. The most sensitive short-term interest rates are well below their peaks, by 2½ percent or more. Yet, bond rates and mortgage rates during the same period reached new peaks, and the prime lending rate of banks has subsided only a bit. Clearly, the markets have been preoccupied with other concerns—including the current and prospective volume of financing and questions about the longer-term inflation outlook.”

Paul A. Volcker, Chairman, Board of Governors of the
Federal Reserve System (Before the National Press
Club, Washington, D.C., September 25, 1981)

Another Look at the Incidence and Duration of Unemployment

By James E. Pearce

Unemployment statistics are among today's most closely watched data on the performance of both the economy and the labor market. The aggregate unemployment rate is used to gauge how fully resources are being utilized. And unemployment rates for groups within the labor force are presumed to provide information on how uniformly access to attractive jobs is distributed across the population. Although unemployment rates draw attention to developments that may warrant action, they often do not convey enough information for a full understanding of the causes and consequences of these developments. In some cases, other statistics, such as on employment or earnings, are needed to reveal more of the story. But looking at the two dimensions of the unemployment rate—incidence and duration—can sometimes provide insights not given by either the unemployment rate or the other indicators.

For example, the high unemployment rates of young workers could be attributable to the large proportion of members of this group in transitional phases of their careers or to the greater difficulty younger workers might experience in finding suit-

able work. Evidence presented in this publication a year ago revealed the higher unemployment rate among workers 20 to 24 years of age to be entirely a consequence of a higher incidence of unemployment, where "incidence" is the percentage of workers becoming unemployed during any given year.¹ This finding, suggesting that obtaining work is not a great problem for these individuals, provides some reassurance that the difference in unemployment rates by age is not a sign that the labor market is malfunctioning.

This article presents further examination of the recent behavior of unemployment by decomposing the unemployment rate into incidence and duration. The evidence presented enhances the results of the previous article in that the conclusions can be expressed more precisely and drawn more confidently. Last year's article covered 1967 through 1977. Because the period did not extend far enough

1. See James E. Pearce, "Differences in Unemployment Incidence and Duration Produce Differences in Unemployment Rates," *Voice of the Federal Reserve Bank of Dallas*, November 1980, p. 12.

Table 1

COMPARISON OF OFFICIAL AND WORK EXPERIENCE UNEMPLOYMENT RATES

(In percent)

Year	Total civilian labor force	WORKERS 20 AND OVER									
		ALL		Males		Females		Whites		Blacks	
		Official rate	Work experience estimate	Official rate	Work experience estimate	Official rate	Work experience estimate	Official rate	Work experience estimate	Official rate	Work experience estimate
1967 ...	3.8	3.0	2.4	2.3	2.3	4.2	2.6	2.7	2.1	5.5	4.6
1968 ...	3.6	2.7	2.1	2.2	1.9	3.8	2.5	2.5	1.9	5.0	4.3
1969 ...	3.5	2.8	2.3	2.1	2.1	3.7	2.4	2.4	2.0	4.6	4.3
1970 ...	4.9	4.0	3.7	3.5	3.6	4.8	3.7	3.7	3.4	6.2	5.9
1971 ...	5.9	4.9	4.4	4.4	4.3	5.7	4.6	4.5	4.1	7.9	7.3
1972 ...	5.6	4.5	4.1	4.0	4.0	5.4	4.2	4.1	3.7	7.7	7.3
1973 ...	4.9	3.7	3.3	3.2	3.1	4.8	3.7	3.4	3.0	6.8	6.0
1974 ...	5.6	4.5	4.1	3.8	4.1	5.5	4.0	4.1	3.7	7.5	7.2
1975 ...	8.5	7.3	6.9	6.7	6.8	8.0	7.0	6.7	6.3	11.6	11.9
1976 ...	7.7	6.5	6.1	5.9	6.1	7.4	6.2	5.9	5.7	10.9	10.1
1977 ...	7.0	5.9	5.2	5.2	5.1	7.0	5.4	5.3	4.6	10.8	10.1
1978 ...	6.0	4.9	4.2	4.2	4.1	6.0	4.3	4.3	3.7	9.6	8.1
1979 ...	5.8	4.7	4.1	4.1	4.1	5.7	4.2	4.1	3.6	9.2	8.2

NOTE: The work experience estimate is computed from information obtained from the March Current Population Survey each year, covering the preceding January-December period. Estimate is $(\sum w_j U_j / \sum w_j L_j) \times 100$, where w_j is the individual's sampling weight—the inverse of the probability of his inclusion in the CPS sample—and U_j and L_j are weeks unemployed and weeks in the labor force, respectively, as reported by the individual. The sample is restricted to workers in the labor force at least 40 weeks.

SOURCES: U.S. Department of Commerce, Bureau of the Census.
U.S. Department of Labor, Bureau of Labor Statistics.
Federal Reserve Bank of Dallas.

beyond the recession of 1974-75, it was not possible to identify the degree to which the higher unemployment of the 1970's was produced by cyclical forces and, therefore, likely to dissipate with the passage of time. Here, data from two additional years facilitate separation of the influences of short-term fluctuations and longer-term trends. In addition, the confidence that could be placed in the conclusions was somewhat limited by the disparity between official unemployment rates and the unemployment rates estimated from the data used to compute incidence and duration. The sample has been enlarged slightly here, and the change brings the two unemployment series closer together.²

A noteworthy feature of the 1967-79 period is the divergence in the unemployment rate series for blacks and whites. Unemployment was higher in the 1970's for all workers, but the increase was larger for blacks than for whites. Moreover, the rising trend continued further into the decade for

2. The sample used in "Differences in Unemployment Incidence and Duration" did not contain individuals who, in the year in question, were in the labor force more than 40 weeks but did not work at all. The procedure used here added such individuals to the sample.

blacks. The evidence reported in this article reveals that for the population as a whole, the higher unemployment rates of the 1970's resulted primarily from higher incidence. On the other hand, more of the increase in unemployment of blacks, particularly since 1975, has been due to a rise in duration. This indicates the increase in the unemployment rates of blacks has a distinct and somewhat more disturbing character.

Incidence and duration estimated from information on work experience

The measure of incidence has been defined above. "Duration" is defined as the mean number of weeks of unemployment accumulated over a calendar year by individuals who experienced some unemployment that year. As before, the estimates have been computed using responses to work experience questions that the U.S. Bureau of the Census adds to the March Current Population Survey (CPS) each year. The analysis is again confined to adults in the labor force at least 40 weeks.³

3. Nearly all the respondents satisfying that criterion were in the labor force 52 weeks.

The sample was restricted in this manner because estimated unemployment rates using responses to retrospective interviews are sufficiently consistent with official statistics for full-year workers only.⁴

Before turning to the evidence on incidence and duration, consider how the unemployment rates estimated from the retrospective work experience information compare with the official statistics published by the U.S. Bureau of Labor Statistics. Because nearly all adult males participate in the labor force the year round, the two unemployment measures for this group should be nearly equal, and they are. This provides some assurance that the work experience information is consistent with the data underlying the official statistics.

Nevertheless, the unemployment series for the entire civilian labor force lies about 1½ percentage points above the work experience series for all full-year adults. Excluding teenagers from the sample population accounts for about two-thirds of this difference, and restricting the sample to full-year workers accounts for the other third. The part-year adult labor force consists primarily of women, and official unemployment rates have been 1.3 to 2.0 percentage points higher for adult females than for adult males. Nearly all this difference is attributable to the larger proportion of women in the labor force only part of the year.

A rise in incidence led to higher unemployment

The difference between the unemployment statistics of the 1970's and those of the late 1960's is pronounced. The average unemployment rate in the first 3 years of the 1967-79 period was more than 2 percentage points below the average for the subsequent 10 years. The recessions in the early and middle 1970's account for some of the disparity, but saying how much is difficult since the

4. "Retrospective" interviews consist of questions about the respondent's past. In the March CPS, questions on work experience refer to the January-December period preceding the interview. Official unemployment rates, on the other hand, are computed from responses to questions about the activity of the respondent at approximately the time of the interview. The annual average unemployment rate estimated from a single retrospective survey may not be the same as the estimate computed from month-by-month monitoring of the employment status of the individuals. The disparity is greatest for people who do not work for pay throughout the year. For more discussion of the shortcomings of the data used in this study, see "Differences in Unemployment Incidence and Duration," p. 14.

Table 2

UNEMPLOYMENT INCIDENCE AND DURATION FOR FULL-YEAR WORKERS 20 AND OVER

Year	Unemployment rate ¹ (Percent)	Percent unemployed 1 week or longer	Mean weeks unemployed ²
1967	2.4	8.6	14.5
1968	2.1	7.9	14.0
1969	2.3	8.6	13.5
1970	3.7	11.9	16.0
1971	4.4	12.6	18.0
1972	4.1	11.8	17.5
1973	3.3	10.6	16.0
1974	4.1	12.9	16.5
1975	6.9	17.0	21.0
1976	6.1	15.9	20.0
1977	5.2	14.4	18.5
1978	4.2	12.4	17.5
1979	4.1	12.8	16.5
Mean			
1967-69 . . .	2.3	8.4	14.0
1970-79 . . .	4.6	13.2	17.5
1967-79 . . .	4.1	12.1	17.0

1. Computed from work experience information obtained from the March Current Population Survey each year (see note with Table 1).
 2. Includes only workers experiencing some unemployment. Rounded to the nearest 0.5 week.
 SOURCES: U.S. Department of Commerce, Bureau of the Census.
 Federal Reserve Bank of Dallas.

persistence of the effects of these business contractions can only be estimated. In any case, the lowest unemployment rate in the 1970's was a full percentage point above the average for the 1960's.

The duration estimates provide some help on the question of persistence, however. Most instances of prolonged unemployment occur late in recessions and in the early months of the subsequent recoveries. Layoffs account for a larger share of the additional unemployment associated with recessions. Mean duration increases as those laid off must wait longer for recall or the appearance of an attractive offer. Durations remain high even after growth resumes because many firms accumulate unwanted inventories that must be sold before the firms return to normal rates of production. The rise in inventories in the 1974-75 recession was particularly massive, and the effects on the mean duration of unemployment were both large and long-lived. Nevertheless, by 1979, duration had nearly subsided to its 1973 level—a fact indicating that the influence of the recession had dissipated.

Table 3

**UNEMPLOYMENT INCIDENCE AND DURATION
FOR FULL-YEAR WORKERS 20 AND OVER, BY RACE**

Year	Unemployment rate ¹ (Percent)		Percent unemployed 1 week or longer		Mean weeks unemployed ²	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
1967	2.1	4.6	7.9	14.0	14.0	16.5
1968	1.9	4.3	7.1	14.1	13.5	15.5
1969	2.0	4.3	8.0	13.3	13.0	17.0
1970	3.4	5.9	11.3	16.3	15.5	18.5
1971	4.1	7.3	12.1	17.6	17.5	21.5
1972	3.7	7.3	11.2	16.8	17.0	22.5
1973	3.0	6.0	10.0	15.9	15.5	19.5
1974	3.7	7.2	12.2	19.4	16.0	19.0
1975	6.3	11.9	16.2	24.5	20.0	25.0
1976	5.7	10.1	15.2	21.6	19.0	24.0
1977	4.6	10.1	13.6	21.2	17.5	24.5
1978	3.7	8.1	11.7	18.8	16.5	22.0
1979	3.6	8.2	12.0	19.7	15.5	21.5
Mean						
1967-69 . . .	2.0	4.4	7.7	13.8	13.5	16.5
1970-79 . . .	4.2	8.2	12.6	19.2	17.0	22.0
1967-79 . . .	3.7	7.3	11.4	17.9	16.0	20.5

1. Computed from work experience information obtained from the March Current Population Survey each year (see note with Table 1).
2. Includes only workers experiencing some unemployment. Rounded to the nearest 0.5 week.

SOURCES: U.S. Department of Commerce, Bureau of the Census.
Federal Reserve Bank of Dallas.

Unemployment rose again in 1980, so looking at an additional year would not show any further decline in duration.

These considerations suggest using the figures for 1979 as the basis for approximations of what unemployment would have been during the last half of the decade if no recession had occurred. Although the incidence and duration of unemployment were both significantly higher after 1969, the rise in incidence was larger in percentage terms. It was also the more important contributor to the increase in the unemployment rate. If incidence had remained 8.5 percent and mean weeks unemployed had risen from 14.0 to 16.5, the unemployment rate would have increased from 2.3 percent to 2.7 percent. But a rise in incidence to 13 percent while duration remained 14 weeks would have increased the unemployment rate to 3.5 percent. The interaction of the two dimensions was also important. Given that incidence had already risen to about 13 percent, the 2.5-week rise in mean duration pushed the unemployment rate to the neighborhood of 4 percent.⁵

**Rising duration increased
unemployment rates of blacks**

A disturbing development of the 1967-79 period was the divergence of the unemployment series for blacks and whites. In the late 1960's the unemployment rate for black adults was, on average, about 2½ percentage points above the rate for white adults. In the late 1970's the difference averaged about 4½ percentage points. Again, the business cycle was responsible for some of this change. In the slack labor markets of the middle 1970's, the difference had been as high as 5½ points. Blacks are more heavily concentrated in occupations that are sensitive to changes in business conditions, so

5. When the sample contains people who are in the labor force the same amount of time, the expression relating the unemployment rate to incidence and mean duration is $U = I \times D/L$, where U is the unemployment rate, I is the percentage unemployed at least one week, D is mean weeks unemployed for workers experiencing some unemployment, and L is the mean weeks in the labor force for workers experiencing some unemployment.

their unemployment rates increase more when the overall demand for labor falls.

Unemployment rates for blacks not only increase faster during periods of economic contraction but also fall more slowly during the subsequent recoveries. Although the mean duration of unemployment rises sharply in recessions for all groups, it remains high longer for blacks than for whites. Thus, the evidence suggests that, on average, blacks who lose their jobs when the economy is weak must wait longer after the economy begins to expand again before they can expect to return to work.

But the widening of the gap between the unemployment rates for blacks and whites does not appear to be attributable to cyclical forces alone. In 1979, duration for blacks—although below the 1975-77 highs—was still up at levels not observed since the 1970-71 recession. In 1973-74 the difference in mean durations for blacks and whites was in the range of 3½ to 4 percentage points, only slightly higher than the difference in the late 1960's. In 1978-79 the difference had risen to around 6 percentage points. This rise in duration contributed heavily to the larger increase in unemployment rates for blacks.

Implications

The knowledge that higher incidence was responsible for most of the difference in unemployment between the late 1960's and the 1970's appears to be of little immediate value in understanding why

the unemployment rate increased. The information may, however, be helpful in directing future research. The factor at work does not appear to be a worsening of "hard-core unemployment"—a term used to characterize the condition of those experiencing great difficulty finding and keeping jobs—but, rather, more frequent job changes or greater use of temporary layoffs to meet seasonal variation in demand. Further progress on this subject will require additional information from other sources, such as a series of surveys on how long individuals have been working for their current employers.

The findings on the higher unemployment rates of blacks may be applied more straightforwardly. The duration evidence indicates that chronic unemployment did contribute significantly to the greater increase in unemployment of blacks. This discovery is somewhat ironic, because the Federal Government went to great lengths to ameliorate prolonged unemployment, particularly of minority races, during the 1975-78 period. Expenditures on employment and training programs were increased sharply in an effort to lighten the burden of the recession on the disadvantaged and reduce hard-core unemployment.⁶ The programs have been widely regarded as unsuccessful, however, and the divergence in the unemployment durations for blacks and whites indicates the effectiveness of these programs has yet to be demonstrated.

6. See James E. Pearce, "The Use of Employment and Training Programs to Reduce Unemployment," *Voice of the Federal Reserve Bank of Dallas*, November 1979, pp. 2-12.

Regulatory Briefs and Announcements

Guides Provided for Conversions to All-Savers Certificates

Member banks in the Eleventh Federal Reserve District have inquired about the rate of interest to be paid on all-savers certificates (ASCs) resulting from conversions.

The Economic Recovery Tax Act of 1981 stipulates that ASCs must have an annual investment yield equal to 70 percent of the average investment yield for 52-week U.S. Treasury bills sold at the most recent auction preceding the week in which the ASC is issued. The ASC must be issued at a rate that will result in the annual investment yield mandated by the act.

One condition for converting an existing time deposit to an ASC or any other deposit at the same institution without imposition of the early-withdrawal penalty is that the rate paid on the new deposit cannot exceed the lower of (a) the rate being paid on the existing time deposit or (b) the regulatory ceiling rate, if any, applicable to the new deposit category at the time of conversion. In the case of a conversion of an existing time deposit to an ASC, the regulatory ceiling rate is the rate in effect for the ASC at the time of conversion.

However, member banks may not offer ASCs that have an annual yield less than that required by law. If, to allow for a penalty-free conversion, a certificate is issued at a nominal rate that produces an annual yield less than that required by law, it will not qualify as an ASC under the regulations issued by the Depository Institutions Deregulation Committee.

Member banks that have issued all-savers certificates having an annual investment yield below the mandatory annual investment yield effective on the date of their issuance should take appropriate action to modify the certificates to conform with the regulations authorizing the tax-exempt certificates.

Regulation K: Proposed Amendment Broadens Activities of Edge Corporations

The Federal Reserve Board has requested comment on a proposal to permit Edge corporations to engage in the United States in certain investment advisory and management services.

The proposal would amend Regulation K (International Banking Operations) to add a new activity to the list of activities permissible for Edge corporations in this country: providing economic, financial, and investment advisory services and managing, on behalf of customers who are not residents of the United States, investment portfolios comprised of securities, and other financial instruments, and real estate.

In addition to requesting comment on this proposal, the Board has asked for comment on the question as to whether the provision of these services might be extended, with respect to foreign investments, to customers who are residents of the United States.

Comments must be received by December 18, 1981. They should be submitted to the Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue, N.W., Washington, D.C. 20551, and should include a reference to Docket No. R-0366.

Deregulation Committee Announces Decisions

The Depository Institutions Deregulation Committee (DIDC) has announced decisions regarding the passbook savings rate ceiling, a new IRA/Keogh deposit category, MMC and SSC rates, MMC rate calculation, a new short-term deposit category, and a new deregulation schedule.

The decisions made by the committee are summarized as follows:

- **Passbook savings rate ceiling—increase postponed.** The DIDC voted on October 19, 1981, to postpone indefinitely the one-half of 1 percentage-point increase in the nontransaction savings rate ceiling that was scheduled to become effective November 1, 1981. Accordingly, the maximum rates payable on passbook and statement savings accounts will remain at 5.50 percent for thrift institutions and at 5.25 percent for commercial banks.

- **New IRA/Keogh category.** A final rule creating a new IRA/Keogh account category has also been issued by the DIDC. The new account has a minimum maturity of 1½ years and no regulated interest rate ceiling. This means that depository institutions may provide instruments with fixed or floating interest rates. Additional deposits during the term of the account will not require extending its maturity. In addition, any depository institution may waive its mandatory early-withdrawal penalties for transfers within the same institution from existing IRA/Keogh deposits to the new IRA/Keogh account category.

The new IRA/Keogh account category becomes effective December 1, 1981, but it does not change the current eligibility requirements or contribution limits for IRAs (individual retirement accounts) or Keoghs contained in the Internal Revenue Code. The extended eligibility changes enacted by the Economic Recovery Tax Act of 1981 do not become effective until January 1, 1982.

- **MMC and SSC ceiling rates.** The DIDC issued final rules concerning the maximum interest rates payable on 26-week money market certificates (MMCs) and the 2½- to 4-year small-saver certificates (SSCs). These final rules reaffirm the DIDC rules that were adopted on May 28, 1980, and subsequently were amended to remove the interest rate caps and to change the dates that the MMC and SSC rates become effective.

- **MMC ceiling—optional four-auction average.** In a separate action, the DIDC also adopted rules at its September 22 meeting that would permit the use of a 4-week average of 26-week U.S. Treasury bills in calculating the maximum interest rates payable on MMCs issued by thrift institutions and commercial banks. Current rules limit the MMC maximum rate to the Treasury bill discount rate plus one-quarter of 1 percentage point. The new rules would set the current ceiling rate at the higher of (a) the most recent auction discount rate plus 25 basis points or (b) an average of the discount rates for the four auctions immediately prior to the date of the deposit plus 25 basis points.

The committee believes that the alternative methods of calculating the maximum rate will enable banks and thrift institutions to be more competitive with money market mutual funds throughout an interest rate cycle, and especially during a declining rate environment, when money market funds traditionally have been able to pay more than the money market certificates.

- **New short-term deposit category.** The committee will consider several specific new short-term deposit categories to be developed by the staff and published for public comment.

- **New deregulation schedule.** The committee also voted to publish for public comment a proposal to authorize a new schedule for the phaseout of all interest rate ceilings through the creation of new categories of time deposits. The first proposed new deposit instrument would become effective February 1, 1982, and would have an

initial maturity of 3½ years or more, no interest rate ceiling, a minimum denomination of \$250, and other characteristics that would identify it as a new account. According to the proposed schedule, the two other new accounts would become effective in 1984 and 1985.

Board Extends Deferral for Small Nonmember Depository Institutions

The Board of Governors of the Federal Reserve System has again deferred reserve and reporting requirements for nonmember depository institutions with less than \$2 million in total deposits. The deferral will now extend through April 1982. Legislation is under consideration in Congress to make the exemption permanent.

The Board had previously deferred until November 1981 reserve requirements for institutions with less than \$2 million in total deposits as of December 31, 1979, in an effort to lessen the burden for smaller institutions. Nonmember depository institutions became subject to reserve requirements under provisions of the Monetary Control Act of 1980.

Regulation T: Amendment Requires Good Faith Margin for Options on Government Securities

The Federal Reserve Board has adopted an amendment to its Regulation T (Credit by Brokers and Dealers) to require brokers and dealers to obtain "good faith" margin from customers who write uncovered options on government securities.

The good faith margin is to be based on the maintenance margins of the exchange that trades the option. Under the amendment, no loan value may be accorded to the option itself.

New National Member Banks

Plaza National Bank of Dallas, Dallas, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business October 7, 1981, as a member of the Federal Reserve System. The new member bank opened with capital of \$1,000,000 and surplus of \$1,000,000. The officers are: William R. Waugh, Jr., Chairman of the Board; Jack Griggs, President; James E. Morgan, Senior Vice President; and Dolores L. Williams, Vice President and Cashier.

Texas Commerce Bank—Quorum, N.A., Addison, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business October 19, 1981, as a member of the Federal Reserve System. The new member bank opened with capital of \$1,500,000 and surplus of \$1,500,000. The officers are: J. Rick Barnes, President and Chief Executive Officer; Bart McCain, Vice President and Cashier; Thomas C. Flood, Vice President; Steven W. Coley, Assistant Vice President; and Virginia F. Cowan, Assistant Vice President.

Charter National Bank—Westheimer, Houston, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business October 23, 1981, as a member of the Federal Reserve System. The new member bank opened with capital of \$1,250,000 and surplus of \$1,250,000. The officers are: A. Harrel Blackshear, Chairman of the Board; Gary Karter, President; D. Mack Butler, Vice President; Becky R. Hamlin, Vice President; Lynn Chasin, Cashier; and Mary E. Rodriguez, Assistant Vice President.

First National Bank of Azle, Azle, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business October 26, 1981, as a member of the Federal Reserve System. The new member bank opened with capital of \$750,000 and surplus of \$750,000. The officers are: G. Scott Allred, President, and Bruce Rose, Executive Vice President and Cashier.

Lamar National Bank, Paris, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business October 26, 1981, as a member of the Federal Reserve System. The new member bank opened with capital of \$2,000,000 and surplus of \$2,000,000. The officers are: Artis Edzards, Chairman of the Board; Lonnie R. Abrahams, President and Chief Executive Officer; Douglas Dowler, Assistant Vice President; and Pamela Kinslow, Cashier.

Security National Bank, Nacogdoches, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business October 30, 1981, as a member of the Federal Reserve System. The new member bank opened with capital of \$1,150,000 and surplus of \$1,150,000. The officers are: Paul H. Smith, Chairman of the Board; Jerry D. Nichols, President; Richard C. Rawlins, Vice President and Cashier; Billie Ontiveros, Assistant Cashier; and Elaine Wingate, Banking Officer—Administration.

Now Available

Recently issued Federal Reserve circulars, speeches, statements to Congress, publications, etc., may be obtained by contacting the Department of Communications, Financial and Community Affairs, Federal Reserve Bank of Dallas, Station K, Dallas, Texas 75222, unless indicated otherwise. Requests for circulars should specify the circular numbers.

Circulars

- Regulation C [Home Mortgage Disclosure].** 14 pp. Circular No. 81-194 (October 6, 1981).
- Depository Institutions Deregulation Committee.** 8 pp. Circular No. 81-195 (October 8, 1981).
- Depository Institutions Deregulation Committee: All Savers Certificates.** 4 pp. Circular No. 81-197 (October 19, 1981).
- Revised List of OTC Margin Stocks.** 25 pp. Circular No. 81-199 (October 21, 1981).
- All Savers Certificate: Clarification of Circular No. 81-181.** 2 pp. Circular No. 81-200 (October 21, 1981).
- Amendment to Regulation T [Credit by Brokers and Dealers].** 7 pp. Circular No. 81-201 (October 22, 1981).
- Results of Election.** 1 p. Circular No. 81-202 (October 22, 1981).
- Regulation J: Collection of Checks and Other Items and Wire Transfer of Funds.** 18 pp. Circular No. 81-203 (October 26, 1981).
- Equal Credit Opportunity Act and Fair Housing Act Enforcement: Policy Statement.** 6 pp. Circular No. 81-204 (October 27, 1981).
- Depository Institutions Deregulation Committee: All Savers Certificate Rate and Proposals for Short-Term Time Deposits.** 9 pp. Circular No. 81-205 (October 28, 1981).
- Depository Institutions Deregulation Committee: Proposed Deregulation of Time Deposits.** 10 pp. Circular No. 81-206 (October 28, 1981).
- Regulation M [Consumer Leasing]: Proposed Commentary.** 6 pp. Circular No. 81-207 (October 29, 1981).
- [Deferral of Reserve Reporting for Small Nonmember Institutions].** 2 pp. Circular No. 81-208 (October 29, 1981).
- Policy Change Regarding Monetary Charges for Overdrafts in Reserve Accounts and Clearing Accounts.** 2 pp. Circular No. 81-209 (October 29, 1981).

Speeches and Statements

Statement by **Paul A. Volcker** before the **Subcommittee on Financial Institutions Supervision, Regulation and Insurance** of the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives. 8 pp. October 1, 1981.

Statement by **E. Gerald Corrigan** before the **Subcommittee on Conservation, Credit and Rural Development** of the Committee on Agriculture, U.S. House of Representatives. 8 pp. October 1, 1981.

Remarks by **Paul A. Volcker** ("Banking: A Framework for the Future") at the **Annual Convention of the American Bankers Association**, San Francisco, California. 15 pp. October 7, 1981.

Statement by **John E. Ryan** before the **Select Committee on Narcotics Abuse and Control**, U.S. House of Representatives. 7 pp. October 9, 1981.

Remarks by **Paul A. Volcker** at the **Owens Graduate School of Management**, Vanderbilt University, Nashville, Tennessee. 12 pp. October 15, 1981.

Statement by **Nancy H. Teeters** before the **Subcommittee on Consumer Affairs and Coinage** of the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives. 5 pp. October 21, 1981.

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