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AN EMPIRICAL IDENTIFICATION OF THE SWEDISH MONEY STOCK

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Abstract

A measure of the Swedish money stock is identified in this paper using an empirical approach. Correlation coefficients between quarterly changes in a number of monetary assets and economic activity are calculated for leading, concurrent and lagging observations. Coins and notes exhibit close simultaneous covariation with economic activity. Commercial bank, savings bank and Post Office Bank deposits lead changes in economic activity by 6–8 quarters. This countercyclical pattern is best regarded as the outcome of *Riksbank* policy. The empirical results suggest a definition of the Swedish money stock as the sum of the volume of notes and commercial bank deposits held by the public.

I. Introduction

The choice of the empirical counterpart to the theoretical concept of "money" has been and still is the subject of considerable discussion. The debate goes back at least as far as the Banking School versus the Currency School controversy. The central issue concerns the principles that should guide the selection of monetary aggregates to be included in the money stock in empirical work. Basically two approaches are found in the literature. The first—or *a priori* approach[1]—proceeds from a theoretical concept of the specific characteristics and/or functions of "money", for example, "money" is "a means of payment", "liquidity" or "a temporary abode of purchasing power". The statistical counterpart of "money" is then constructed on the basis of such concepts.

The second—or empirical approach—consists of two steps. The first step concerns selection of a number of potential money stock components. The second step involves identification of the appropriate empirical measure of

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[1] This term was introduced by Friedman & Schwartz (1970) who surveyed a number of *a priori* approaches used to define money in empirical work.

the money stock given the initial choice of possible money stock items. This is essentially a combination of two methods. One is based on the use of various econometric techniques to measure the degree of "moneyness" of different assets. The other method introduces a number of statistical, practical and theoretical considerations to guide the selection of the money stock. This strategy generally results in a straightforward aggregation procedure for monetary assets where the weights of "moneyness" are either zero or unity. The availability and quality of data on monetary magnitudes and the institutional characteristics of the monetary system are often of crucial importance in this context.[1] It should be emphasized that the empirical approach is not devoid of any *a priori* theoretical considerations. The first and second steps of the empirical approach involve, explicitly or implicitly, the use of some theoretical guidelines.[2,3]

The purpose of this article is to identify a measure of the Swedish money stock using an empirical approach. Such a strategy for identifying the money stock can be defended as long as existing monetary theory does not provide an exact and commonly accepted description of the proper empirical measure of the concept of money. Rapid changes in payment practices and bank technology—and thus the creation of new assets for making payments and storing wealth—as well as developments in monetary theory indicate that an empirical approach for defining money may be a reasonable way to increase our knowledge on monetary matters.[4] Thus, it seems safe to predict that the discussion about the proper definition of money in empirical work will continue.[5]

II. Approaches to the Empirical Definition of Money

The empirical approach is based on the idea that there is a spectrum of monetary assets with different degrees of "moneyness". The central problem is to identify a subset of these assets as the appropriate money stock definition. Several selection procedures have been suggested. Some studies rely on the

[1] Friedman & Schwartz (1970) present a detailed description of this approach applied in practice to define the American money stock.

[2] This point is forcefully argued by Mason (1976) in a critical review of work on the empirical definition of the money stock, aimed specifically at the study by Friedman & Schwartz (1970).

[3] Here, two major approaches to the definition of the money stock are distinguished. Alternatively, three approaches may be singled out; cf. Klovland (1979). He separates definitions based on statistical techniques, (*a*) the general empirical approach, from (*b*) the *a priori* approach and (*c*) the pragmatic approach, which he associates with the strategy adhered to by Friedman & Schwartz (1970).

[4] The problem of finding empirical correspondence for a theoretical concept is well known from empirical studies in several fields of economics. See, for example, the debate about the appropriate measure of concepts such as "capital", "investment" and "income". Thus, empirical identification of the money stock is one aspect of a general issue.

[5] The empirical definition of money has been debated extensively; see e.g. the work by Laidler (1969) and Mason (1976). Generally, the money stock definition adopted does not affect the results of econometric studies; see Laidler (1977, p. 105).

concept of substitutability; that is, assets which are close substitutes should be grouped together into one aggregate. One method proceeds from a utility function including various monetary assets as the arguments. The degree of substitutability among monetary items is calculated on the basis of the postulated utility function of the asset holders; see e.g. the work by Chetty (1969) on the definition of the US money stock and by Barth, Kraft & Kraft (1977) on the British money stock.[1]

Another approach utilizes money demand studies to derive interest cross-elasticity estimates for various liquid assets. These estimates are then regarded as measures of the degree of substitutability. For a review of numerous studies in this field, see Feige & Pearce (1977).[2] Some researchers have used money demand regressions to experiment with different money stock definitions as dependent variables and with different explanatory variables to determine the proper measure of money. The work by Lieberman (1979) exemplifies such an attempt to examine substitutability among narrow and broad definitions of money.[3]

Other researchers have examined the covariation between different combinations of monetary assets and, typically, nominal income. The mix of monetary aggregates that displays the highest degree of covariation with income is selected as the appropriate definition of the money stock. The first study of this kind was made by Friedman & Meiselman (1963). They apply two criteria to guide their selection process. First, the combination of assets displaying the highest correlation with nominal income is designated as the money stock, if, as a second criterion, no component of this aggregate displays a higher correlation than the total. Other studies have extended this approach by including lead-lag relationships between monetary magnitudes and nominal income. One set of studies in this tradition uses estimates of the coefficients, derived from regressions of money components on nominal income, as measures of the degree of moneyness; see e.g. Timberlake & Fortson (1967) and Laumas (1968).

III. An Empirical Identification of the Swedish Money Stock

An empirical identification of the Swedish money stock is derived here by using the cross-correlogram technique. This method, which was previously

[1] O'Brien (1974) applies the covariance measure of substitution developed by Theil to measure the degree of substitution among financial assets. This approach, however, has the drawback of requiring a considerably larger volume of data than traditional studies of substitution among monetary assets.

[2] As emphasized by Feige & Pearce (1977), the issue of the size of the cross-elasticity required in order for "near-money" to become "money" remains to be settled.

[3] The issue of substitution among financial assets, discussed in studies of the empirical definition of money, is closely associated with the question of the effectiveness of monetary policy initially raised by Gurley & Shaw (1960). They suggested that a high degree of substitutability between bank deposits and liabilities of nonbank financial intermediaries would reduce the efficacy of monetary policy.

adopted by i.a. Kaufman (1969) for the US and Crockett (1970) for Great Britain, is based on calculations of simple correlation coefficients between two time series for leading, concurrent and lagging observations. This technique —which gives a simple account of lead-lag relationships between different monetary assets and economic activity[1]—does not involve any assumptions concerning causal relationships.[2]

The period 1954–1971 is studied here for a number of reasons. This period was fairly uniform from a monetary policy point of view. Sweden maintained fixed exchange rates and the policy conducted by the *Riksbank* remained unchanged during these years. As a rule monetary policy was restrictive during booms, thereby reducing the growth rate of monetary aggregates; while an expansionary monetary policy was pursued during periods of low economic activity, thereby increasing the growth rate of financial assets.[3] It is of crucial importance that monetary policy remained unchanged during the estimation period because the policy strategy of the *Riksbank* influences the temporal covariation between monetary aggregates and economic activity. Furthermore, the 1970s cannot be included in the period of investigation due to changes in Swedish monetary statistics.

A total of eight categories of monetary assets are selected as potential components of the money stock. These alternatives are (1) the volume of coins held by the Swedish nonbank public (CO), (2) the stock of notes held by the nonbank public (NO), (3) the volume of commercial bank deposits (CD), (4) the amount of savings bank deposits (SD), (5) the volume of Post Office Bank deposits (PD), (6) Postal Giro Service deposits (PG), (7) agricultural credit association deposits (AD), and (8) the volume of unused credit in the commercial banking system (UC), that is, the volume of credit granted but not utilized by borrowers.

The above list covers the deposits of the four major banking systems existing in Sweden in the 1950s and 1960s, that is, commercial banks, savings banks, the Post Office Bank, and agricultural credit associations. The volume of commercial bank deposits (CD) is also divided into demand deposits (DD) and time deposits (TD)—a distinction commonly made in studies of the American money stock—in order to examine these components separately.

Quarterly national income data for the entire period 1954–1971 are not available for Sweden. For this reason a proxy measure of economic activity is constructed as the product of the wholesale price index and the index of

[1] Whereas studies of substitution among financial assets require the use of data on asset yields, the correlogram technique as applied here does not. This is one advantage of this technique in the Swedish post World War II context, as controls on interest rates and regulations of financial markets make it difficult to find appropriate empirical measures of returns to financial assets.

[2] Pautler & Rivard (1979) apply tests of causality to search for an operationally useful monetary aggregate which the authorities can use to control movements in nominal income. But their approach—which requires advanced statistical testing—does not address the issue of the definition of money.

[3] On this point, see Jonung (1974), in particular Chart 2.

Table 1. *Correlation coefficients between changes in various monetary items and changes in economic activity*

Money stock components leading economic activity from +8 quarters to −5 quarters. Correlation coefficients exceeding those of other monetary items are italicized. Abbreviations: CO = coins in circulation, NO = notes held by the nonbank public, CD = commercial bank deposits, SD = savings bank deposits, PD = Post Office Bank deposits, PG = Postal Giro deposits, AD = agricultural credit association deposits, UC = unused commercial bank credits in current account

	+8	+7	+6	+5	+4	+3	+2	+1	0	−1	−2	−3	−4	−5
I. *1954–1971*														
1. CO	−0.36	−0.20	−0.06	0.06	0.19	0.28	*0.34*	*0.38*	*0.36*	0.35	0.35	0.34	0.33	0.32
2. NO	0.08	0.13	0.16	0.17	0.27	*0.34*	*0.34*	0.31	0.17	0.10	0.13	0.16	0.21	0.29
3. CD	0.47	*0.51*	*0.52*	*0.49*	*0.40*	0.25	0.06	−0.15	−0.32	−0.47	−0.58	−0.64	−0.61	−0.49
4. SD	0.38	0.40	0.34	0.26	0.19	0.08	−0.08	−0.22	−0.38	−0.47	−0.46	−0.42	−0.29	−0.13
5. PD	*0.50*	0.41	0.31	0.17	0.04	−0.08	−0.24	−0.31	−0.36	−0.35	−0.22	−0.06	0.11	0.23
6. PG	0.13	0.07	−0.06	−0.06	−0.17	−0.23	−0.17	−0.26	−0.20	−0.16	−0.21	−0.05	0.08	0.21
7. AD	−0.02	0.03	0.07	0.11	0.16	0.23	0.28	0.32	0.35	0.39	0.45	0.50	0.49	0.46
8. UC	0.06	−0.02	−0.03	−0.01	−0.01	−0.05	−0.13	−0.23	−0.36	−0.45	−0.48	−0.44	−0.27	−0.11
II. *1954–1962*														
1. CO	−0.66	−0.47	−0.29	−0.14	0.03	0.18	0.31	0.42	0.47	0.49	0.50	0.47	0.50	0.46
2. NO	−0.49	−0.48	−0.47	−0.42	−0.25	−0.03	0.21	*0.45*	*0.62*	0.65	0.67	0.68	0.65	0.59
3. CD	0.54	0.39	*0.27*	*0.18*	0.08	−0.01	−0.12	−0.22	−0.32	−0.49	−0.63	−0.73	−0.73	−0.61
4. SD	0.18	0.01	−0.15	−0.39	−0.51	−0.63	−0.77	−0.76	−0.71	−0.68	−0.49	−0.31	−0.11	0.12
5. PD	*0.71*	*0.43*	*0.27*	0.09	−0.06	−0.09	−0.16	−0.16	−0.09	−0.09	−0.05	0.04	0.12	0.16
6. PG	0.02	−0.04	−0.19	−0.17	−0.32	−0.35	−0.24	−0.35	−0.29	−0.36	−0.40	−0.21	−0.02	0.19
7. AD	−0.07	0.06	0.13	0.14	*0.15*	*0.26*	*0.33*	0.42	0.52	0.55	0.63	0.65	0.56	0.43
8. UC	−0.24	−0.42	−0.50	−0.54	−0.57	−0.58	−0.49	−0.31	−0.20	−0.13	−0.14	−0.19	−0.10	−0.02
III. *1963–1971*														
1. CO	−0.34	−0.14	0.03	0.19	0.36	0.39	*0.38*	*0.33*	*0.17*	−0.01	−0.17	−0.24	−0.31	−0.26
2. NO	0.48	0.63	0.64	0.57	0.56	*0.51*	0.34	0.04	−0.33	−0.56	−0.59	−0.55	−0.37	−0.12
3. CD	0.71	*0.86*	*0.90*	*0.84*	*0.69*	0.42	0.10	−0.25	−0.50	−0.69	−0.82	−0.82	−0.72	−0.54
4. SD	*0.80*	0.81	0.68	0.52	0.39	0.21	−0.01	−0.20	−0.44	−0.60	−0.66	−0.67	−0.52	−0.31
5. PD	0.43	0.30	0.08	−0.11	−0.26	−0.41	−0.56	−0.56	−0.58	−0.55	−0.37	−0.13	0.17	0.36
6. PG	0.27	0.13	−0.01	−0.05	−0.17	−0.21	−0.21	−0.30	−0.21	−0.09	−0.20	−0.08	0.04	0.11
7. AD	−0.21	−0.22	−0.18	−0.10	0.00	0.08	0.15	0.16	0.13	0.15	0.16	0.24	0.31	0.37
8. UC	0.76	0.65	0.56	0.46	0.41	0.31	0.11	−0.20	−0.50	−0.69	−0.74	−0.63	−0.40	−0.14

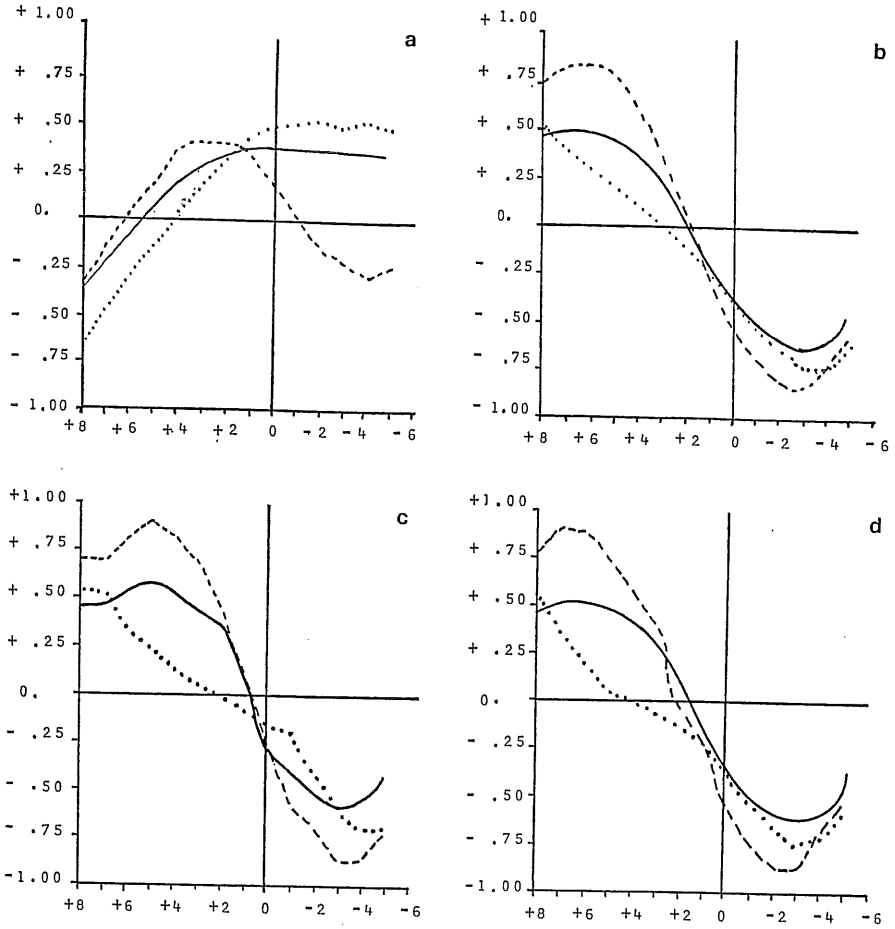

Chart 1. Correlation coefficients between quarterly changes in four monetary aggregates and quarterly changes in economic activity. Money stock components leading economic activity from +8 quarters to −5 quarters. (*a*) Coins; (*b*) commercial bank deposits; (*c*) notes and commercial bank deposits (M_2); (*d*) notes and commercial bank and savings bank deposits (M_3). Note: The solid line represents the correlation coefficients calculated for 1954–71, the dotted line for 1954–62, and the dashed line for 1963–71. Source: See Tables 1 and 2.

industrial production. The pattern displayed by this proxy for nominal income closely follows the general business cycle pattern in Sweden in the 1950s and 1960s.[1]

Changes in the eight categories of financial assets are correlated with changes in economic activity as measured by the proxy variable. The correlation coefficients which constitute the correlograms are shown in Table 1; see also Chart 1. The correlograms are based on annual percentage changes computed from quarterly data. This is a method for removing a trend in the level of a

[1] See Keran (1969) for the construction and use of this proxy.

series, which reduces the possibility of spurious correlation, as well as a way of dealing with seasonal fluctuations in the time series. The table and the chart show monetary assets leading economic activity from +8 quarters to +1 quarter, and lagging from 1 to 5 quarters. The period 1954–1971 is divided into two subperiods, 1954–1962 and 1963–1971, to give a rough indication of the stability of the covariation patterns.

The correlograms indicate that the volume of coins and the stock of notes exhibit a fairly close simultaneous covariation with economic activity. The highest correlations are registered for roughly concomitant observations with small or no leads and lags. This pattern is to be expected, as currency—in the form of coins and notes—is demanded as a means of payment to settle transactions, primarily in retail business. This demand increases during booms and falls during periods of low economic activity as shown by Table 1, where the highest correlation for coins is found with a one quarter lead and for notes with a lead of 2–3 quarters.

The general shape of most of the correlograms for deposits indicates a lead-lag relationship of 6–8 quarters between the growth rates of deposits and changes in economic activity. The correlograms display the highest correlation with a lead of six quarters for commercial bank deposits, seven quarters for savings bank deposits and eight quarters for Post Office Bank deposits. (The latter deposits are primarily savings accounts.) The pattern of postal giro deposits is similar in shape.

The correlograms of agricultural credit association deposits differ significantly from those of the other banking systems. This suggests that the behavior of this type of deposits is determined by another set of factors than those which govern the deposits of commercial banks, savings banks and the Post Office Bank. Holders of deposits with agricultural credit associations are predominantly associated with the farming sector which has been protected to a larger extent from business cycle fluctuations than most other sectors of the Swedish economy.

The lead-lag relationships between changes in deposits and in economic activity are probably best regarded as the result of the countercyclical policy of the *Riksbank*. During periods of low economic activity, the Bank has increased the growth rate of financial assets, and during booms the growth rate has been reduced as an element of Swedish stabilization policy. The *Riksbank* has influenced and regulated the activities of the commercial banks very actively. This partly explains why the correlograms of commercial bank deposits exhibit the widest range of fluctuations of all the types of monetary items in Table 1. (The correlation coefficients range from +0.52 to −0.64 for the period 1954–1971.) The same result also holds for the two subperiods.

There is dissimilarity between the correlation pattern displayed by the volume of unused commercial bank credit—which is sometimes proposed as a money stock component—and the correlograms of commercial bank deposits.

This aggregate seems to be determined by forces other than those that govern bank deposits. Thus, it appears to be less of a candidate for inclusion in the money stock than other bank deposits. Finally, an examination of the correlograms for the two subperiods suggests a fairly uniform pattern for all of the financial assets except notes and unused commercial bank credits, where the two subperiods exhibit divergent shapes.[1]

Due to changes in Swedish banking statistics, the cross-correlograms for the demand and time deposits of commercial banks were calculated for the period 1954–1968 and for two subperiods, 1954–1962 and 1960–1968. These correlograms—not reproduced here—indicate that demand deposits have a higher correlation with economic activity than time deposits, with a lead of +4 to 0 quarters, while the opposite pattern holds with a lead of +8 to +5 quarters. However, as a rule, the correlation coefficients are considerably lower for these two assets separately during 1954–1968 than for their total during 1954–1971 as shown in Table 1. The same pattern also holds for the two subperiods.

These results suggest an aggregation of demand and time deposits into one total. This approach is consistent with the view that the degree of substitution between Swedish short-term and long-term accounts is comparatively high; demand deposits are as a rule interest-bearing and withdrawals from time deposits can be made on demand at no charge or at a nominal fee. Swedish banking laws do not distinguish between demand and time deposits as US banking laws do. Moreover, due to a considerable spectrum of different types of deposits, any distinction between demand and time deposits appears to be a fairly arbitrary choice.[2]

To sum up, there is a clear difference between the patterns of coins and notes on one hand and the patterns of commercial bank, savings bank and Post Office Bank deposits on the other. The volumes of coins and notes covary closely with economic activity, whereas changes in deposits lead changes in economic activity by several quarters. This is seen from the correlograms for coins and commercial bank deposits in the upper part of Chart 1.

This suggests that fundamentally different forces determine short-run fluctuations in holdings of currency and deposits. The volume of coins and notes held by the public should be regarded as basically demand determined, that is, the monetary authorities—the Mint and the Central Bank—passively supply whatever amount of coins and notes the public demands. In other words, the authorities make no attempt to regulate the volume of currency in circulation

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[1] The specific reasons for these divergencies are unclear. Changes in payments technology, in regulations regarding the volume of unused bank credit and in taxation may be contributing factors.

[2] Regulation of the rates charged and offered by banks has resulted in non-price competition among Swedish banks. This is a partial explanation for the many types of accounts which have developed and for the lack of a sharp distinction between demand and time deposits.

as part of a counter-cyclical monetary policy. Commercial bank, savings bank and Post Office Bank deposits, however, are strongly controlled in the short run by the *Riksbank* as part of its policy, that is, as opposed to the volume of currency, this volume is primarily supply determined.

The calculations suggest a number of combinations of the financial assets studied separately in Table 1. Five different mixes are tried in Table 2; (10) notes plus commercial bank deposits (the amount of coins is thus excluded), (11) the above aggregate combined with savings bank deposits, (12) notes, commercial bank deposits, Post Office Bank deposits and Postal Giro Service deposits, (13) the previous aggregate plus coins and agricultural credit association deposits, and (14) notes, commercial bank deposits and Postal Giro deposits.

The correlograms for these five combinations in Table 2 indicate that notes and commercial bank deposits exhibit the strongest positive covariation with economic activity, with a lead from +7 to 0 quarters. Combinations (11) to (13), which include deposits with financial institutions other than the commercial banks, give higher correlation coefficients for +8 and +7 quarters' lead than the money stock defined as the sum of notes and commercial bank deposits. However, the difference between the correlation coefficients for the various aggregations for +8 and +7 quarters' lead is very small. A breakdown of the period 1954–1971 into two subperiods gives practically the same result as for the entire period, as shown in Table 2.[1]

Table 2 thus suggests a measure of the Swedish money stock consisting of the volume of notes and commercial bank deposits held by the public. This money stock definition exhibits the strongest covariation with economic activity for most quarters when money leads economic activity. As a rule, the differences between various monetary aggregates in Table 2 are small, however. An aggregate including notes, commercial bank deposits and the volume of savings bank deposits appears to be a close alternative to the money stock definition which encompasses notes and commercial bank deposits. This is indicated by the correlograms in Table 2 and in the lower part of Chart 1.[2]

IV. Conclusions

An empirical measure of the Swedish money stock has been constructed by employing the correlogram technique. The calculations suggest a definition of

[1] By applying the double criteria of Friedman & Meiselman (1963) to Table 2, money defined as notes plus commercial bank deposits is a proper definition of money with a lead from +4 to +7 quarters for the period 1954–1971. For shorter leads, the volume of coins has a higher correlation.

[2] Macesich & Close (1969) experiment with various money stock definitions for Sweden and Norway in a study of the relative stability of monetary velocities and investment multipliers, based on the approach of Friedman & Meiselman (1963). They try four money measures using annual data for national income components and end-of-year data for the money series. However, they do not address the issue of the proper definition of the money stock. They focus on the relative performance of money and autonomous expenditures, and conclude that monetary velocity in Sweden appears to be more stable than investment multipliers for most measures of autonomous expenditures.

Table 2. *Correlation coefficients between changes in various money stock definitions and changes in economic activity*

Money stock leading economic activity from +8 quarters to −5 quarters. Highest correlation coefficients are italicized. Coefficients fulfilling the double criteria of Friedman & Meiselman are indicated by an asterisk. Abbreviations, see Table 1

	+8	+7	+6	+5	+4	+3	+2	+1	0	−1	−2	−3	−4	−5
I. *1954–1971*														
10. NO+CD	0.46	0.51	*0.54**	*0.51**	*0.44**	*0.29*	*0.10*	*−0.11*	*−0.29*	−0.44	−0.55	−0.60	−0.57	−0.44
11. 10+SD	0.48	*0.53**	*0.54**	0.50	0.41	0.26	0.06	−0.14	−0.33	−0.48	−0.57	−0.61	−0.55	−0.40
12. 11+PD+PG	*0.50*	*0.53**	0.52	0.48	0.39	0.23	0.03	−0.18	−0.36	−0.50	−0.58	−0.59	−0.52	−0.35
13. 12+AD+CO	0.49	*0.53**	0.52	0.48	0.39	0.24	0.04	−0.16	−0.34	−0.48	−0.56	−0.56	−0.49	−0.33
14. NO+CD+PG	0.46	0.50	0.51	0.49	0.40	0.26	0.04	−0.13	−0.30	−0.44	−0.55	−0.58	−0.54	−0.40
II. *1954–1962*														
10. NO+CD	*0.52*	*0.36*	*0.25*	*0.15*	*0.08*	*0.00*	*−0.10*	*−0.18*	*−0.21*	−0.44	−0.59	−0.71	−0.71	−0.59
11. 10+SD	0.52	0.35	0.23	0.12	0.03	−0.06	−0.16	−0.23	−0.31	−0.48	−0.61	−0.71	−0.69	−0.56
12. 11+PD+PG	0.51	0.32	0.20	0.10	−0.01	−0.10	−0.18	−0.27	−0.33	−0.50	−0.63	−0.70	−0.66	−0.52
13. 12+AD+CO	0.51	0.34	0.21	0.10	0.00	−0.09	−0.17	−0.26	−0.32	−0.49	−0.62	−0.69	−0.65	−0.51
14. NO+CD+PG	0.49	0.33	0.21	0.13	0.03	−0.05	−0.12	−0.21	−0.29	−0.46	−0.61	−0.70	−0.67	−0.54
III. *1963–1971*														
10. NO+CD	0.71	0.87	*0.91**	*0.85**	*0.70**	*0.44*	*0.12*	*−0.24*	*−0.50*	−0.71	−0.82	−0.82	−0.71	−0.53
11. 10+SD	0.80	*0.92**	0.90	0.79	0.63	0.39	0.08	*−0.24*	−0.51	−0.71	−0.81	−0.82	−0.69	−0.48
12. 11+PD+PG	*0.83**	*0.92**	0.88	0.77	0.60	0.35	0.04	−0.28	−0.55	−0.74	−0.83	−0.81	−0.66	−0.44
13. 12+AD+CO	*0.83**	*0.92**	0.88	0.76	0.60	0.35	0.05	−0.28	−0.55	−0.73	−0.83	−0.80	−0.65	−0.43
14. NO+CD+PG	0.75	0.88	0.90	0.83	0.67	0.41	0.09	−0.26	−0.52	−0.71	−0.83	−0.81	−0.70	−0.51

money composed of the volume of notes and commercial bank deposits. This result seems reasonable in the sense that (*a*) such a definition has been adopted in empirical work on the monetary experience in Sweden and several other countries, (*b*) Swedish monetary policy has strongly aimed at influencing the assets and liabilities of Swedish commercial banks, and (*c*) the volume of commercial banks deposits is larger than that of any other financial institution. The calculations also indicate that savings bank deposits possess a high degree of "moneyness". A M_3-definition of the Swedish money stock is thus a close alternative to an M_2-measure which consists of notes and commercial bank deposits.

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