UPDATE FOR ACTUARIES ON U.S. FEDERAL STATISTICS

Moderator: ROBERT J. JOHANSEN. Panelists: ALLAN H. YOUNG*, MICHAEL GRUPE**, KATHERINE K. WALLMAN***. Recorder: JOHN T. JORDANO

This session is sponsored by the American Statistical Association.

1. The nuts and bolts and structural parts of the GNP index, what it
    means, its strengths and weaknesses will be explained in plain
    English by Mr. Allan H. Young. He will also discuss the three
    important measures of inflation: the CPI, the GNP price deflator
    and the GNP fixed weighted price index and will explain how to
    pick the most appropriate measure for your particular problem.

2. With a growing emphasis on and the importance of the financial
    aspects of present day and probable future protection plans, an
    explanation of monetary aggregates, what they mean and how to
    understand their import as well as the inner workings of the Federal
    Reserve System will be presented by Dr. Michael Grupe.

3. The outlook for improvement, expansion, or curtailment of Federal
    statistics in general and especially those important to actuaries
    will be discussed by Ms. Katherine K. Wallman. She will comment on
    COPAFS' involvement in the Washington scene, its serving as a re-
    source for Congressional committees and statistical agencies and
    how it can serve you.

* Mr. Young, not a member of the Society, is Deputy Director of the
Bureau of Economic Analysis in the Department of Commerce.

** Dr. Grupe, not a member of the Society, is Senior Corporate Planning
Analyst at Fannie Mae (FNMA).

*** Ms. Wallman, not a member of the Society, is the Executive Director
of the Council of Professional Associations on Federal Statistics.

MR. ROBERT J. JOHANSEN: This panel discussion on United States Federal sta
tistics is sponsored by the American Statistical Association with an
assist from Jim Hickman of the Society's Committee on Relations with
Statistical Organizations. I am Chairperson of the Committee. This
session continues the interchanges between ASA and the Society which I
have promoted for several years

Allan H. Young, Deputy Director of the Bureau of Economic Analysis in the
Department of Commerce will be our first speaker. His Bureau is
responsible for the Gross National Product, or GNP, accounts which
provide quarterly readings of the United States economy. BEA is also
responsible for related measures including the balance of payments,
measures of regional income and for various forecasting tools such as the
index of leading indicators.

Allan Young has worked at BEA since 1966 and was in charge of GNP
estimates prior to becoming Deputy Director. He is a graduate of Case
Western Reserve and has a Master's degree from American University.

Our second speaker, Dr. Michael Grupe, now Senior Corporate Planning
Analyst at Fannie Mae (FNMA) has, until recently, been at the Federal
Reserve in the Division of Research and Statistics. Prior to that he was
at the University of Wisconsin and has a Ph.D. from that school.

I am sure that all actuaries remember the details of Federal Reserve
operations from their actuarial examination days. Dr. Grupe will review
the important aspects for you with insight and a behind the scenes
viewpoint of the Fed.

Our third speaker will provide us with an overview of the present
condition of the United States Federal statistical system, the damaging
effects of sharp budget cuts on the system and how the various agencies
are coping.

She will also describe the origins of the Council of Professional
Associations on Federal Statistics, COPAFS, of which the Society is a
founding member and she will outline its successes in preserving
essential statistical series. I am sure you will be interested in
learning why Congressional Committees and staff people started coming to
COPAFS to ask for help and direction.

Just recently elected a Fellow of the American Statistical Association,
Katherine Wallman is the Executive Director of the Council of
Professional Associations on Federal Statistics. Previously she had
served as Deputy Director in the Office of Statistical Policy and
Standards and in a number of other positions in the Federal statistical
system. Her priorities include the improvement of Federal statistics for
policy and program implementation and the strengthening of Federal, state
and local cooperation in the collection and use of government statistics.

John Jordano, from Metropolitan Life and a new Fellow, is our Recorder.

MR. ALLAN H. YOUNG: I plan to discuss several aspects of the GNP accounts that are probably not familiar to most of you. I will begin with their conceptual basis, and in order to underline two important concepts, I will refer to the GNP accounts by their proper title, the National Income and Product Accounts.

Conceptual Basis of the Accounts

The National Income and Product Accounts Display the value and composition of national output -- the GNP -- and the initial and final distributions of incomes generated in its production.   With minor exceptions, GNP is defined to be the economic production that is reflected in the sales and purchase transactions of the market economy.

The GNP can be measured either as the total value of the goods and services produced in the economy, or by the equivalent total of payments of factor incomes and other costs arising from its production.   In either case, purchases by business on current account are subtracted so that the GNP total is an unduplicated total that includes only the value of the goods and services sold to final users.   In other words, we count only the value of the car purchased by the consumer; we do not also count the value of the steel used in producing the car, because it is already counted in the value of the car.

The National Income and Product Accounts can be viewed as aggregations of the economic accounts of the individual transactors in the economy, whether or not formal accounting statements exist explicitly for all of them.   In presenting national income and product accounting from this perspective, one can start with the economic accounts of a business -- since business produces most of the GNP -- and add together such accounts to obtain similar accounts for the business sector as a whole.   Similar accounts can then be established for the other sectors -- the household, government and foreign sectors.

The first panel of Exhibit 1 shows, in T-account form, the production account of the firm. A close study of this account would reveal that it is obtained by rearranging the entries from the firm's income statement. On the right side, revenue is converted into production by adding the change in work in process and finished goods inventories and deducting the outputs of other firms - the purchases on current account - that are consumed in the course of operations.   On the left side, the various charges against production are entered and net income before tax is adjusted to yield an entry termed "profits", which is defined to be earnings arising from current production.

For most purposes, it is useful to simplify the presentation of the production account by rearranging terms and dropping some detail, as is shown in the second panel of Exhibit 1.   On the right side, the term "consumption" has been dropped, leaving purchases and the change in raw materials inventories which has been combined with the change in work in process and finished goods inventories.   On the left side, the detail under profits has been dropped, and depreciation has been renamed

"capital consumption allowances" to introduce the standard terminology of the National Income and Product Accounts.

Exhibit 2 shows the national income and product accounts in full detail. This five-account system is, in effect, an aggregation of a production account, an appropriation account, and a savings and investment account for each producing or consuming unit in the economy. The first of the five accounts, the national income and product account, shows the derivation of the gross national product, the GNP. On the right side, we can discern a close similarity to the production account of the firm in Exhibit 1. The only basic difference is that the sales of materials and services by each business firm to other firms have been cancelled by the negative entries for the corresponding current account purchases of these materials and services by the other firms. Thus we are left with sales to final users. The terminology used for these transactions in the national income and product account are personal consumption expenditures, fixed investment, government purchases of goods and services, and exports. Imports remain as a negative item because there are not corresponding sales against which they cancel as is the case with other purchases on current account. The national income and product account shows GNP, the unduplicated output of the economy, consisting of the sales to final users plus the change in inventory less imports. The account follows the convention of showing imports deducted from exports with the difference termed net exports.

On the left side, the various charges against production are aggregated and conceptually provide the same GNP total. However, note the entry for the statistical discrepancy on Line 26. It is the difference between the totals of the statistical estimates in the two sides. It arises because various data sources that contain errors are used in estimating the entries in the two sides of the account. The statistical discrepancy is a useful indicator of the total error in the system, and when it is large, we work hard to uncover the problem. In the quarterly estimates in the last three years, after we have done what we can to eliminate it, the statistical discrepancy has ranged from +$5 billion to -$12 billion on a base of about $3 trillion, or in relative terms plus or minus a few tenths of one percent.

The second account is the personal income and outlay account. It records the incomes, outlays, and saving of households. Incomes include government transfer payments such as Social Security and Unemployment Compensation. Saving is obtained as a residual, the difference between income and outlays. One can ascertain the double entry, balancing nature of the 5-account system by noting the entry of wage and salary disbursements and personal consumption expenditures in both the first account and in the second.

The third account is the government receipts and expenditures account. It records receipts, expenditures, and the surplus or deficit of both the Federal and the State and local governments. The fourth account, the foreign transactions account, records the Nation's transactions with the rest of the world. The fifth account, the saving investment account, shows the share of income that is saved balanced against the share of output that is invested.

Customarily the data are not presented in this accounting framework, but as quarterly and annual time series, and much additional detail and many supplementary measures are also published, including monthly estimates of the personal income and outlay account. One should note that while some persons pay much attention only to the quarterly estimate of total GNP, consideration of the full set of measures that I have described is necessary for an understanding of quarterly developments in the economy. The journal of record for the data is the monthly Survey of Current Business published by the Bureau of Economic Analysis.

I have skipped over many details that make things rather complex. For the details, I refer you to the article by Carson and Jaszi.

How The Estimates Are Prepared

BEA conducts very few statistical surveys itself. The source data for the accounts is provided largely by the multi-purpose surveys of statistical agencies such as the Bureau of the Census and the Bureau of Labor Statistics, tabluations of tax returns by IRS, tabluations of administrative records by agencies such as the Social Security Administration, records of government operations from the Office of Management and Budget, Treasury, Defense, and other agencies, and information from private sources such as trade associations. Altogether, there are hundreds of sources.

None of the source data are designed specifically for the purpose of estimating GNP. BEA's job is to fill in the boxes in the accounts by piecing together data designed for other purposes. This requires an estimating methodology for each box that conforms and combines data that do not in themselves meet the desired definitions and that are not synchronized in terms of timing or coverage. Some of the methodologies are quite complex, some are simple, depending on the job to be done. Many of them require frequent attention, because either the characteristics of the data change, or events make the data or estimating methodologies obsolete. Because of the constant change, the estimation process is a mixture of science and art, or if you prefer, standard procedures and judgment.

In general, there is more complete and accurate information available on an annual basis than on a quarterly basis. In some cases, the annual data are based on larger samples. In others, they represent a complete universe count. Also, the annual data often correspond more closely to the desired definitions. The quarterly estimates are obtained from the more accurate annual estimates by interpolating between them and extrapolating from the most recent one. Similarly, the annual estimates in many instances represent extrapolations or interpolations from information available in great detail in the economic and demographic censuses, which are conducted every five and ten years, respectively.

The schedule for preparing the quarterly estimates is as follows: The first estimate is prepared 15 days before the end of the quarter. Until recently, this estimate, referred to as the "flash" or "minus 15-day estimate," was not published but was made available to several government

policy makers. Over the years, it found its way into the newspapers with
increasing frequency. Therefore, the Department recently changed its
status and BEA now officially releases the "flash" to the public. For
most components, the "flash" is based on information for one or two
months of the quarter. The missing months are obtained either on the
basis of a simple projection technique such as repeating the previous
month's change or on the basis of the estimator's judgment.

The "flash" is replaced by the plus 15-day estimate about 15 days after
the end of the quarter. For most components, it is based on information
for two or three months of the quarter. However, in most cases the
source data for the second and third months of the quarter are not final
and are subject to revision by the issuing agencies.

A month later, the 15-day estimate is replaced by the "45-day estimate"
that is based on information for all three months of the quarter.
However, there are instances in which source data, particularly for the
third month, are subject to further revision. Thus, a month later we
have the "75-day estimate."

The 75-day estimate of the quarter stands until the following July. Each
quarterly estimate is subject to three successive annual or July
revisions in which the more detailed and reliable annual data sources are
introduced.

Following the July revisions, each quarterly estimate is subject to one
or more benchmark revisions at 5-year intervals that incorporate the
information obtained in the Nation's economic and demographic censuses.

Constant-Dollar GNP and Measures of Price Change

The measures shown in Exhibit 2 are in prices of the current period. The
change in GNP from one period to another measured in current prices
reflects both the change in output and the change in the price level.
The element of price change can be removed by restating GNP in terms of
the prices of a basis period. In general, this is done by the process of
deflation in which each detailed component of GNP is divided by a price
relative. Most of the price relatives are components of the consumer
price index and producers' price index from BLS. Other sources of price
information include the Census Bureau single family house price index,
and the international trade price indexes from the Bureau of Labor
Statistics. Over 500 detailed components of GNP are separately
deflated. The constant-dollar GNP estimates comprise a Laspeyres or
fixed-weighted quantity index in which the quantities are weighted by the
prices of a base year. Currently, the base year is 1972.

The ratio of GNP in current dollars to GNP in constant dollars is the
implicit GNP price deflator. It is a Paasche or current weight index in
which the price relatives used in the deflation of GNP for a given
quarter are weighted by the quantities for that quarter rather than by
those of a base period. Thus, the change from last quarter to this
quarter in the implicit price deflator reflects not only the price change

but the change in the quantity weights from last quarter to this quarter. In other words, the market basket is not fixed from period to period as it is in a price index such as the consumer price index, which is a "pure" measure of price change.

In spite of this shortcoming, the implicit GNP price deflator was used for many years as a measure of the overall price change in the economy. As long as things were fairly stable, one could perhaps be excused for using it. As inflation became more important, however, it became necessary for BEA to downplay the implicit GNP price deflator and focus attention on what we call the fixed-weighted GNP price index. In this index, the price relatives used in the deflation of GNP are weighted with the quantities of a base year, presently 1972. It is a Laspeyres or fixed-weighted price index, in other words a "pure" price measure like the CPI.

As shown in Exhibit 3, the quarterly percent changes in the fixed weighted GNP price index have sometimes differed markedly from those of the implicit GNP price deflator. For example, note the four quarters of 1979, where the differences range up to 2 percentage points. Interestingly, over a 24 year period from 1959 to early 1983, both indexes increased about the same amount. This is either because the market basket has been fairly stable in the long run or because the effects of shifts in the market basket have worked to offset each other. However, one cannot count on this happening over another long period.

The GNP fixed-weighted price index measures the change in the price of the output produced by the Nation. Often when considering inflation, one is not concerned so much with the change in price of output as with the change in price of the goods and services purchased by residents of the Nation. This related measure is obtained by removing the prices for exports and inventory change, and adding the prices of imports. The Bureau publishes quarterly a fixed-weighted price index for this measure, that is for final sales to domestic purchasers, as well as price indexes for the components of GNP. Taken together, these measures provide much insight into inflation and its effects on the economy.

The announcement of this meeting said that I would tell you how to pick the most appropriate price index for your particular problem. That is too ambitious. I will say that in assessing the overall price situation, one should use the family of GNP related price indexes, both the fixed- and the chain-weighted, which I have not discussed. Also, with respect to prices consumers face, note that now that BLS has revised the treatment of housing in the consumer price index, it more closely resembles the price index for personal consumption expenditures in GNP, and it is available monthly.

If you are concerned with the question of what index should be used for indexing an agreement between two parties or Government benefit payments, I suggest that you might want to read two recent articles by Jack Triplett of the Bureau of Labor Statistics that stress the need to be clear on what one wants to accomplish by indexing. You may find his comments with respect to the past indexing of Social Security benefits interesting.

Reliability

Measures of the total error in GNP and its components are not possible --
basically because nonsampling errors generally cannot be quantified in
the source data. The statistical discrepancy is an indicator of the
total error in GNP, but it is not a complete measure because the data
sources are not entirely independent and to some extent the same errors
enter both sides of the account. Further, it says nothing about the
reliability of the components.

The most useful indicators of error that we have are provided by the
revisions that occur as more complete and accurate source data become
available for estimating the GNP. They also are an incomplete measure of
error, however, because they do not reflect the error that remains in the
final estimates. One result of this is that revisions can be misleading
when considering the accuracy of components. For example, some
relatively unreliable components are revised very little because better
source data are not available later. Small revisions do not mean that
the initial estimates are accurate.

Exhibit 4 provides a perspective on the reliability of GNP in recent
years as measured by revisions. The measure of bias indicates whether
the preliminary estimate of the quarter-to-quarter change was on average
revised up or down. The dispersion measures the size of the revision by
averaging the revisions without regard to sign. The relative bias and
relative dispersion relate the revision measures to the average size of
the quarter-to-quarter change. The revisions on which Exhibit 4 are
based are those between the indicated earlier estimate and the estimate
of quarterly change that is now published for the quarter.

The exhibit shows that there has been a small downward bias in the
preliminary estimates of current-dollar GNP. The average size of the
revision, that is the dispersion, has been between .4 and .5 percentage
points in the first two estimates. When the quarterly changes are stated
at annual rates, the average size of the revision amounts to about 1.6 to
2.0 percentage points.

The relative dispersion in the first two estimates of current-dollar GNP
is 17 to 18 percent. Thus when the flash estimate of current-dollar GNP
is reported as increasing 10 percent at an annual rate, the measure of
relative dispersion indicates that the change of 10 percent would, on
average, be revised as high as 11.8 or as low as 8.2 percent. Keep in
mind there will be some quarters when the revision is larger than
average. A revision of the 10 percent change to 15 to 16 percent in the
final estimate would be a fairly rare event.

For constant-dollar GNP, the relative dispersion of the flash estimate is
40 percent. Thus, a change of 5 percent in constant-dollar GNP would on
average be revised to as low as 3 percent or as high as 7 percent. A
revision of the 5 percent change to 9 percent in the final estimate would
be rare.

The following quotations illustrate two points of view about the accuracy of the estimates. The first is from a letter received by the Secretary of Commerce in the spring of 1981. In the wisdom of the bureaucracy, I was called upon to draft a reply.

The letter said: "If your staff and their methodology can't produce better preliminary GNP figures than they did for the first quarter, you shouldn't bother releasing preliminary figures.

Reported economic data frequently impacts the value of securities by billions of dollars.

The gross incompetence of your staff is irresponsible and reprehensible.

Give us all a break. Don't release incorrect preliminary figures."

The second quotation is from a study I made of revisions in the early 1970's:

"The degree of accuracy is judged to be generally sufficient for the policy decisions for which the NIP estimates are used. The early estimates of a quarter's change in GNP almost always distinguish whether the ultimate estimate will be large or small and will usually distinguish whether the ultimate estimate will be larger or smaller than the preceding quarter."

To the extent that you keep in mind the imprecision of the estimates as indicated in the second quote, the likelihood that I shall find myself drafting a reply to your letter to the Secretary will be much reduced.

DR. MICHAEL GRUPE: What I decided to do is just to expand a little bit on the topic of the monetary aggregates. Because the aggregates themselves (if you just talk about the definitions and the data sources) frankly provide a rather sterile topic and I felt that for your purposes it might be a little more useful to get a broader insight into the framework in which the monetary aggregates serve a purpose and to expand for you the setting in which the monetary aggregates are measured and monitored and provide some additional information, aside from what you read in the newspapers on Saturday morning or Monday morning about the Friday afternoon money release and how the Bond Market reacts and whether the money comes in above target or below target. We watch that on a week-to-week basis and after about 3-4 weeks, the story doesn't change. Money will come in above or below target. The Bond market will react. The equity markets will react on Monday morning and then the market settles down and waits for the following Friday's release. Not a very interesting scenario unless you are a trader on the street.

First I'd like to talk just a little bit about what the Federal Reserve target variables actually are, as opposed to their policy instruments. Then I'd like to give just a

little theoretical background, flesh out the problem to give us a greater
appreciation of what's going on and then move into the definitions of the
aggregates themselves. Next I will spend a few moments discussing recent
monetary policy and give just the quick historical framework in order to
understand why recent policy might be the way it is. Finally, from
whatever time we have left, I will look at some of those statistical or
measurement problems that arise in trying to use the aggregates as a
target or a policy instrument. That's obviously the place that will be
cut a little bit short but there are about ten pages on the end of the
handout that deal basically with three current issues. One having to do
with massive shifts of funds between the aggregates, the second having to
do with the recent decline in the velocity measure, and the third having
to do with seasonal adjustment issues. All of those can be followed
either through the Federal Reserve Bulletin or staff papers, or
something. They are the three sort of "hot" topics in the current period.

First, let's distinguish between what I would label   as primary
targets, intermediate targets, and actual policy instruments. It's a
real nice lead-off after Allan's talk because the primary targets of the
Federal Reserve are the same as the primary targets for the Legislative
Branch and the Executive Branch. Everybody is trying to come up with
useful policy initiatives to promote stable and continuing growth in
nominal GNP in an environment of prices as as stable as possible, to
promote increasing and stable employment in the economy, and also to
address the two external issues of trade balance and foreign exchange.

Unfortunately, neither the Executive Branch, the Congress, or the Federal
Reserve for that matter, has any direct influence over any of these
primary economic targets. So everybody is relying upon their own
authorized intermediate targets or policy instruments through which,
hopefully they can have positive influence on these primary economic or
macro-economic targets.

As far as the Federal Reserve is concerned, the intermediate targets of
special interest would be the general level of interest rates and the
monetary aggregates. Those are clearly the two areas in which the
Federal Reserve has primary domain. However, even those intermediate
targets cannot be directly affected despite publishing its annual targets
for growth in the monetary aggregates. The Federal Reserve cannot just
simply control some levers that see to it that those growth pads are
automatically fulfilled. It has to rely on what are known as its policy
instruments.

The Federal Funds rate is the rate on over-night reserves that large
banks trade amongst themselves. These are very short-term loans, a day
or two at the most. The Federal Funds rate can be influenced by the
Federal Reserve by the position that it takes in affecting the level of
reserves in the banking system. If it pulls back on the level of
reserves there will tend to be upward pressure on the Federal Funds

rate. If it provides added reserves, there will tend to be downward pressure on that rate. The Federal Reserve does have complete discretion when it comes to try and influence the Federal Funds rate and can in fact control it quite closely.

The Federal Reserve also has available requirements which are implemented through what's known as it's Regulation D. Reserve requirements are a broad system of requirements whereby depository institutions, as opposed to what used to be just commercial banks - now   commercial banks, savings and loans, mutual savings banks, credit unions, branches and agencies of foreign banks - are subject in one form or another to reserve requirements. That reserve mechanism sees that the Federal Reserve gets a handle in the overall level of deposits, credit and liquidity in the economy. These reserve requirements basically just say that for certain levels of deposits that you as a depository institution are holding, you are going to have to maintain a basic cash reserve of some small porportion of those deposits in a Federal Reserve account. That is not an active policy instrument, although policy initiatives can be taken by raising or lowering various reserve requirements.

The third   - reserve aggregates - is probably, with the Federal Funds rate, among the more important policy instruments. The reserve aggregates are just like the monetary aggregates. They are various sum totals of all these reserve accounts that commercial banks and other depository institutions are holding with the Federal Reserve. The monetary aggregates are just various sum totals of all the deposits that are outstanding.

The discount rate is not so much a direct policy instrument as it is a related instrument with the Federal Funds rate. In order to achieve and put into practice certain of their policy instruments, the Federal Funds rate and the discount rate have to maintain some reasonably close relationship. The discount rate, for example, is currently held at 8 1/2 percent. The Federal Funds rate on the other hand is currently trading between around 9 and 9 3/8 percent. The Federal Funds rate is controlled to maintain that slight positive relationship to the discount rate. And finally it also has   discretionary variable interest rate ceilings which go into effect through what is known as Regulation Q, however, this is a rapidly evaporating instrument as interest rate ceilings are being eliminated on a wide variety of deposits.

There are three points I would like to be able to draw from this little review. The fact that the available policy instruments offer, at best, what should be considered indirect and very loose control over the national economy. Your best hope is to find some useful relationships between these policy instruments and your ultimate macro-economic targets to try to achieve your objectives. But those economic relationships, like all economic relationships, are transient, variable and unstable and so it's difficult to operate on a day-to-day basis and a long-term basis, depending on those relationships.

Secondly, monetary policy in whatever form it takes must assume a reasonably predictable long-term relationship between money supply growth, interest rates and gross national product.

And the third point is that in going through all those instruments and variables we find that the fiscal side is conspicuously absent. An issue which is frequently discussed. The fact that there appears to be - at most we can look at   appearances - limited coordination between policies of the Executive Branch, the Legislative Branch and the Federal Reserve. Now certainly there's communication. But you do have some problems that creep in when you don't have a fully coordinated policy. This may happen or you might argue is currently happening with the large Federal deficit side of the ledger while the Federal Reserve is trying to maintain steady growth in money supply or whatever its macro-economic targets are. So that just suggests that there's the potential here for some additional problems.

Now let's just step back a bit and look at some very rudimentary theoretical considerations which go behind identifying these relationships between policy instruments, intermediate economic targets, and ultimate primary macro-economic targets. Slide 1 is what I call the classical theory of the demand for money. In its very simplest form, this relationship - the quantity theory of money which is more of an identity here than an equation - just says that there are two ways of looking at the economy as far as measuring is concerned. One is that we can measure the total volume of transactions that are taking place by looking at the quantity of money that's outstanding and multiply that by a velocity constant - that is the number of times that money that's outstanding is used to actually facilitate final transactions.

On the other side, we can look at what is the real income that Allan was talking about - the real income in the economy for that same given period.   Adjust it for a current price index, translate that into nominal terms and you should end up with - you'd have to in this identity - the same number that you get by looking at the money side. In its simplest form, there are several points to notice ¬ The first is what might be referred to as the velocity assumption - the fact that, in its most rudimentary form, velocity is assumed as a constant or at best to be independent of the current level of interest rates. The second is that this whole approach is primarily concerned, in fact exclusively concerned, in this case with transactions balances. The transactions concept - the liquidity concept of money - is sometimes referred to as narrow money or M1. These two last points are actually combined. You will notice that there is no reference to the overall level of interest rates, and because of that the other arguments for holding money are sort of ignored. There's no provision to address the whole area of the inventory management decision of holding your wealth in alternative financial instruments.

Traditional variance of the classical theory (Slide 2) is the first variant. You'll notice all we've done is take out the price index so

that we're just left with real income. Take it over to the other side
and divide nominal money balances and we get real demand for money
proportional to the real level of income where k here is just the inverse
of that velocity constant. Now we'll add in another functional part
which does take into account the level of interest rates. It is
sometimes referred to as speculative demand for money.

You can take that a step further where you say, well I don't really know
that much about these individual demands for money for transactions
purposes, or for precautionary purposes or for speculative purposes. I
just put these altogether and say that the overall level of demand for
real money balances is a function of interest rates and real income." A
subsequent varient was to address the portfolio allocation process, or
inventory management process that I spoke about, by introducing the
capital stock variable, where we're saying that people desirous to hold
money are a function not only of the level of real income economic
activity in the economy and the level of interest rates but of the overall
portfolio financial assets and where they want to employ their financial
assets at different times.

In the last ten – twenty years, the working theory of money demand, what
I call in Slide 3 the contemporary theory, has really shifted gears to a
more empirically based approach to try and estimate these relationships
which the classical theory only looked at in some sort of crude
functional forms. In particular most work has been done in trying to
model narrow money balances as functions of the overall level of
transactions or spending, the opportunity cost of holding those liquid
balances, or some nominal interest rate, the price level and transactions
costs. And I've just illustrated here two of those possible
relationships that have been explored. One would be the quarterly model
at the Federal Reserve, where one aspect of that models the level of
demand deposits as a function of: per-capita real gross national
product, passbook rate, (the ordinary passbook savings account), the
Federal Funds rate and short-term treasury bill rates, the GNP deflator,
and a cash management variable which has been introduced in the last 5–6
years to reflect the fact that as we moved into these periods of
increasingly high interest rates, the opportunity cost of holding liquid
balances became rather large and so corporations began to adapt new cash
management techniques for minimizing the amount of liquidity on a
non-earning basis that they were holding at any given period of time.
The interesting thing about the cash management variable is that it has a
ratchet effect so that as you move to higher costs of holding liquid
balances you'll spend the money that's needed to adapt new cash
management techniques. If interest rates back-off from that level you
are not going to turn around and throw that work out and go back to your
old cash management practices. You'll keep those new techniques and so
the influence of that type of variable tends to have a ratcheting effect
and is introduced in this model in that way.

Another example would be the DRI quarterly model. The DRI model models
demand deposits as a function of: real gross national product, Treasury
Bill rates, a weighted average passbook/small time deposit rate, a

dividend-price ratio to try to capture the opportunity cost of other types of financial assets, the GNP deflator and non-financial holdings of government securities and large time deposits to capture this wealth that we were talking about.

The points we should draw from all this is that basically, the theory of money demand has not changed that much since the classical theories. We still look primarily at the velocity of money, the quantity of money, and the overall level of interest rates. And secondly, that monetary targeting is based on the presumption that structural changes will not be so rapid or so unpredictable as to undermine the usefulness of the aggregates as annual targets, although over time they may need to be modified for behavioral changes. Obviously that's something that's recognized by those who are implementing monetary policy. The problem is that by the time you have enough data to realize and observe that the relationships which you use to operate do need, over time, to be modified for changes, you are already past that policy implementation period. And you can't go back to say well we now know that the relationship changed let's go back and try again maybe we can do better. It just doesn't work that way.

Alright let's quickly review the aggregates (Slide 4). I'm sure you are all familiar with M1, M2 and M3. M1, often referred to as narrow money, or transactions balances, is trying to measure the most liquid type of financial assets that are used to facilitate transactions within the economy. Comprised of a currency component which is all the currency that's outside of the Treasury and outside of Federal Reserve Banks through which it is funneled into the economy – minus that part of the currency which is residing in depository institutions as bulk cash. When you do that netting you end up with the currency that each one of us carries with us. That's the amount of currency that's actually being demanded and used. We add to that regular demand deposits (our old checking accounts), plus a category called other checkable deposits which are Now Accounts, Negotiable Order Withdrawal Accounts, the new Super Now Accounts that went into effect in January, automatic transfer savings accounts, EPS Accounts, and nonbank travelers checks. Now nonbank travelers checks are not a particularly dynamic part of the money supply. They have a very pronounced seasonal pattern which is what makes them important. There's a much greater increase in the demand for travelers checks in the summertime than there is at any other time of the year. And so you want to be prepared to accommodate that demand so that you don't inadvertently put undue restraint on the economy. That's primarily why that's in there. Otherwise from year-to-year it's a relatively stable amount of about $4 1/2-5 billion dollars.

M2 broadens that definition a little bit and M2 adds to M1 savings deposits, small time deposits, Money Market Mutual Funds, Overnight Repurchase Agreements and Overnight Eurodollar Deposits. Savings deposits are your regular passbook savings deposits which despite the fact that they only pay 5 1/4 or 5 1/2 percent, they continue to hold at about $350 billion dollars which I find phenomonal. Small time deposits

are all those deposits of less than $100,000. Money Market Mutual Fund Shares are referred to as General Purpose or Broker/Dealer funds such as Fidelity Cash Reserves and Merrill Lynch Ready Assets. Eurodollar deposits are just dollar-denominated deposits that you or I have deposited in branches of U.S. banks that happen to be what is referred to as off-shore.

M3 just goes for a broader definition. We add to M2 Large Time deposits, Long Term Repurchase Agreements, and Institutional only Money Market Mutual Funds which are funds that are open only to institutional depositors.

Now I will emphasize a point that Allan already made regarding the gross national product with the national income and product account figures. The thing to note is that these aggregate definitions in practice are really quite complicated. A simple little summary of M1, M2 and M3 looks innocent enough but there are literally hundreds of data sources that the Federal Reserve receives from over 20,000 different institutions to assemble all those aggregates. The numbers come in with delays, they come in with errors and they come in with different frequencies.

Some institutions don't even have to report their deposits and so when you are counting up the money supply you have to guess at what they are. You try to make an educated guess but you still have to guess. The definitions are not complete. Some of the data is just not available. You're not authorized by Congress to request the banks to give you the data. Different data sources have different frequencies. Some of the data comes in daily, some of it comes in weekly, some of it comes in quarterly. Some banks don't have to report except once a year. Some of the data is only estimated as I said and of course all the data is subject to errors.

Now I would like to address some of the current continuing problems.

First, you always have definitional problems because the nature and the purpose that these aggregates are serving is constantly changing so you always have to address the issues of what is money and what is liquidity. And can it be measured if you can define what it is?

Second is something that I call legislative problems which probably isn't quite right. It's not that Congress is a problem but through their legislative initiatives, they create situations that need to be addressed. The two most recent are the Monetary Control Act of 1980 and the Gran-St. Germain Act of 1982. The Monetary Control Act brought into focus this entire deregulation of interest rate ceilings. It also changed the entire reserve requirement structure that the Federal Reserve has to operate. And when those things change, even to the extent that they're good ideas, it still means that you have to change all your operating procedures and many of the relationships that you've been

operating with that are based on the historical practice. It puts you
into a very difficult situation because now you don't have any evidence
as to how the new regime is going to behave and you just have to do the
best you can.

The Gran-St. Germain Act was partly in response to the pressure from the
depository institutions to reduce what they perceived as their reporting
burden. They just don't want to report data. They don't want to take
the time to fill out the forms. They don't want to take the time to add
up the numbers and they complained. Just like they complained about
withholding interest rate from time deposits and banking deposits which
was rescinded.

What happened under the Gran-St. Germain Act was that banks or depository
institutions with less than $2 1/2 million in reservable liabilities
don't have to report. Okay so you've got a certain segment out there
that don't have to report. Well you have to address that.

The third problem is this whole issue of financial innovation that we've
been going through for about the last ten - fifteen years.   Cash
Management techniques that I referred to, Ceiling-free interest rates
Money Market Mutual Funds and this whole array of new deposits, Now
Accounts, Super Now Accounts, ATS Accounts, the recently inaugurated
MMDAs of last December (Money Market Demand Accounts, and Money Market
Deposit Accounts), MMCs (Money Market Certificates) that were introduced
in 1977 or 1978 where you had the six-month certificate tied to the
Treasury bill rate.   These types of initiatives bring with them
tremendous deposit shifts among the aggregates and I'll close by just
going over one of the examples (Slide 5).

This would be the shift of deposits into the MMDAs which were authorized to
begin last December]4, I believe. This is the growth in the new account, MM
Deposit Accounts. It currently rides at about $360-370 billion.   It's
the largest shift in deposits from one type of aggregate to another
aggregate since aggregates have been kept. The previous sort of record
was held by the MMCs. Also, shown are some of the other accounts from which
funds were shifted to this new instrument. You can see how savings
deposits fell off somewhat but again rather modestly reflecting the fact
that for those who are shifting deposits for interest rate sensitivity,
they could have shifted from savings deposits to money market funds or
some of these other instruments a long time ago. There is a resiliency
in passbook savings accounts. However, the big shift came in small time
deposits. A shift also came from money market mutual funds which have
been running out since the first of the year and also from large time
deposits.

The other interesting thing to note here is that the savings deposits,
the money market mutual funds, and the large time deposits broke their
pattern of growth with the inception of the new account. They went down
in December for the first time. Unlike these, small time deposits began
to break several months earlier. What's happening there is that people

who are holding these small time deposits (they may have two months to go, three months to go on their deposit), have been reading that this new money market deposit account will be available so instead of rolling over their small time deposit they cash in their small time deposit as it matures and put it into something else, like their money market fund, or their checking account to maintain its liquidity until the money market deposit accounts are authorized and then that money goes in. So it's very interesting to see how these different deposit holders shift these funds.

Slide 6 summarizes all the accounts. You can see here the total in-flows to money market deposit accounts totaling through July about $368 billion . Of those other accounts that we looked at, savings, small time, money market shares and large time deposits they total about $281 billion. So there's a residual of about $80 billion out there that came from other types of securities: Government securities, short-term notes, say the two-year note, or the equity markets.

MS. KATHERINE K. WALLMAN: The previous speakers have described in some detail just a few of the Federal Government's major statistical programs. In a sense, they have set the stage for the kinds of things that I want to talk to you about this morning. My remarks might seem a little bit more like a "sermon", in contrast to the more technical "lectures" you've just heard. (I am delighted to see that the audience this morning is not a group that some of us have referred to as "the converted". With one exception, I do not know any of the individuals in the room; that gives me the opportunity to "spread the Gospel" about what is happening to Federal statistics and how we hope you will be more active in what is going on.)

The fact is that Federal statistics play a major role, although it's sometimes not very obvious, in almost everything that goes on in American life today. At the highest levels of Government, as you've just seen, statistics are used in the determination of monetary and fiscal policy. Across the nation, incomes of retirees and workers are indexed to data produced by Federal statistical programs. Private businesses such as yours rely on statistics for a wide variety of purposes. Billions of dollars in domestic assistance are allocated using formulas that are indexed to Federal statistical resources. Research in many fields, including economics, demography, health and (I'm told) insurance, depends on Federal statistics in order for its accomplishment. As former Secretary of Commerce Juanita Kreps commented, "Statistics do more than tell us what is happening. Statistics also cause things to happen."

In view of the critical importance of Federal statistics, three years ago 12 professional associations, including the Society of Actuaries, joined together to establish the Council of Professional Associations on Federal Statistics, known as COPAFS. By supporting a small jointly funded staff, the founding members of COPAFS hoped to establish a mechanism for providing timely, systematic information on developments in Federal statistics to the professional associations. They hoped also to stimulate discussion and response by the members of those associations to

what was happening; and they hoped to provide a means for bringing the
view of the professions to bear on decisions that would ultimately affect
Federal statistical products.   In general, it was hoped that COPAFS could
foster <u>improvements</u> to the quality and utility of Federal statistical
products.

Towards the end of 1981, the environment for Federal statistics, and thus
for COPAFS, changed rather markedly.   Budgets for Federal statistical
programs, like those for virtually all other areas of domestic spending,
were subjected to substantial cuts.   According to a Library of Congress
study, released in April of 1982, current statistical programs of the
Federal Government experienced a little more than 5 percent reduction
between 1981 and 1983.   That was, however, without any adjustment for
inflation.   A study by the Joint Economic Committee indicated that if you
compare the years 1980 and 1983, about a 20 percent reduction in real
terms occurred in the resources available for Federal statistical
activities.

A September 1982 report by the House Committee on Government Operations
provided 58 examples of Federal statistics programs that had either been
reduced in scope or eliminated as a consequence of budgetary cutbacks.   I
think some of us would argue that a number of those reductions were
timely, or perhaps overdue.   Nevertheless, I think most users and
producers agree that many valuable programs were lost or weakened during
that time.

Let me give you a few examples.   First, we have been experiencing delays
in the processing of available data and reductions in publication and
dissemination services across the board in Federal statistical agencies.
A prime example which may well concern you is the fact that the detailed
1980 Decennial Census results were delayed in publication until the end
of 1983.   A second major effect of reduced resources for Federal
statistical programs is the elimination of some long-standing series and
a loss of geographic detail in others.   For example, many of you may rely
on information in the Current Population Survey, where the sample size
has now been reduced by some 12,000 households.   This will make
statistics for states, Metropolitan Statistical Areas, central cities and
minority propulations less reliable.   A third consequence of current
constraints on Federal statistical programs is a reduction in the
periodicity, or the frequency, of many surveys, leading to further
erosion in the timeliness of Federal statistics.   The counts obtained
from the 1980 census of population show that for some locations,
population estimates made between censuses were seriously in error.   Yet
budget cuts caused the Census Bureau to place its existing population
estimates program on a biennial rather than an annual basis and to
abandon plans to develop improved estimates that were to have served in
lieu of the currently legislated, but not implemented, mid-decade
census.   Seven major surveys at the National Center for Health Statistics
will be conducted less frequently.   Among these are the Health and
Nutrition Examination Survey, the National Ambulatory Medical Care Survey
and the National Nursing Home Survey.

Less obvious, but equally as serious, are threats to the quality and utility of Federal statistics which will occur as a consequence of smaller sample sizes, delays in sample redesign, and reductions in quality control activities, as well as elimination of statistical and survey research, the delay of methodological improvements to on-going programs and in some cases, the loss of highly qualified staff.

For example, the Bureau of Labor Statistics (BLS) has set into place the structure required to produce estimates of the accuracy and precision of the monthly consumer price index. But an additional $1 million is required to produce the numerical values. As a consequence of budget restrictions BLS will not be able to determine the accuracy of these numbers which are critical in the distribution of billions of public and private dollars.

Similarly, since 1981 the Commissioner of Labor Statistics has emphasized the need to make certain fundamental revisions in the Consumer Price Index (CPI). Because the index charts the trend in prices for a fixed market basket of goods, it is necessary to update both the composition of the items in the basket and the weights assigned to major categories to obtain a more current reflection of spending patterns. Yet no funds were made available, either in 1982 or 1983, to undertake the work associated with the scheduled CPI revision. Likewise the budgets of some statistical agencies included resources necessary for redesign of major household surveys but the budgets of other agencies did not. As a consequence, the redesigned samples which would improve the surveys and make them more cost efficient will not be in place before 1985. Until that time sampling frames based on the 1970 Decennial Census will continue to be used.

Developments which have caused deterioration in the quality and utility of the programs of the Government's statistical agencies have been exacerbated further by the gradual weakening and ultimate demise in April 1982 of the office responsible for the Government's statistical policy, planning and coordination. Many of you may know that for almost 50 years, from 1933 until 1982, the Federal Government had a separate unit responsible for the coordination of the decentralized U.S. statistical system. Despite the fact that Federal statistical activities were expanding rapidly during that 50-year period, resources for the statistical policy function reached a peak just after World War II and experienced a gradual decline during the 30 years following. In the Spring of 1982, OMB abolished it's separate statistical policy unit, merging those functions into the newly-formed Office of Information and Regulatory Affairs mandated by the Paperwork Reduction Act of 1980. At the same time, staff resources assigned to statistical policy activities were further reduced, leaving only a handful of professionals to perform the legislated functions.

In a recent report prepared at the request of the House Committee on Government Operations, the Comptroller General of the United States concluded that since the Paperwork Act was passed in 1980, "long-range planning activities for Federal statistical activities have not been

completed, statistical policy directives have not been reissued, evaluations of statistical programs have not been performed, and resources applied to OMB's statistical policy, coordination and oversight responsibilities have diminished sharply."

Fiscal and paperwork burden constraints have made it more necessary than ever to examine the strengths and weaknesses of the Government's statistical activities in order to ensure that programs of low quality and utility are eliminated, that new programs to reflect changes in policies and information needs are initiated, that high priority programs are maintained and improved, and that agency efforts are coordinated carefully to make efficient use of limited resources. (Indeed, you've heard several examples this morning of the multiple data sources required for some of the Federal statistical products.) The staff available for oversight of Government statistical programs is too small to address even those problems facing the major statistical agencies. Issues that arise in the 100 smaller agencies producing Federal statistics are neglected totally.

Is there any good news? The recent reductions in Federal statistical programs and products, and the erosion of the Government's resources for statistical policy, have caused representatives of private business, of the research community, of public interest groups, and of academic institutions to join together in what I must characterize as "unprecedented" fashion. In March 1982 Representative Robert Garcia asked the Council of Professional Associations on Federal Statistics to organize a day-long hearing on the impact of budget reductions on the utility and quality of Federal statistics. In June of that year, the Council assisted Representative Jack Brooks in conducting a hearing to examine the effects of budget cuts and of the dismantling of the Statistical Policy Office. In July of 1982, prodded by users of Federal statistics, Representative Henry Reuss sent a communication to members of the Appropriations Committees in the House and Senate which outlined a number of priority restorations for Federal Statistical Programs in the 1983 budget.

The outcry from users of statistics has in fact brought action by the Administration and the Congress. For example, testimony on the decision to abandon the Survey of Income and Program Participation, which was intended to improve the quality and timeliness of information on income, and testimony on the redesign of household survey samples, convinced the Administration of the need for action. Even David Stockman went on record stating that the Office of Management and Budget supports the Survey of Income and Program Participation, and ordered that funding be redirected from within the Administration budget to make sure that the SIPP program got under way, albeit a year behind schedule.

The concerns of statistics users have been heard as well in the Congress. Using the Joint Economic Committee Report as a basis, Members of Congress restored a number of items in the fiscal 1983 budget and in continuing resolutions which set spending levels for some of the agencies. Among the programs reinstated by the Congress was the Survey

of Income and Program Participation. In addition, there were restorations made for improved measures of state, local and regional population characteristics; for the redesign of the household survey samples; for some limited GNP data quality maintenance activities at the Bureau of Economic Analysis; and in samples for the IRS Statistics of Income program for data critical to the quality of the GNP estimates. Congressional decisions on the 1984 budget are still in process. If proposals which are in the President's budget are approved, the consequences for the statistical agencies will essentially range from level funding to increases as high as 15 percent. The Administration's recommended funding levels in effect would provide for continuation of current collection and dissemination programs, but would not allow for restoration of programs curtailed or eliminated by the cuts in 1982 and 1983. Funding for a limited number of new initiatives is included in the budgets for a few of the statistical agencies. For example, the Administration's budget request for the Bureau of the Census includes the first-year of data collection for the Survey of Income and Program Participation; it includes an umbrella request for funding for the redesign of household survey samples; and it includes first-year funding for the planning for the 1990 Decennial Census. The Bureau of Labor Statistics' 1984 budget request includes an increase to begin the multi-year revision of the Consumer Price Index, which will result in the development of new population samples and weights, adjustments to reflect changes in the market basket of goods purchased, and incorporation of a formal quality control program.

While users' efforts with the Administration and Congress appear to have halted further back-sliding in Federal Statistical Programs and products, initiatives to ensure that needed resources will be available for evaluating current programs, conducting methodological research, and introducing improvements and coordinating the Government's decentralized statistical activities have been less successful. The June 1982 hearing and the September 1982 report of the House Government Operations Committee raised OMB's consciousness about the importance of statistical policy and coordination functions. But the response from OMB's Office of Information and Regulatory Affairs has been what we must characterize as minimal. OMB's failure to reinstate a distinct unit for statistical policy, and to staff that office with an adequate number of qualified individuals to carry out the statistical functions assigned by law, are cause for continuing concern. Despite concerted efforts by users and by our colleagues in the Congress, OMB's attention to matters of statistical policy still languishes.

It has been argued that businesses, research groups, and state and local governments could fill the most important gaps in the Federal Statistical Programs. Few states and localities have the technical capacity to undertake such work. Private businesses, which may have the capacity, frequently are unable to collect needed information either because they lack authority, or because they do not have the confidence of the public, or in some cases, because they do not have the funding available for the kind of collection we're discussing.

Even if the human and financial resources were available in these institutions, and they clearly are not, the resulting products would not be satisfactory. Non-Federal entities I think quite reasonably would tend to collect what they could use for their own limited purposes. In those cases where data could be obtained either by state or local governments or by private organizations, problems of quality standards and of standardization of definitions, concepts and units would become far more difficult than they already are. Comparable data on states, jurisdictions, and sectors would be lost and compilation of national statistics would be virtually impossible.

Over the years, users of statistics have had the opportunity, particularly through professional association activities, to work with officials of the Federal statistical agencies. Through service on advisory committees, for example, they have made known the uses they make of Federal statistics, and have been able to influence in some degree both the content and the form of products which come from the Federal statistical system. The environment in which those recommendations were made was, for the most part, one in which improvement and growth were the order of the day. When the climate is favorable, the results of work by users of Federal statistics should be provided as a resource to those responsible for periodic updating and improvement of statistical sources. When constraints on resources are imposed, the priorities of Federal statistics users can and should serve as a key element in decisions affecting the elimination of programs of low quality and utility or the continuation and improvement of those products which are critical to their professional concerns.

In testimony at January 1983 Congressional Conference on Federal Statistics and National needs, Representative Paul Simon characterized what I believe is a chronic problem when he noted, "statistical systems do not have a broad and well-developed base of support." During the past two years, the effects of the historic lack of a constituency for Federal statistical programs have become increasingly evident. The Council of Professional Associations on Federal Statistics was envisioned by its founders as an organization which would foster improvements in the quality and utility of Federal statistics. In the wake of events of the past two years, the Council, its member associations and cognate organizations have been thrust into a somewhat different role. Our efforts to date have been focused not so much on improvement, but rather on preservation, of Federal statistical resources. The modest success which has been achieved is in large measure a consequence of testimony, of documentation provided by Federal statistics users which has convinced key decision-makers of the importance of Federal statistics in policy formulation, in public and private decision-making, in research, in the distribution of benefits and in the allocation of resources.

For Federal statistics the past really is merely prologue. Among the many activities currently underway, for example, is the planning for the 1990 Decennial Census of Population and Housing. Decisions that would fundamentally alter the type and quantity of statistical information available would affect the information collected, analyzed, and reported

by statisticians, social scientists, medical researchers...virtually everyone. Other opportunities that will allow users of statistics to have some effect on what kinds of information will be collected in the future are already on the agenda. For example, in conjunction with the proposed revision of the Consumer Price Index, we have recently been asked to provide advice on changes in the "market basket." In addition, Manning Feinleib, the Director of the National Center for Health Statistics, wrote last week and asked if some of our member organizations would look at the plans for upcoming supplements to the Health Interview Survey. Indeed, I noticed that one of the planned supplements for 1986 would address the subject of health insurance. But the National Center for Health Statistics, and the rest of the Federal statistical agencies, can only make optimum decisions about what to collect (or what to cease collecting) if they have help from the real users of the data.

As decisions affecting the integrity and quality of Federal statistics are made over the next two years, your documentation of the strenghts and weaknesses of on-going programs, your expressions of priorities, and your recommendations for improvements will become even more important. With the expectation that Federal statistical activities will probably be held level, (we hope not reduced further,) users will be called upon to consider tradeoffs among programs which remain. I hope you will join, through your Society and with the Council, in helping us to address those problems. Thank you.

MR. ROBERT J. MYERS: I am constrained to make some remarks on one aspect of Ms. Wallman's excellent presentation on the development in federal statistical programs. I believe that the Survey of Incomes and Program Participation, which she mentioned as a new statistical program, is a great waste of taxpayer's money, both directly and, likely even far more so, indirectly. Its direct cost will be at least $15 million, and probably several times that before it is completed.

Because SIPP will result in what I believe to be much misleading and erroneous data being developed and disseminated, it may have a huge indirect cost if it results in entitlement programs being greatly liberalized. Surveys of income and assets will always contain a significant amount of under-reporting, either intentionally or unintentionally. People have a strong tendency in this direction because of fear -- either unwarranted or, in some cases, warranted -- that the Federal Government will reduce or cut off some of their entitlement benefits if it knows their true financial status.

When I was Deputy Commissioner of Social Security in 1981, I vigorously opposed SIPP, both for the reasons stated previously and also because of its proposed financing basis at that time, which was to have the Social Security trust funds pay its entire costs. I saw no possible use in the administration and development of the Social Security system in having such data as SIPP will provide. I thought that I had "killed the monster", but apparently it is hydra-headed and, through some means, still lives. In any event, I won part of the battle, because it is not being financed from the trust funds.

One evidence of significant under-reporting of income is shown by a study made by the Social Security Administration, as described in an article in the Social Security Bulletin for January 1983. The income reported by respondents in a survey was checked against their income tax returns and against Social Security records. The latter sources indicated 41 percent higher income on the average than shown in the survey, despite the fact that there undoubtedly was some under-reporting on the income tax returns. Thus survey results as to income and assets will tend to show people as being much poorer than they really are. Nonetheless, social planners will believe that they have "evidence" of the need for expansion of entitlement programs.

MR. JOHANSEN: Dr. Grupe, in the past several years the rates of new and increased policy loans and cash surrenders were extremely high. Were these accounted for in effect on money supply?

DR. GRUPE: My answer is two-fold - first   they would be accounted for in the money supply but the second point is that it depends on where they show up. In other words it depends on what the ultimate uses of these loans would actually be. Now when the subscriber asks for the loan, they'll receive a check, presumably from the Insurance Company, and they'll take it to their bank and they'll deposit it and once the check is cleared they will have a deposit - say they put it in their checking account and that would certainly show up in one. But chances are that's not the reason why they ask for the loan. Chances are they realize that the interest rate that they would have to pay on that loan was a lot less than they could earn in a money market fund or a small time deposit or something. So that money will probably then be shifted to another deposit account. Wherever it ultimately ends up may or may not be within the monetary aggregates. It could end up in equity issues in which case it would be completely outside.

MR. JOHANSEN: My reason for asking the question is that assets of Life Insurance companies are not part of M1, M2, M3 -- so it is a source of funds which is not usually observable.

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Exhibit 1. - Production Account of a Business Firm

Wages and salaries	:	Gross output
Depreciation	:	Sales
Interest paid	:	Change in work-in-process and
Less: Interest received	:	finished goods inventories
Indirect business taxes	:	Less: Consumption
Profits	:	Purchased materials
Net income before tax	:	Purchased business services
Less: Dividends received	:	Less: Change in raw materials
Less: Gains (net of losses) on	:	inventories
sales of fixed assets and	:	
securities	:	
Plus: Depletion	:	
	:	
Charges against output	:	Output

<center>_or_</center>

<center>in a simplified format</center>

Wages and salaries	:	Sales
Capital consumption allowances	:	Change in inventories
Interest paid	:	Less: Purchased materials and
Less: Interest received	:	business services
Indirect taxes	:	
Profits	:	
	:	
Charges against output	:	Output

Exhibit 2. - Summary National Income and Product Accounts, 1982

Account 1.—National Income and Product Account

[Billions of dollars]

Line			Line		
1	Compensation of employees	1,865.7	27	Personal consumption expenditure (2–3)	1,9
2	Wages and salaries	1,568.1	28	Durable goods	7
3	Disbursements (2–7)	1,568.1	29	Nondurable goods	7
4	Wage accruals less disbursements (3–12) and (5–4)	0	30	Services	9
5	Supplements to wages and salaries	297.6			
6	Employer contributions for social insurance (3–20)	140.9	31	Gross private domestic investment (5–1)	4
7	Other labor income (2–8)	156.6	32	Fixed investment	4
			33	Nonresidential	3
8	Proprietors' income with inventory valuation and capital consumption adjustments (2–9).	109.0	34	Structures	1
			35	Producers' durable equipment	2
			36	Residential	
9	Rental income of persons with capital consumption adjustment (2–10)	49.9	37	Change in business inventories	
10	Corporate profits with inventory valuation and capital consumption adjustments	164.8	38	Net exports of goods and services	
11	Profits before tax	174.2	39	Exports (4–1)	3
12	Profits tax liability (3–17)	59.2	40	Imports (4–3)	3
13	Profits after tax	115.1			
14	Dividends (2–12)	68.7	41	Government purchases of goods and services (3–1)	
15	Undistributed profits (5–6)	46.4	42	Federal	2
16	Inventory valuation adjustment (5–7)	−8.4	43	National defense	1
17	Capital consumption adjustment (5–8)	−1.1	44	Nondefense	
			45	State and local	3
18	Net interest (2–15)	261.1			
19	National income	2,450.4			
20	Business transfer payments (2–20)	14.1			
21	Indirect business tax and nontax liability (3–18)	258.3			
22	Less: Subsidies less current surplus of government enterprises (3–11)	9.5			
23	Charges against net national product	2,713.3			
24	Capital consumption allowances with capital consumption adjustment (5–9)	359.2			
25	Charges against gross national product	3,072.5			
26	Statistical discrepancy (5–12)	.5			
	GROSS NATIONAL PRODUCT	3,073.0		GROSS NATIONAL PRODUCT	3,0

Account 2.—Personal Income and Outlay Account

Line			Line		
1	Personal tax and nontax payments (3–16)	402.1	7	Wage and salary disbursements (1–3)	1,5
2	Personal outlays	2,051.1	8	Other labor income (1–7)	
3	Personal consumption expenditures (1–27)	1,991.9			
4	Interest paid by consumers to business (2–18)	58.1	9	Proprietors' income with inventory valuation and capital consumption adjustments (1–8)	
5	Personal transfer payments to foreigners (net) (4–5)	1.1			
6	Personal saving (5–3)	125.4	10	Rental income of persons with capital consumption adjustment (1–9)	
			11	Personal dividend income	
			12	Dividends (1–14)	
			13	Less: Dividends received by government (3–10)	
			14	Personal interest income	
			15	Net interest (1–18)	
			16	Interest paid by government to persons and business (3–7)	
			17	Less: Interest received by government (3–9)	
			18	Interest paid by consumers to business (2–4)	
			19	Transfer payments to persons	
			20	From business (1–20)	
			21	From government (3–3)	
			22	Less: Personal contributions for social insurance (3–21)	
	PERSONAL TAXES, OUTLAYS, AND SAVING	2,578.6		PERSONAL INCOME	2,

Exhibit 2. .- Summary National Income and Product Accounts, 1982 (Continued)

Account 3.—Government Receipts and Expenditures Account

[Billions of dollars]

e			Line		
1	Purchases of goods and services (1–41)	649.2	16	Personal tax and nontax payments (2–1)	402.1
2	Transfer payments	366.7	17	Corporate profits tax liability (1–12)	59.2
3	To persons (2–21)	360.4			
4	To foreigners (net) (4–6)	6.3	18	Indirect business tax and nontax liability (1–21)	258.3
5	Net interest paid	65.2	19	Contributions for social insurance	253.0
6	Interest paid	137.6	20	Employer (1–6)	140.9
7	To persons and business (2–16)	119.4	21	Personal (2–22)	112.0
8	To foreigners (4–7)	18.2			
9	Less: Interest received by government (2–17)	72.5			
0	Less: Dividends received by government (2–13)	2.3			
1	Subsidies less current surplus of government enterprises (1–22)	9.5			
2	Less: Wage accruals less disbursements (1–4)	0			
3	Surplus or deficit (—), national income and product accounts (5–10)	–115.8			
4	Federal	–147.1			
5	State and local	31.3			
	GOVERNMENT EXPENDITURES AND SURPLUS	972.5		GOVERNMENT RECEIPTS	972.5

Account 4.—Foreign Transactions Account

1	Exports of goods and services (1–39)	347.6	3	Imports of goods and services (1–40)	330.2
2	Capital grants received by the United States (net) (5–11)	0	4	Transfer payments to foreigners (net)	7.5
			5	From persons (net) (2–5)	1.1
			6	From government (net) (3–4)	6.3
			7	Interest paid by government to foreigners (3–8)	18.2
			8	Net foreign investment (5–2)	–8.3
	RECEIPTS FROM FOREIGNERS	347.6		PAYMENTS TO FOREIGNERS	347.6

Account 5.—Gross Saving and Investment Account

1	Gross private domestic investment (1–31)	414.5	3	Personal saving (2–6)	125.4
2	Net foreign investment (4–8)	–8.3	4	Wage accruals less disbursements (1–¹)	0
			5	Undistributed corporate profits inventory valuation and capital consumption adjustments	37.0
			6	Undistributed corporate profits (1–15)	46.4
			7	Inventory valuation adjustment (1–16)	–8.4
			8	Capital consumption adjustment (1–17)	–1.1
			9	Capital consumption allowances with capital consumption adjustment (1–24)	359.2
			10	Government surplus or deficit (—), national income and product accounts (3–13)	–115.8
			11	Capital grants received by the United States (net) (4–2)	0
			12	Statistical discrepancy (1–26)	.5
	GROSS INVESTMENT	406.2		GROSS SAVING AND STATISTICAL DISCREPANCY	406.2

Note.—Numbers in parentheses indicate accounts and items of counterentry in the accounts. For example, the counterentry for wage and salary disbursements, (2–7), is in account 2, line 7.

NOTE: This exhibit is reproduced from pp. 18 - 19 of the July 1983 <u>Survey of Current Busines</u>

Bureau of Economic Analysis
October 7, 1983

Exhibit 3

Implicit GNP Price Deflator and Fixed-Weighted GNP Price Index

Index: 1972=100

Ratio
scale

Implicit GNP price deflator
Fixed-weighted GNP price index

Arithmetic
scale

Percent change
at annual rate

Bureau of Economic Analysis
October 7, 1983
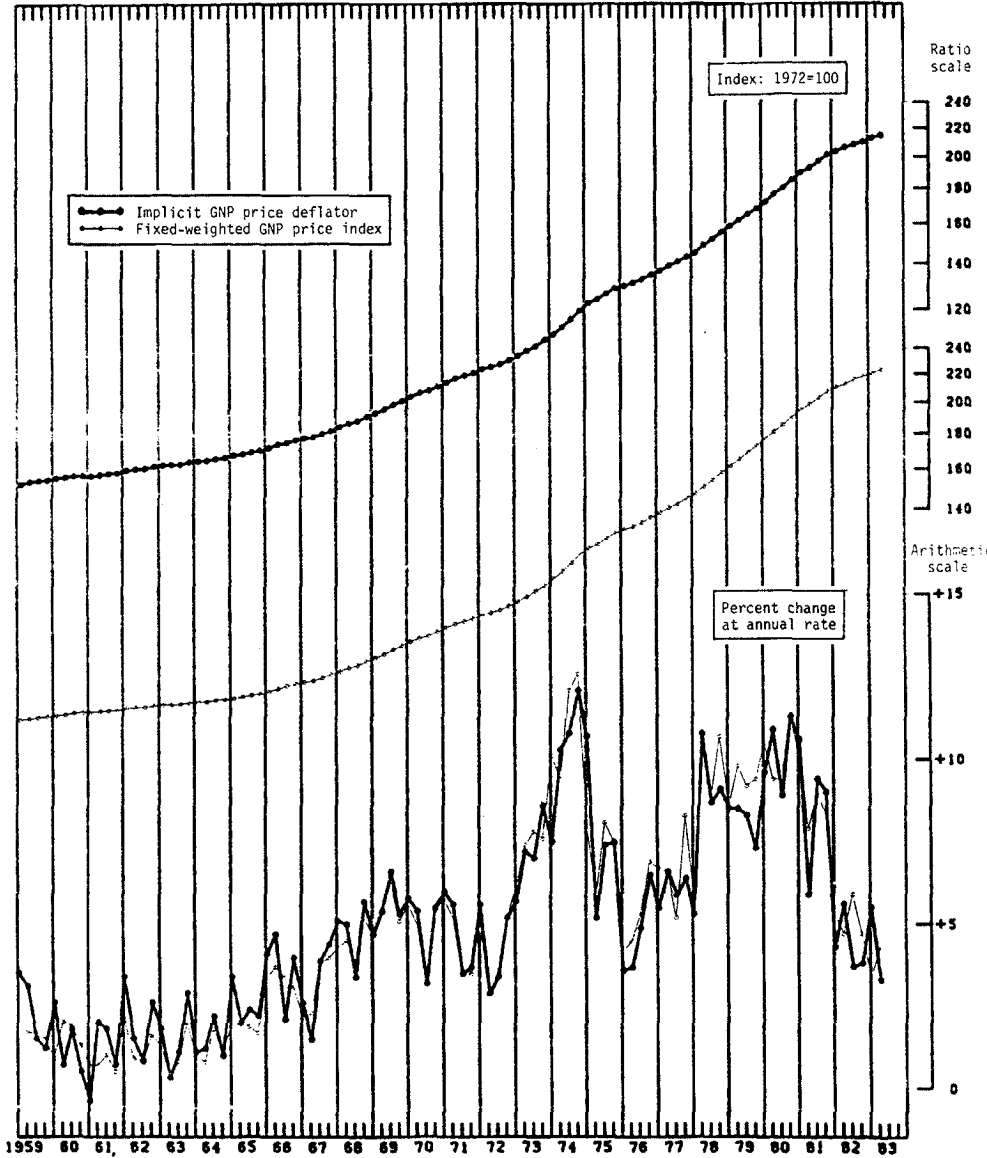
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Exhibit 4. - Measures of Revision in Quarter-to-Quarter Percent Changes in GNP, 1976-I to 1981-IV   PRELIMINARY

	Bias				Dispersion				Relative Bias				Relative Dispersion			
	Minus 15-Day	15-Day	45-Day	75-Day	Minus 15-Day	15-Day	45-Day	75-Day	Minus 15-Day	15-Day	45-Day	75-Day	Minus 15-Day	15-Day	45-Day	75-Day
Current-dollar estimates																
Gross national product...	-.24	-.22	-.12	-.06	.47	.44	.35	.31	-9.2	-8.6	-4.7	-2.5	18.0	17.0	13.4	12.0
Personal consumption expenditures...	-.07	-.05	.00	.04	.36	.29	.27	.31	-2.6	-1.9	0.0	1.6	13.9	11.2	10.3	11.7
Gross private domestic investment...	-1.69	-1.06	-.50	-.15	2.87	1.83	1.68	1.31	-51.8	-32.4	-15.3	-7.3	61.7	39.3	36.2	32.9
Fixed investment...	-1.22	-.89	-.42	-.30	1.39	1.07	.86	.80	-39.9	-28.9	-13.6	-12.6	37.3	28.6	23.0	24.1
Change in business inventories 1/...	-1.5	-.6	-0.4	0.6	8.2	6.1	5.0	4.2	-251.4	-105.0	-67.9	-49.2	84.8	62.5	51.6	41.6
Net exports 1/...	0.7	-1.5	-1.2	-0.6	5.6	4.2	3.5	3.7	-358.7	804.4	610.9	302.2	86.4	64.0	54.2	56.9
Exports...	-.82	-1.10	-.43	-.26	1.23	1.64	1.48	1.46	-23.1	-31.1	-12.2	-7.3	32.2	43.0	38.7	38.3
Imports...	-1.31	-.67	.05	-.03	2.31	1.72	1.35	1.31	-32.0	-16.4	1.3	-0.7	48.3	35.9	28.1	27.4
Government purchases...	.05	.13	.04	-.11	.80	.76	.78	.67	2.0	5.2	1.8	-4.2	33.1	31.6	32.4	24.7
Constant-dollar estimates																
Gross national product...	-.20	-.16	-.09	-.04	.43	.40	.34	.31	-28.0	-22.1	-12.9	-5.0	39.5	36.8	31.2	28.3
Implicit price deflator																
Gross national product...	-.03	-.06	-.03	-.03	.23	.22	.19	.20	-1.8	-3.3	-1.5	-1.5	12.3	11.5	10.4	10.5

1/ Measures of bias and dispersion for change in business inventories and net exports are in billions of dollars at seasonally adjusted annual rates. The quarterly changes in these components cannot be expressed in percentage terms because of negative values.

NOTE: Bias is the average of the differences between the initial measure of percentage change and the final measure. Let P represent the preliminary percentage change, F the final percentage change, and n the number of quarterly changes. Bias $= (P - F)/n$

Relative bias is the ratio of the bias to the average of the final percentage changes. Relative bias $= 100\left(\dfrac{\Sigma(P-F)/n}{\Sigma F/n}\right) = 100\left(\dfrac{\Sigma(P - F)}{\Sigma F}\right)$

Dispersion is the average of the absolute values of the differences between the initial and final percentage changes. Dispersion $= \Sigma|P - F|/n$

Relative dispersion is the ratio of the dispersion to the average of the absolute values of the final percentage changes. Relative dispersion $= 100\left(\dfrac{\Sigma|P-F|/n}{\Sigma|F|/n}\right) = 100\left(\dfrac{\Sigma|P - F|}{\Sigma|F|}\right)$

SLIDE 1

CLASSICAL THEORY OF THE DEMAND FOR MONEY

Quantity Theory of Money

$$M^{\cdot}V = p \cdot Y$$

M   =   Quantity of Money

V   =   Velocity

p   =   Price Index

Y   =   Real Income

o   Velocity Assumption

o   Transactions Balances (Narrow Money)

o   Inventory Management Decision
            (Opportunity Cost)

o   Interest Rate

SLIDE 2

TRADITIONAL VARIANTS OF THE CLASSICAL THEORY

o   m = k ` Y + L(i)

       L(i) = Speculative Demand

o   m = L(i, Y)

o   m = L(i, Y, K)

       K = Capital Stock or Wealth

       Portfolio Allocation Process
       (Broad Money)

SLIDE 3

CONTEMPORARY THEORY OF THE DEMAND FOR MONEY

o   Narrow Money Balances are Function of

  –   Transactions or Spending (GNP)

  –   Opportunity Cost (nominal interest rate)

  –   Price Level

  –   Transactons Costs

o   Federal Reserve Board Quarterly Model

  Demand Deposits depend on

  –   per capita real GNP

  –   passbook, fed funds, T-bill rates

  –   GNP deflator

  –   cash management variable

o   DRI Quarterly Model

  Demand Deposits depend on

  –   real GNP

  –   T-bill rate

  –   weighted average passbook/small time rates

  –   dividend-price ratio

  –   GNP deflator

  –   nonfinancial holdings of government securities and
      large time deposits

SLIDE 4

MONETARY AGGREGATES

M1 =   Currency Component

   +   Demand Deposits

   +   Other Checkable Deposits

   +   Nonbank Travelers Checks

M2 =   M1

   +   Savings Deposits

   +   Small Time Deposits

   +   Money Market Mutual Funds

   +   Overnight Repurchase Agreements

   +   Overnight Eurodollar Deposits

M3 =   M2

   +   Net Large Time Depostis @ CB

   +   Large Time Deposits @ Thrifts

   +   Term RPs @ CB

   +   Term RPs @ S&Ls

   +   Institution - Only MMMFs

   −   Overnight RPs @ I–O MMMFs

SLIDE 5

SHIFT OF DEPOSITS INTO MMDAS

($, Billion)

MONEY MARKET DEPOSIT ACCOUNTS

1982   1983

SAVINGS DEPOSITS

SMALL TIME DEPOSITS

MONEY MARKET MUTUAL FUNDS

LARGE TIME DEPOSITS
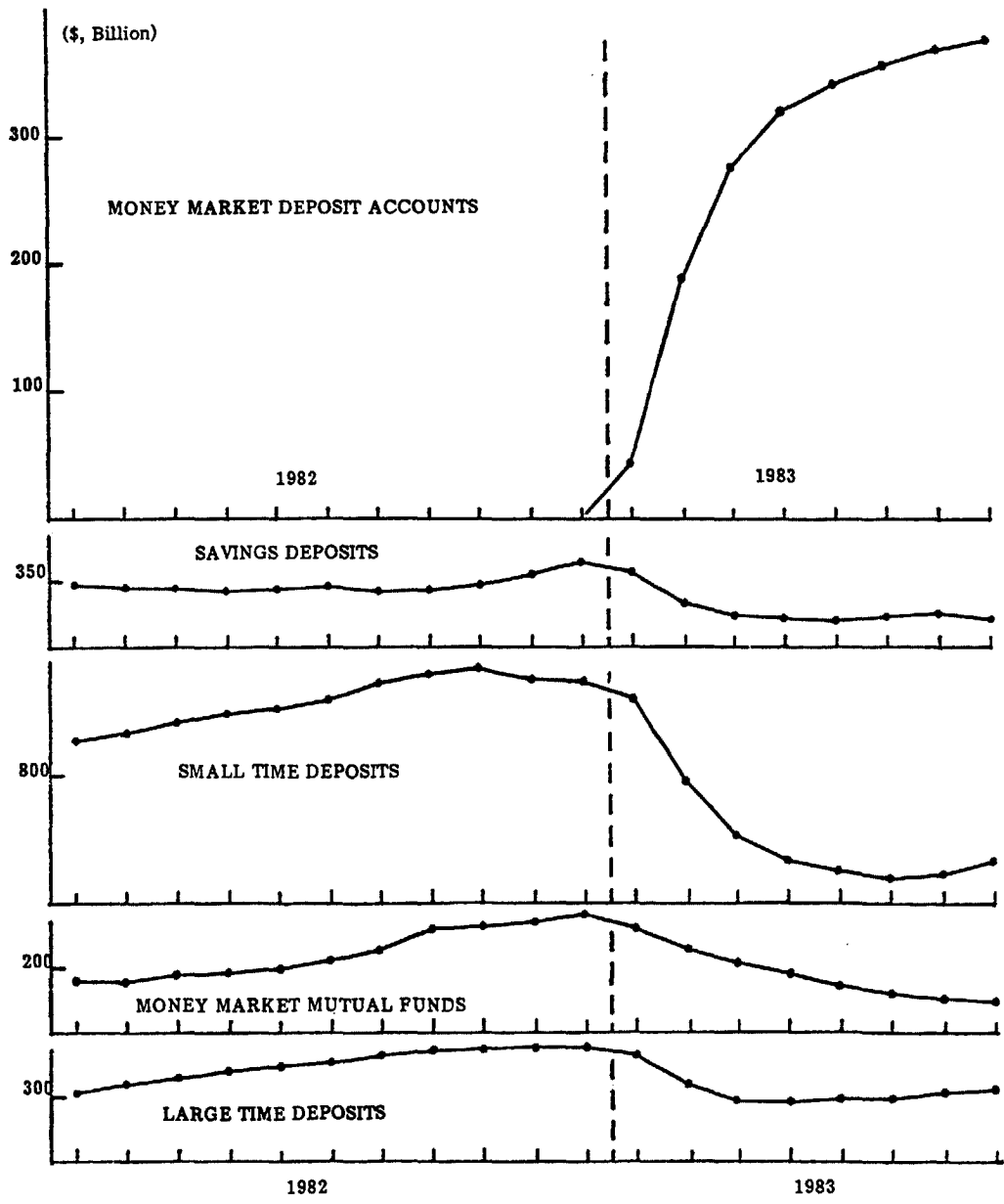
1982   1983

SLIDE 6

SHIFT OF DEPOSITS

INTO MMDAs

	Savings	Small Time	MMMFS	Large Time	Total	MMDAs
1982 - Oct	8.0	-5.2	3.6	3.5	9.9	- -
Nov	8.4	-3.1	4.1	0.8	10.2	- -
Dec	-7.1	-15.8	-11.2	-6.6	-40.7	43.2
1983 - Jan	-24.2	-61.7	-17.0	-23.1	-126.0	145.9
Feb	-9.4	-42.3	-8.0	-12.8	-72.5	88.6
Mar	-3.0	-21.3	-7.3	-1.7	-33.3	42.8
April	1.2	-8.1	-9.8	4.0	-15.1	20.7
May	1.6	-5.6	-6.2	-1.0	-11.2	15.6
June	1.9	2.0	-2.7	4.9	6.1	10.5
Jul	-1.5	13.0	-1.8	1.8	11.5	1.1
Dec - Jul	-42.9	-139.8	-64.0	-34.5	-281.2	368.4
%	11.6	37.9	17.4	9.4	76.3	