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Retail Sweep Accounts

Retail sweep accounts are growing in popularity with banks. The sweep programs take idle reserves from certain checking accounts and put them in higher-interest accounts — typically money market deposit accounts. However, transferring money out of these transaction accounts into what have typically been considered savings accounts distorts M1 money supply and the monetary base. Sweeps also have the potential to weaken the Federal Reserve's ability to conduct monetary policy by reducing the significance of one of its major policy levers.

In early 1995, M1 money supply, the narrowest measure of money, began decreasing and since then has continued to decline into 1997. M1 is the sum of currency in circulation, checking accounts, travelers checks, and other checkable deposits. It purportedly measures the most liquid of assets that can be immediately used in transactions. The chart below shows a breakdown of the components of M1. It is clear from the chart that most of the decline in M1 is attributable to a decrease in Other Checkable Deposits (OCDs) — the sum of deposits in Negotiable Orders of Withdrawals (NOW) accounts and Automatic Transfer Savings (ATS) accounts. In effect, these two types of deposit accounts are savings accounts upon which checks can be written. Developed in the 1970s, these types of assets were considered close proxies for checking accounts and in 1980 OCDs were added as a component of M1. For many years, they were the largest component of M1, but now they are the third largest.

Part of the decline in the popularity of the OCDs is due to their poor return relative to similar assets. As of November 1996, NOW accounts paid 1.98 percent compared with 2.85 percent on savings deposits. This disparity between rates has prompted some banks to find better cash management systems for their retail customers. These banks are offering sweep accounts where any deposits over a certain threshold that are held in the low-interest checking accounts are swept out of that account into a higher-interest money-market account — typically a money market deposit account (MMDA).

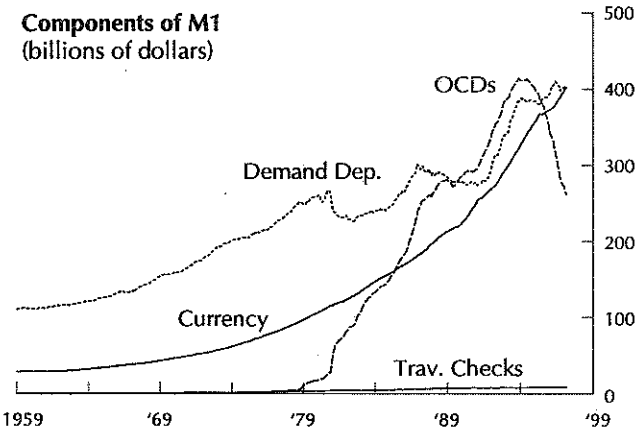
Authorized in 1982, MMDAs are relatively high-yielding savings accounts that offer limited check writing privileges. When depositors draw down the balances in their OCD accounts, money from their MMDA is transferred back into their checking account to cover the withdrawals (only six transfers a month are allowed on MMDAs, so on the sixth transfer of each month all the money that was swept into the MMDA is moved back into the OCD account). Under this type of arrangement, retail customers can get a better return on their idle cash, without giving up the liquidity of a checking account.

The banks that offer the sweep accounts also benefit. Under the current fractional reserve system, banks are not required to hold in reserve all of the deposits they receive. When banks receive a deposit, most of the funds are loaned out in order to generate interest income. However, the Federal Reserve requires that banks hold in reserve a certain percentage of the transaction deposits they accept — either as cash in the bank's own vaults or as deposits at the Federal Reserve. Unlike deposits in NOW or ATS accounts, banks do not have to keep any reserves on hand for deposits in MMDAs, because MMDAs are not considered transaction accounts. Banks have a significant incentive to hold as little as possible in reserves, because the funds in reserve earn no interest. Reserve requirements vary according to bank size and the type of account. Large banks are subject to a 10 percent reserve requirement on deposits in their OCD accounts. Smaller banks are subject to a 3 percent reserve requirement. Not surprisingly, sweep programs have become increasingly popular, especially at larger depository institutions where the incentive is greater.

This arrangement, however, could be a potential headache for the Federal Reserve for several reasons. First, it distorts the Federal Reserve's measure of M1 money supply because unlike NOW and ATS accounts, MMDAs are not included in M1. When funds are swept out of the checking accounts, they are also swept out of M1. Does this mean that the depositor considers the funds swept into MMDAs as savings and not as a transactions balances? Probably not. The depositor knows that the bank will simply return the balances to his checking account when the funds are needed. Based upon estimates by the Federal Reserve, since 1994 $176.4 billion has been swept out of M1. In 1996, had there not been any sweep activity, M1 would have increased 5.8 percent, but because of the sweeps, official M1 decreased 4.25 percent.

However, these are only estimates. There are no official data on sweep accounts. Banks are not required to notify the Federal Reserve when they begin a sweep program nor are they required to report its size. To derive the estimates, the Federal Reserve looks for evidence of a significant drop in a bank's OCDs, co-

Components of M1
(billions of dollars)



Source: St. Louis Federal Reserve.

inciding with an increase in its MMDAs. Since banks may not report when they begin a sweep program, the Fed may miss some programs that are just getting started. But the Fed claims that any undetected amount is likely to be small because a sweep program of any significance will be easy to spot by the substantial drop in other checkable deposits.

Historically, M1 was a useful statistic for predicting economic activity. When M1 began to decline, it was a signal of restrictive monetary policy, rising interest rates and a reduction in consumer demand. However, the correlation between M1 and economic activity has broken down because of two decades of financial innovations and deregulation that have blurred the lines between transaction balances and savings accounts. Sweeps are just the latest innovation to further muddle the issue.

Sweeps Also Affect Fed Policy Tools

Besides the impact on M1, if sweep programs continue to grow in popularity, they could create difficulties in the federal funds market. As mentioned above, banks are required to meet certain reserve requirements. If a bank finds that it has come up short of funds, it can go to the federal funds market and borrow from banks that have excess reserves. However, since sweep accounts reduce the amount of reserves banks are required to hold, the federal funds market could become volatile if banks underestimate their reserve needs and all start bidding for limited funds. According to the Federal Reserve, at low enough levels, reserve balances may provide inadequate protection if too many banks fall short of their required reserve levels. To date, however, this has not happened, partly because some of the decline in reserve balances from sweeps has been offset by increases in other types of clearing balances. Also, banks have become much more adept at estimating their clearing needs. Part of the reason banks began offering sweep accounts was because they could better estimate their clearing needs.

The federal funds market is also important because the Federal Reserve targets the rate of interest banks charge each other within the federal funds market — the so-called federal funds rate. If, because banks become more adept at estimating their clearing needs, fewer turn to the federal funds market, the Federal Reserve would have to sell Treasury securities to pull money out of the system if it wanted to maintain its targeted federal funds rate. Last year, the Federal Reserve offset the 12 percent decline in reserve levels due to sweeps by lowering its holding of Treasury securities. This lowers revenue at the Federal Reserve, because of the lost interest earned on the securities it would have otherwise held. (This in turn would reduce revenue at the Treasury, because by law the Federal Reserve is required to turn over any profits to the Treasury.)

At the extreme, if the federal funds market dried up, banks would no longer be able to turn to it to borrow money. If this happened then the federal funds rate policy lever would be useless. There is no value in controlling a market that no one uses.

To a lesser extent, sweep accounts could affect the monetary base. The monetary base is the sum of legal reserves, the amount of currency and coin held by the public, and deposits held at the Federal Reserve to meet clearing balance contracts. To date the monetary base has been little affected by sweeps, mainly because the currency component, which is by far the largest portion of the total monetary base, continues to grow. The monetary base bears watching, however, because small changes in that measure can result in much larger changes in the broader measures of the money supply. The monetary base is often called "high power money" because increases or decreases in it have a multiplier effect on the money supply. According to the latest estimates a $1,000 increase in the monetary base would increase M1 by about $2,270.

If the Federal Reserve wants to reverse the trend towards sweep accounts, it has two choices. One is to pay interest to banks on their reserve balances. However, this would take an act of Congress, and is not likely to happen — partly because it would reduce the profits that the Federal Reserve returns to the Treasury every year by an estimated $560 million. Second, it could require banks to hold reserves on money-market accounts. Here, too, it would meet opposition from the banks who already feel it is unfair for them to have to hold reserves, while security dealers who offer similar assets may not. Former Federal Reserve Chairman Paul Volcker tried in the early 1980s without success.

However, in a current proposal to amend Regulation D, the regulation that governs reserve requirements, the Federal Reserve signaled that it may try to impose reserve requirements on the banks' money-market liabilities. The proposal solicits public comments on a "clarification of the definition of 'savings deposit,'" and "changes to the definition of 'transaction account.'" It also states that currently no substantive change is intended. It is too soon to tell how important sweep accounts will become, but the Federal Reserve estimates that sweeps have the potential to reduce required reserves by 50 percent or more. In any event, it would seem that the calculation of the monetary aggregates ought to acknowledge the evident effect of sweep programs if they are to serve any useful statistical purpose. ❑

Book Review

The Ultimate Resource 2, by Julian L. Simon, Princeton University Press, 1996, 734 pp. with index, $35, hardbound.

Everyone who thinks that mankind is at risk of using up the earth's limited supply of resources and that we should try to postpone the day of reckoning by limiting population growth and consumption should read this book. Most people probably believe this more or less. Even if they do not think it will be a problem in their lifetimes, they would probably agree, if they sat down to "do the math," that two broad trends — an ever-increasing world population and a finite supply of natural resources — must someday collide, with grim consequences for everyone.

The media have done much to foster this view. Television, newspapers, and magazines are the main source of information about the environment for most people. Understandably, the media generally focus on bad news, and they tend to base their reports on information provided to them by "experts" and activists who, not surprisingly, are not necessarily a source of unbiased and scientific evidence.

The nation's public schools have done much the same thing. Relying unquestioningly on information supplied by environmental groups, they now teach children that the earth is "dying" as a result of mankind's exploitation of its resources; that we are at risk of running out of trees, oil, and other resources; and that recycling is essential to "saving the planet" for future generations. In some households children have become junior agents for the environmental police, ready to accuse their parents of polluting the planet if they throw an empty tuna can into the trash instead of the recycling bin. The notion that recycling, however costly or inconvenient, helps to reduce pollution and slow the rate at which we are exhausting the earth's resources seems to many a matter of common sense.

The Ultimate Resource 2 is a scientific work that presents evidence that rebuts these conventional views about the environment and population growth. Despite the title, it is not a sequel but an updated and expanded edition of *The Ultimate Resource*, which was published in 1981. In new notes and chapters, Simon pre-

sents fresh evidence that reinforces the earlier book's main assertion: namely, things are getting better, not worse. Every trend in material welfare has been improving, the environment is becoming cleaner, and resources are becoming less rather than more scarce.

The author does not argue that there have been no environmental or population problems, but says they have been temporary. He offers a basic theory for why this is so: "More people, and increased income, cause resources to become more scarce in the short run. Heightened scarcity causes prices to rise. The higher prices present opportunity and prompt inventors and entrepreneurs to search for solutions. Many fail in the search, at cost to themselves. But in a free society, solutions are eventually found. And in the long run *the new developments leave us better off than if the problems had not arisen.* That is, prices eventually become lower than before the increased scarcity occurred."

Simon acknowledges that this contrarian assertion — that scarcity leads to a higher standard of living and to lower, not higher, prices — will strike many people as nonsense. He notes that when he began his research into population growth 30 years ago, he shared the "doom and gloom" view. When he went looking for data to support it, however, he was surprised to find an abundance of data suggesting otherwise. His book is a detailed, very readable and highly compelling analysis of this evidence.

Take energy. The prevailing view is that the United States and other developed countries are too dependent on a finite supply of fossil fuels and that we should develop alternative sources of energy before we eventually "run out" of oil. Simon points out that it is misleading to measure the scarcity of oil (and other natural resources) by counting the "known" or "recoverable" reserves. The amount that can be counted depends on the technology that is currently available and affordable, and this technology is not fixed. It changes with the price of oil. If the price increases, it will become profitable to develop new technology to identify and recover more oil reserves, and thus the available supply of oil will increase. A higher oil price also will encourage people to invent alternative sources of energy. Thus, Simon says, a short-run increase in the scarcity of oil — as measured by the increase in its price — will lead to the discovery and development of more energy sources, and the price of energy (relative to other things) will decline in the long run. Although this theory of scarcity may strike many as counterintuitive, there is ample historical evidence to support it.

The Fallacy of Overlooking Long-run Effects

This flies in the face of what the "experts" were predicting during the oil crises of the 1970s, of course. They focussed on the gasoline shortages (which were attributable to wrong-headed energy policies) and the spike in oil prices that occurred when government price controls were lifted, and extrapolated these short-term developments into the distant future. They failed to take into account the longer-run response of supply and demand to higher prices. They assumed that there would be no developments in oil production or in other energy sources that would make future energy costs lower than they would be with the present state of technology. As Simon notes, this contradicts the entire history of energy (and other natural resources), in which scarcity has sparked new discoveries, technological advances, and the development of substitutes.

Regarding similar forecasts about the future food supply, Simon notes that agricultural experts have long been optimistic but that public opinion, shaped by the popular media, has long been pessimistic — and wrong. The Malthusian worry that population growth would lead to food shortages and famine reached an apocalyptic level 30 years ago in such popular books as *Famine — 1975* and *The Population Time Bomb*. United Nations reports warned at that time of millions of starvation deaths due to inadequate food production. "The record of food production entirely contradicts the scary forecasts," Simon says. "The world trend in recent decades shows unmistakably an increase in food produced per person."

Throughout the book Simon emphasizes that it is essential to consider short, medium, long, and longer-run effects — and not to confuse them. The forecasters of famine would not have been so wrong if instead of assuming that a recent increase in food prices — and therefore scarcity — would continue indefinitely, they had considered the longer-term response to higher prices. According to the book's basic theory, higher prices will prompt individuals to search for solutions. Given sufficient economic and political freedom, they will eventually find them. In the long run these will leave us better off than before the problems arose — prices will end up lower than before the increased scarcity occurred. Simon presents extensive historical evidence that this is, in fact, the long-run history of food supply. In the face of such evidence, the burden is on the pessimists to explain why this pattern of progress will not continue in the future.

With respect to pollution, many people apparently believe the problem is bad and getting worse. This view seems especially prevalent among school children, who learn alarmist views about the environment from such popular books as *50 Simple Things Kids Can Do to Save the Earth.* According to one poll Simon cites, 47 percent of a sample of 6-17 year olds said that "Environment" is among the "biggest problems in our country these days." Among adults, similar concern appears to be heavily influenced by the media. Simon notes that when people are asked about their local environment (of which they have personal knowledge) they indicate a much lower degree of concern than they do about the environment of the country or world as a whole (which they learn about through the media).

Are increased fears warranted by the evidence? In a word, no. Looking back over history, Simon observes that there is "an increase in pollution as societies move from subsistence agriculture toward modernization. But when society becomes rich enough to put cleanliness high on its list of priorities — as the rich societies do — there is every likelihood that it, too, will move toward less of even the pollutions that come with modernization... The combination of affluence and improved technology tends toward greater cleanliness." According to Simon, "Life expectancy is the best single index of the state of health-related pollution...by this measure, pollution has been declining very fast for a long time."

The Role of Government

Additional data on emissions and airborne concentrations of major air pollutants indicate that air pollution is decreasing in the United States and other developed nations. In contrast, the worst pollution stories of recent decades have come from Eastern Europe. This is a subject on which environmentalists in this country have been relatively silent, but Simon says the lesson is clear:

> "The revelations in the 1980s of the terrible air and water pollutions in Eastern Europe have provided powerful evidence of the role of government structure in such matters. Economic theory shows that in socialism the managers of enterprises have an incentive to use large amounts of raw material inputs without penalty for waste, rather than an incentive to economize on inputs as there is in a free-enterprise system. Hence, the ratio of inputs to outputs is much larger in socialism...And because factories are part of the government in socialism, and also because consumer protests were squelched by the authorities in Eastern Europe, consumers could not raise the charge that greedy business people were

polluting the environment for their own self-interest (although ironically the managers of the state enterprises were doing exactly that). This political system leads to a large volume of waste outputs that must either be controlled or — as was the case in Eastern Europe — simply vented to the environment."

It is also clear from this excerpt that Simon is not against environmental regulation. He notes that in a democracy, the demand for a cleaner environment may be expressed through political activity, and says that the public's demand for businesses to be held responsible for their noxious emissions "is entirely consistent with free-market principles." The problem is that in order to win public support for changing public policy, activists exaggerate problems and misinform the public.

The debate over the loss of species is an example. As anyone with a postal address probably is aware, conservationist groups have issued dire warnings about this. According to a World Wildlife Fund fund-raising letter, "Without firing a shot, we may kill one-fifth of all species of life on this planet in the next 10 years." The president of the World Wildlife Fund claims that "some scientists believe that up to 1 million species of life will become extinct by the end of this century" unless governments "do something" about it. In 1980, the *Global 2000 Report to the President* forecast that "hundreds of thousands of species — perhaps as many as 20 percent of all species on earth — will be irretrievably lost as their habitats vanish, especially in tropical forests." The media have repeated and amplified these warnings.

It turns out these estimates are not scientific statements but almost pure guesswork. There is scant historical evidence on the rate of world species extinction. What little there is suggests that the extinction rate was much lower in the past than the above forecasts imply. However, the forecasters either do not acknowledge that their numbers are highly uncertain or they say it does not matter. Such an attitude is inexcusable if their goal is to advance scientific understanding and enlighten the public. It seems clear that their goal is to frighten the public, and for this purpose large numbers are more effective than small ones. As Simon writes:

> "The biologists want us to write a blank check, as society would never do for anything else. Nobody would go to Congress and ask for money to give food to hungry children, or put guard rails on the highways, without any idea about how many people are at risk. The biologists justify behaving differently in this case on the grounds that we who are nonbiologists cannot understand these matters.
>
> "Some have said: But was not Rachel Carson's *Silent Spring* an important force for good even though it exaggerated? Maybe so. But the accounts are not yet closed on the indirect and long-run consequences of ill-founded concerns about environmental dangers. And it seems to me that, without some very special justification, there is a strong presumption in favor of stating the facts as best we know them, especially in a scientific context, rather than in any manipulation of the data no matter how well intended."

On the subject of the human species, of course, the popular fear is that the numbers are getting too big too fast. Simon notes that the doomsayers have stoked fears with "voodoo forecasts" that have repeatedly overestimated population growth. Their forecasts have proven false partly because they have mistaken every short-term upward tick in the growth rate for a lasting trend. Based on this record, there is ample reason to doubt the latest predictions of how soon the earth, or the United States, will become "overcrowded." (Indeed, some demographic studies indicate that the birth rate is falling worldwide, and in some countries, such as Italy, it is below the replacement rate. If these trends continue — and they may not — some countries may eventually be faced with economic problems stemming from being "under populated.")

Even if the predictions were more credible, Simon argues, fears about future population growth are overstated. He argues that minds matter as much as, or more than, hands or mouths, and the most important benefit of increased population is an increase in the stock of knowledge. He supports these assertions with empirical evidence that population growth does not slow economic development, and that adding more people does not equate to a lower standard of living or poorer health.

Of course, he notes, in some places increased population *has* sometimes reduced the standard of living to misery and subsistence. Whether added population is a net benefit, he concludes, depends crucially on "the extent to which the political-social-economic system provides personal freedom from government coercion. For an economy to grow, individuals require a social and economic framework that provides incentives for working hard and taking risks, enabling their talents to flower and come to fruition. The key elements of such a framework are economic liberty, respect for property, and fair and sensible rule of the market that are enforced equally for all."

The book makes clear that the general public often has been misled on environmental and population issues. When evidence subsequently shows their assertions to be wrong, it is often too late for public policy. As the author writes in reference to one of the biggest environmental issues of the 1980s, which was subsequently shown to be overblown: "The acid-rain scare reteaches an important lesson: It is quick and easy to raise a false alarm, but to quell the alarm is hard and slow. The necessary solid research requires considerable time. And by the time the research is complete, many people have a stake in wanting the scientific truth not to be heard — advocacy organizations who gain public support from the alarm; and bureaucrats who have a stake in not being shown to have been in error, and who already have built some empire on the supposed problem."

In the 15 years since the first edition of this book, the author has become famous for putting his money where his mouth is — and winning. The 1981 edition included an offer to bet that natural resources would not become more scarce in future years and therefore their prices would not increase. Paul Ehrlich, his most prominent critic, took him up on the wager and lost. The new edition includes an epilogue that addresses comments made by Ehrlich and others. Simon does not so much summarize as mow down their criticisms, many of which are more personal than scientific.

The updated book includes an updated bet. Simon will wager that "just about any environmental and economic trend pertaining to basic human material welfare (though not, of course, the progress of this group compared to that one) will show improvement in the long run...This broad offer includes betting on any explicit or implicit prediction made in this book — and there are plenty of them." None of his critics has yet been willing to take this bet, which may be the strongest endorsement of all for this fine book. ❑

PRICE OF GOLD

	1995	*1996*	*—— 1997 ——*	
	May 11	*May 9*	*May 1*	*May 8*
Final fixing in London	$383.65	$392.70	$339.25	$343.75

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