CASH FLOWS IN THE MONEY MARKET

by

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I would like to look at the basic commodity that we use in the money market — MONEY. Obviously, it is changes in the amount of money available to the market which changes the rates for money and interest rates in general.

Why Look At Money?

Economists have, for a long time, recognised the importance of the money supply, although the precise way in which it affects other economic variables is not fully known and is still the subject of vigorous debate. However, it is generally agreed that the money supply has a direct impact on interest rates and on the level of spending. Of less general agreement is the part which money plays in inflation — whether it is by itself sufficient to produce changes in the general level of prices or whether it plays a part alongside other factors such as wage increases and excess demand.

However, money market people incline towards the monetarist approach and take a keen interest in the money supply as an indicator of inflation, interest rates and the volume of investible funds.

What Figures Do We Use?

Statistics on the volume of money (that is the stock of money at any one time rather than the supply over a period of time) are published monthly by the Reserve Bank. Three totals or aggregates are produced — M_1, M_2, M_3. Emphasis by commentators is usually on M_3 which covers cash and all deposits at trading and savings banks. These figures are examined with a view to foreseeing the direction one can expect the monetary authorities to take, and in the likely direction of prices.

How Do We Interpret Them?

Observers have an opinion on the appropriate increase in the volume of money over the year. In recent times this has tended to coincide with the Government's 'target' range presented in the Budget. A rough rule of thumb is — take the expected real rate of growth in G.D.P., add the current rate of inflation, subtract one or two per cent to allow for an increase in the velocity of circulation, and, one derives a volume of money growth rate which is 'neutral'. Anything above this will be regarded as likely to lead to an increase in the rate of inflation, while anything below it will be contractionary or deflationary.

For instance, suppose a 'neutral' rate of growth is thought to be 8%. Financial observers will be alarmed if indications are that the volume of money is increasing by 12% in analysed terms. There are two possible consequences from this excessive rate of growth — either inflation will rise to an extent greater than expected, and/or Government will move to bring the money supply back to its appropriate rate of growth. This will involve contractionary monetary moves such as the sale of Government securities to the non-bank public or an increase in the banks' SRD ratio. If there is excessive capital inflow there may also be changes to the exchange rate or restrictions on the import of capital.

The monthly change in the volume of money is therefore one of the key leading indicators monitored by the financial market professionals. Despite the warning from the Reserve Bank that too much emphasis should not be placed on one month's figures, we are forced to follow the monthly figures in the absence of other clues to the likely direction of economic policy. The market obviously has more faith in statistics, for all their shortcomings, than in the assurances of politicians. For events can dictate rapid changes in economic policy and statistics are one of the more reliable reflections of changing events. It is interesting to note that in the U.S.A. money supply figures are released weekly and awaited eagerly by the money market. Recently, they were a little late in appearing and panic broke out in the markets since it was assumed that they contained bad news. And it is said that Milton Friedman did rather well on the Stock Exchange by buying or selling according to the money supply figures before other operators caught on to the same idea.

Are Figures on M_3 Sufficient?

As well as the raw monthly change in the volume of money we are interested in the changes in the components of M_3 and how these come about and how we can predict future growth. For an insight into these factors we turn to what is known as the 'formation table' — a document which is closely followed in financial circles but little understood outside these circles.

Formation tables are published in two official sources — the Treasury produces a quarterly table in selected issues of its Round-Up of Economic Statistics, while the Reserve Bank publishes a monthly table in its Statistical Bulletin. These two tables differ somewhat in format, and their titles indicate the different emphasis. The Treasury Table is called 'Formation of Movements in the Volume of Money' and tends to show the forces behind the change in the volume of money. The Reserve Bank Table is entitled 'Bank Liquidity and Money' and shows how changes in the money supply are reflected in the balance sheets of the banking system including the Reserve Bank. Each format has its followers, but the Treasury style tends to be favoured by financial commentators since it is perhaps easier to understand, showing as it does, the sources of liquidity rather than their net effects.

Before proceeding it might be useful to define what I call 'primary liquidity' or 'high-powered money'. This is money created by the Reserve Bank and it takes the format of an increase in the assets and liabilities of the Reserve Bank. Secondary liquidity is money created by the commercial banking system and, not surprisingly, it takes the form of an increase in the assets and liabilities of the commercial banks. The importance of the distinction is that it is an increase in primary liquidity or high-powered money which enables the commercial banks to expand secondary liquidity through the well-known process of credit creation based on fractional reserve banking.

The largest factor affecting changes in money supply and the first item in the formation table is the Federal Government Budget deficit or surplus. This represents the excess of domestic Federal Government expenditure over receipts or vice versa. For the moment, we shall assume that a deficit is financed by the printing of new bank notes. These are used to pay for the excess of expenditure over receipts and represent an increase in the liabilities of the Reserve Bank. Treasury Bills are issued by the Government to the Reserve Bank in return for the notes as the corresponding asset. There has therefore been an increase in high-powered money. Similarly, a government surplus brings a decrease of high-powered money.

The next item is 'Private Sector Foreign Exchange Transactions'. This represents the difference between exports plus capital inflow and imports plus capital outflow.

Let us assume that the private sector has a foreign exchange surplus in a particular month. It then has foreign currency which it wishes to exchange — this is taken to the Reserve Bank (in practice via the trading banks) and the holders of the exchange receive bank notes — again high-powered money has increased.

The third factor in drawing up a formation table is the S.R.D. Accounts of the trading banks. If these are increased there has to be a transfer of cash from the commercial banks to the Reserve Bank. This has the effect of counter-acting the increase in high-powered money caused by government deficit spending or foreign exchange surpluses — indeed, this was the purpose of introducing the system of S.R.D. Accounts. If the S.R.D. ratio is reduced, cash is pumped into the system. In the absence of changes to the S.R.D. ratio, there is usually a small monthly change to the level of S.R.D. accounts based on the change in bank deposits, but the absolute amount is usually fairly small. On the other hand, a 1% increase in the S.R.D. ratio takes about $200 million in cash out of the commercial banking system.

We come next to Rural Credits Advances. When the Rural Credits Department of the Reserve Bank lends to, for instance, wheat growers via the Wheat Board there is an increase in the Reserve Bank's assets and liabilities. We shall assume that the money is advanced in cash so that there is an increase in primary liquidity.

The next item is 'Other Factors' which includes Reserve Bank transactions in commercial bills, other loans (the largest being loans to Authorised Money Market Dealers).

The sum of these items gives the change in the private sector's liquid and government securities assets, which, for the moment, we are assuming takes the form of changes in cash only. It now becomes important as to what the public does with the increased cash. If the total amount is put into bank accounts (either by the recipients or after they have spent it) the commercial banks have increased cash reserves and can expand credit through the credit creation multiplier. In the Australian context, each extra dollar in high-powered money will lead to an increase in bank deposits of three to four dollars. Such a process can obviously frustrate the Government's monetary policy if it is attempting to restrain monetary growth.

The Government may therefore attempt to get some of the high-powered money back into the coffers of the Reserve Bank. It can do this by selling Government securities to the non-bank public. It is here that you can see the use for formation tables in interest rate predictions.

This look at the formation tables shows how liquidity in the economy as a whole is affected by the major factors — which, to recapitulate, are:—

(i) the domestic budget deficit or surplus;
(ii) the net effect of private sector transactions with the rest of the world;
(iii) the net effect of Reserve Bank transactions with the public through its lending activities, primarily via rural credits advances;
(iv) changes in the S.R.D. ratio; and
(v) the creation of bank deposits by the commercial banks via the credit creation multiplier.

The formation table is not only of historic interest. Money Market participants and observers prepare their own forecasts of the table, usually after the Federal Budget has been brought down in August. Then as the year progresses these estimates can be updated in the light of actual events. It is interesting to compare one's own estimated formation tables with those of other observers. Naturally there can be significant differences in individual items — for instance, who can accurately predict the next year's balance of payments surplus or deficit? — but there is usually a large measure of agreement on the total increase in the volume of money. This has particularly been the case since the Government has been giving a target range for M_3 growth in the budget.

Seasonal Patterns:

The preparation of an estimated formation table is the first step in producing detailed liquidity estimates for the coming financial year. To use formation tables for the money market it is necessary to go further than the Treasury Table and to split the quarters into individual months. One then has an option on the relative liquidity of each month and can use this to determine strategies.

Months in which large tax payments are made are usually tight — these months being August, November, February and the April-May-June period. However, refunds paid mainly in July, August and September give a boost to liquidity. Calendar months which contain three social securities fortnightly payments are slightly more liquid than they would otherwise be, although this becomes irrelevant when looking at weekly liquidity. Interest payments on Government debt add to liquidity particularly in February, May, August and November. There is therefore a mixed effect from the Government deficit, but generally it is a picture of an addition to liquidity in the first nine months of the financial year, this effect being less strong in August, November and February, followed by a large drain on liquidity in the tax rundown period of April-May and to a lesser extent, June.

Government cash loans take money out of the system. This used to be a major factor in August, November, February and May when the loans were announced, but recently there has been a tendency away from cash loans in favour of a continuous sale of bonds by the Reserve Bank. This process will continue under the new system of tap marketing Government securities and will lead to a more even pattern of liquidity.
Private sector foreign exchange transactions have a fairly even effect, barring exceptional capital inflows or outflows due to expectations of a revaluation or devaluation of the Australian dollar. There are, however, small peaks or troughs — interest and dividend payments tend to be paid in January and April-May, while capital inflows which can

just be an offsetting figure representing retained earnings has recently been greatest in the tax period of April-May.

Calls to, or releases from, S.R.D. Accounts are usually made in response to liquidity conditions. Calls are therefore made when liquidity is thought to be too high — invariably in the first nine months of the financial year, while releases are made when liquidity is tight or expected to become so. This would usually be at the tax rundown period of April-May-June, but they are sometimes made at other times of the year if liquidity is tight. The S.R.D. movements therefore tend to counteract the other factors that we have been discussing with the result that the liquidity pattern is more even — this, after all, is one of the jobs of the Reserve Bank, and the reason they use the S.R.D. mechanism.

Rural credits advances are highly seasonal — they give a boost to liquidity in January and February when advance wheat payments are made, and there is then a gradual repayment of these loans over the rest of the year. This year they gave too big a boost to liquidity and in order to reduce their effect the Government made the Wheat Board borrow from the banks by way of bills rather than from the Reserve Bank.

The contribution of banks to liquidity tends to follow movements in primary liquidity since this is the major constraint on their ability to create credit. However, bank lending can even out peaks and troughs in primary liquidity — bank lending tends to go up more than would otherwise be expected at tax payment times as companies and individuals go into, or increase, their overdrafts to make tax payments.

Despite the difficulty of prediction, however, the preparation of a formation table is the first step towards a detailed examination of cash flows in the market.

The formation table when split down to a month-by-month analysis shows us the cyclical movements in liquidity but within these months there are often dramatic money flows which significantly affect the money market and interest rates payable on money. I think of the expectations of monthly changes in liquidity as causes for change in such things as term intercompany rates and 3 and 6-month bill rates and the "within the month" money supply changes as affecting call and short-term security rates. There are, of course, refinements to this.

Let us now look at some of the major money movements within a month which affect the money market.

As part of its spending programme the Federal Government hands over money to the States. On the 1st and the 15th of the month (or the next available business day) significant payments are made to the State Treasurers. On the 1st of the month, approximately $150 million is paid over by the Federal Government to the States and these funds are used for State payments for public works and housing. Then on the 15th of the month some $300-$350 million is paid over representing reimbursement to the State of tax collected by the Federal Government. Both these payments represent the injection of new money into the system as the Government issues Treasury Bills to the Reserve Bank in exchange for the money. The various State Treasuries bank with the Australian banks and they either leave this new money with the banks, place it on deposit with the market or spend it, but whatever they do it has the effect of lowering deposit rates as the two payments are initially absorbed by the money market.

As a counter to these inflows on the 7th of each month "pay as you earn tax" is payable by companies and as this figure is currently around $900 million per month, it does reflect a significant outflow of money to the Federal Government and, therefore, has an effect on the money market. This outflow is concentrated around the 7-10th of the month, roughly half going in the period. As a plus against the outflow there is normal Government spending which in total is over $2,000 million per month.

As I previously mentioned some months have significant bond interest payments and as these are made on the 15th of the month they also add to the money inflow.

Other regular money movements are:—

- Petrol Excise payable each week — $25 m. and on 21st of month — $60-$70 m.
- Sales Tax most of which is payable towards the end of the month.
- S.R.D. adjustments which are made on the second Wednesday of each month and

can have a positive or negative affect depending whether bank deposits rose or fell in the previous month.

As well as these regular monthly movements there is within this structure a regular weekly cycle revolving around the payment of wages by cash. In order to make up wage packets, companies withdraw cash from their banks. The banks get this cash by buying it from the Reserve Bank with money called from the money market or maturing Government securities. This usually takes place each Wednesday and Thursday. Then as wages are spent and/or banked, the notes and coins flow back to the banks who sell them to the Reserve Bank and have funds to lend the market and this usually occurs Mondays and Tuesdays. Federal Government employees are paid fortnightly and when they are involved the banks need more than $100 m. in notes and coin. At Easter, Mother's Day and Christmas, in particular, the banks purchase extra notes and coin. For instance at Christmas it is over $600 m. extra and Easter $200 m. extra.

This has been a superficial look at the factors affecting money movements and their flow on to the money markets, but in dealing in the market it is essential to understand these movements and to attempt to predict them to help in determining likely interest rate movements.

For those of you wishing to pursue the matter further, the Federal Government publishes its Accounts monthly and this document is the most important in compiling formation tables. The document is often called the Neimeyer Statement after the gentleman who first developed it, but goes under the official title of "Statement of Financial Transactions".

It shows the budget estimates of income and expenditure broken down into various items. It also shows income and expenditure monthly — cumulative for the year, and gives a comparison with the previous year.

Calculation of weekly and monthly movements in "high-powered money" will become more and more important as we are now about to move to a system of tendering for Treasury Notes. Presumably the Reserve Bank will be able to estimate the expected growth in money over the week and will put up for tender enough Treasury Notes to see that too much of these moneys don't end up in bank accounts. Similarly, money market dealers tendering to buy these notes will have their own estimates of money growth and demand for these notes; and will base their bids primarily on these estimates. Dealers will also be looking at their forward projections of the formation table to pitch the rates to cover likely future movements in money supply and interest rates.

In normal times (if there are such) the amount of Treasury Notes being offered for each tender would be slightly less than the amount of expected net government expenditure and therefore there would be large tenders at the beginning and middle of each month to coincide with the Federal Government disbursements. In this situation, rates should hold fairly steady. If the authorities thought the level of rates should be increased, an increase above the available money supply in the amount of the tender will have the effect of increasing rates; similarly a smaller amount than the supply of money will tend to reduce rates. But in looking to bid on tenders for Treasury Notes, predictions of the formation of liquidity, both weekly and monthly, will play a vital role in the way dealers frame their bids.