Revision of the 1995 statistics of monetary aggregates

Introduction

The statistics of monetary aggregates reflect the development of the money generated by the commercial banks together with the central bank[1]. There are delimitation problems within the statistics since money cannot only be used as a means of payment but also as a store of value. As a general rule, the money stock M1 contains those financial assets which can be used directly as a means of payment. The money stocks M2 and M3, however, comprise financial assets whose primary objective is not a payment function but a function as a store of value. Even though such financial assets are close substitutes for the bank deposits in M1, they are not as quickly accessible as these.

Since 1975, the National Bank has distinguished between these three monetary aggregates [2]. Prior to 1975 there were only two types of money stock. In 1985, the statistics of monetary aggregates were compiled on a more comprehensive banking statistical basis. Since then statistics of monetary aggregates have also included the Principality of Liechtenstein, thus covering the entire Swiss currency area [3]. In the 1985 definition, the aggregate M1 - the money supply in a narrow sense - comprised currency in circulation and sight deposits at banks and at the post office. The aggregate M2 was composed of M1 and the time deposits. The money stock M3 corresponded to the sum of M2 and the savings deposits (including savings deposit books and/or accounts). The aggregate M3 also contained the transaction account balances since these were generally a part of the savings deposits[4]. The pension fund monies invested in schemes with restricted terms and tax benefits, also referred to as "tied" pension fund monies, (2nd and 3rd pillar of the old age pension scheme) were likewise included in the money stock M3.

The 1995 revision

The 1995 revision of the monetary aggregates introduced three changes versus the 1985 definition:

- separating the transaction accounts from savings deposits and allocating them to M1,
- separating the "tied" pension fund monies from the savings deposits and M3,
- allocating the savings deposits to M2 and the time deposits to M3.

The new composition of M1, M2 and M3 is shown in table 1. In addition to the currency in circulation and the sight deposits, the money supply M1 now comprises the transaction accounts. The aggregate M2 comprises M1 and now also the savings deposits adjusted for transaction accounts and the "tied" pension fund monies (vested pension fund and pension fund accounts). The money stock M3 now includes M2 and the time deposits without the tied pension fund monies.

[1] The statistics of monetary aggregates are essentially based on the Swiss National Bank's statistics on the monthly and annual balance sheets of banks in Switzerland. The bank deposits compiled in the statistics of monetary aggregates are exclusively Swiss franc holdings of Swiss residents at Swiss banks and their branches abroad.
[2] "Revision of the statistics of monetary aggregates", appendix to the SNB Monthly Bulletin, no. 8, August 1975
[3] "Revision of the statistics of monetary aggregates", SNB Quarterly Bulletin no.1/1985
[4] According to the banking statistics, transaction accounts include salary accounts, personal accounts and/or other accounts which are offered in connection with most of the following services: payment orders, access to automated teller machines, cheques, debit and credit cards, Videotex ("home banking"), overdraft facilities.

Table 1: 1995 money supply definitions

Savings deposits are exclusively Swiss franc holdings of residents at Swiss banks and their branches abroad.

Money stock M1	Currency in circulation	Notes and coins in circulation + current accounts at the SNB + sight deposit accounts of trade and industry at the SNB - notes and coins at banks and post offices
	Sight deposits	Sight deposits at banks + postal account balances - postal account balances of the banks and the Federal government
	Transaction accounts	Deposits in the form of savings accounts and investments for payment purposes
Money stock M2	Money stock M1	
	Savings deposits (exc. vested pension benefits and pension fund accounts)	Liabilities vis-à-vis clients in savings account and investment form - transaction accounts - vested pension benefit and pension fund accounts
Money stock M3	Money stock M2	
	Time deposits	

Reasons for the revision

The 1995 revision of money aggregates is largely the result of a new assessment of the savings deposits which were thus far a part of M3, i.e. the liabilities vis-à-vis customers in the form of savings and investments, based on their degree of liquidity. The savings deposits can be divided into three parts according to their degree of liquidity:

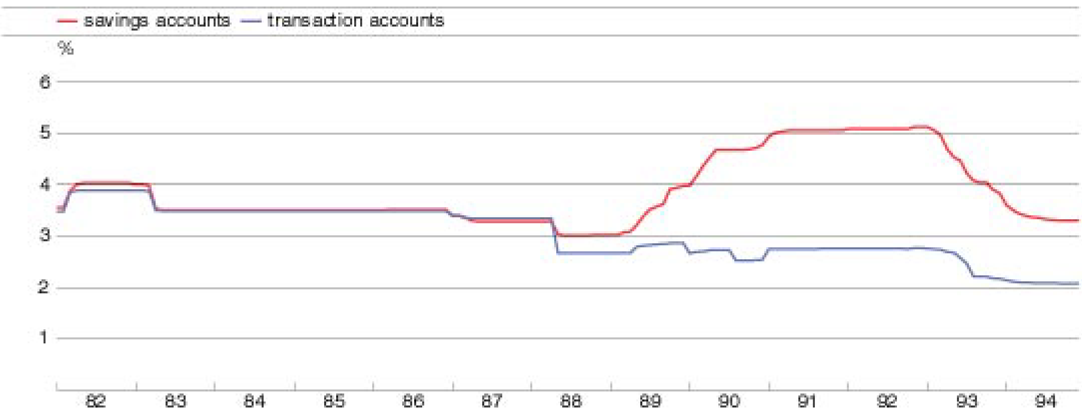
- balances on transaction deposits,
- funds invested in insurance schemes with restrictive terms and tax benefits,
- other savings deposits (essentially the traditional savings accounts).

The funds invested in insurance schemes with restrictive terms and tax benefits no longer appear in the statistics of monetary aggregates whereas the transaction accounts are allocated to M1 and the other savings deposits to M2. Time deposits, also due to the changed degree of liquidity, are now allocated to the money stock M3.

Separation of the transaction accounts from the savings deposits and their allocation to M1:
The transaction accounts differ from the traditional savings and investment accounts as follows: the withdrawal limit is higher, the services for payment transactions are more comprehensive and the interest rate is lower. With these characteristics the transaction accounts become more like current accounts and thus like sight deposits. Transaction accounts are therefore liabilities vis-à-vis customers in the form of savings and investments which are mostly used for payment purposes.

Banks did not always make a clear distinction between interest paid on transaction accounts and interest paid on savings and investment accounts. When they introduced transaction accounts in the sixties and seventies the interest paid was similar to that paid on savings deposits. Consequently, the National Bank decided to treat the two types of deposits in the same way for purposes of the statistics of monetary aggregates. Since 1988, however, the interest rate for transaction deposits has been markedly lower than the one for savings accounts and also less prone to fluctuations. This development, as evidenced in graph 1, justifies separating transaction accounts from the savings deposits and allocating them to the aggregate M1

Interest rates on savings and transaction accounts Graph 1



Separation of the funds invested in insurance schemes with restrictive terms and tax benefits from the savings deposits and from M3:

The funds invested in insurance schemes with restrictive terms and tax benefits mainly comprise vested pension benefit accounts within the framework of the mandatory occupational pension scheme (pillar 2) and the accounts of the voluntary, individual pension scheme (pillar 3). This type of pension savings is tax-privileged and the banks pay a higher rate of interest than for the traditional forms of savings. Investors, on the other hand, commit themselves to long-term saving; funds can only be withdrawn five years before the statutory AHV (Federal Old Age and Survivors Insurance Fund) retirement age is reached. Withdrawals before the AHV retirement age is reached are only possible in a few cases, e.g. to finance owner-occupied properties. Consequently, funds invested in insurance schemes with restrictive terms and tax benefits do not have the character of a means of payment and are therefore no longer taken into consideration in the statistics of monetary aggregates.

Allocating the savings deposits to M2 and the time deposits to M3

In accordance with the 1985 definition of the monetary aggregates, time deposits belong to M2 and savings deposits to M3. Today, no convincing argument can be made for this allocation. Contrary to investors who hold time deposits, holders of savings deposits can withdraw funds up to a certain limit immediately and at any time. They must respect a period of notice only for amounts exceeding this limit. The liquidity for savings deposits is thus between that of sight and that of time deposits[5]. This position is further underscored by the interest rate. Interest rates for traditional savings accounts are generally higher than those for current accounts and transaction accounts, but lower than for time deposits. Investors thus pay a price in the form of a lower interest yield for the higher liquidity of savings deposits compared with time deposits. Based on their different liquidity, savings deposits are now allocated to the Based on their different liquidity, savings deposits are now allocated to the money stock M2 and time deposits to the money stock M3.

Development of the monetary aggregates based on the old and the new definition

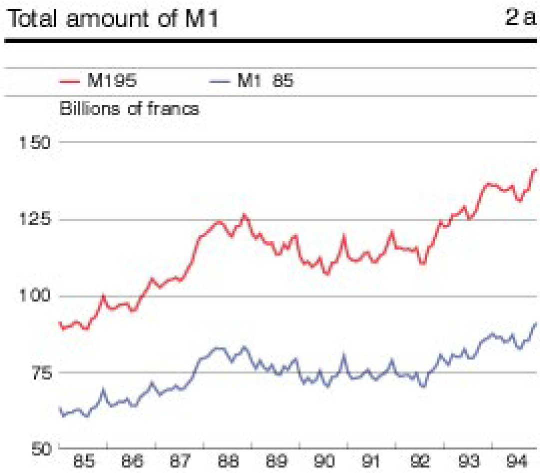
Graphs 2a-f outline the development of the monetary aggregates M1, M2 and M3 according to the old and the new definition during the period from 1985 to 1994. This phase saw an acceleration and subsequent deceleration of the money supply and - with a 3-year time lag - an acceleration and subsequent deceleration of inflationary pressures. Every aggregate is represented in two graphs reflecting the levels and the rates of change.

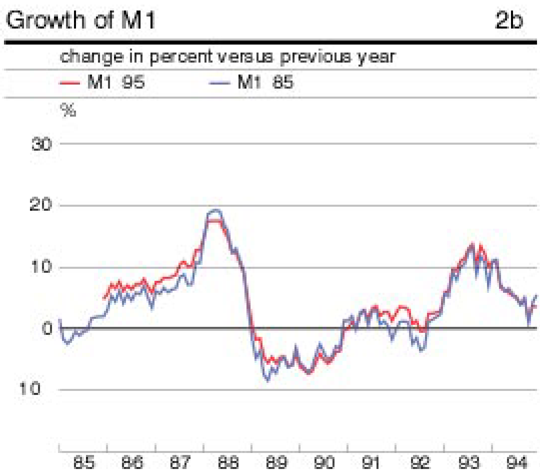
[5] However, there are also time deposits whose maturities are shorter than the withdrawal notice for savings accounts.

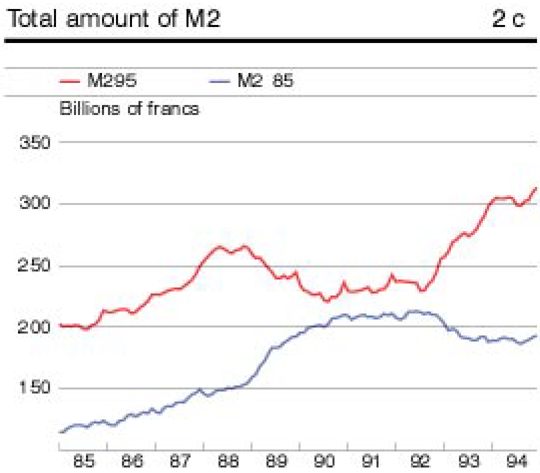
The course of the old and the new aggregate M1 is depicted in graphs 2a and 2b. Graph 2a shows that the transaction accounts which correspond to the differential between the two curves include a considerable share of the new aggregate M1. This share grew from 28.6% at the end of 1984 to 35.6% at the end of 1994. As a result, the yearly rates of change of the new M1 shown in graph 2b are generally slightly above the ones of the old aggregate.

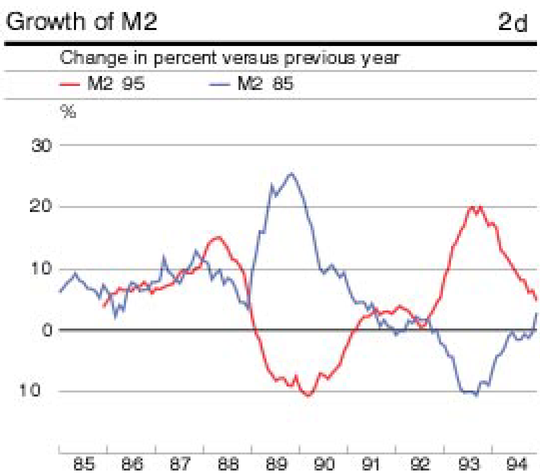
Graphs 2c and 2d show the course of the money stock M2. The differences between the two definitions are more apparent than with M1. Since savings deposits outstrip the time deposits the aggregate M2 is significantly higher than the old one. Furthermore, the rates of change develop in the opposite direction: a rise in the growth according to the old definition generally coincided with a decline according to the new one. This is due to the fact that increasing short-term interest rates trigger shifts from savings into time deposits. The restrictive monetary policy introduced at the end of the eighties, which led to a massive increase in short-term interest rates, was therefore also reflected in a strong growth of the old aggregate M2. The new aggregate M2, however, grew at a slower pace and even declined temporarily.

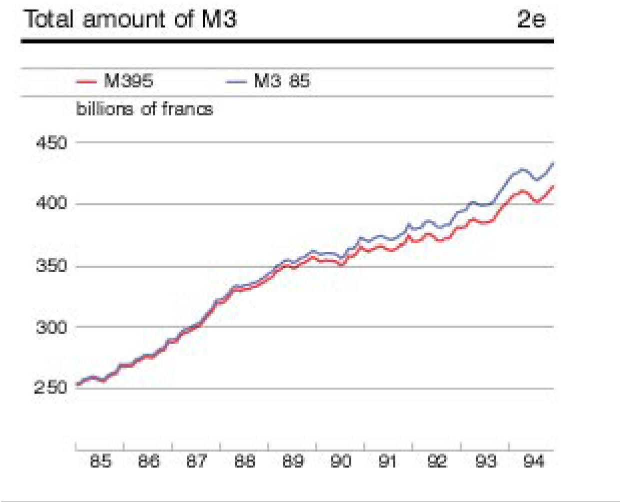
Graphs 2e and 2f show the course of the old and the new aggregate M3. Since the two definitions only differ by the funds invested in insurance schemes with restrictive terms and tax benefits, which amounted to 4.5% of the old aggregate at the end of 1994, the shape of the two curves is practically identical.

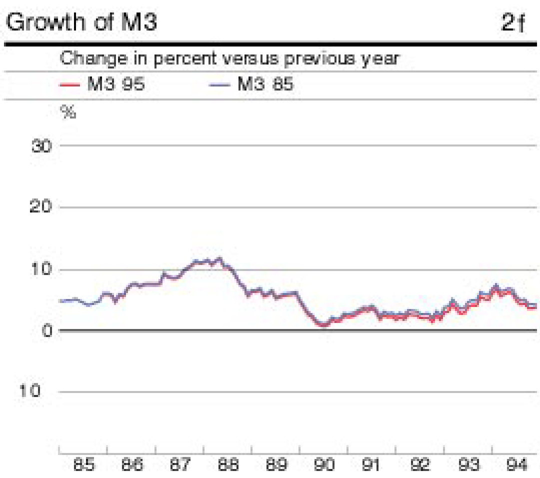












Aside from the current statistics of monetary aggregates, the National Bank publishes additional data in connection with the money stocks in its Monthly Statistical Bulletin. The articles of Fluri [6] and Peytrignet [7] contain further investigations in connection with the construction of the money stocks in line with the new definition.

[6] Robert Fluri, in: Quarterly Bulletin of the Swiss National Bank no. 1/1995, pages 76ff
[7] Michel Peytrignet, in: Quarterly Bulletin of the Swiss National Bank no. 1/1995, pages 89ff, and no. 3/1996, pages 251ff