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ECONOMIC PERSPECTIVES

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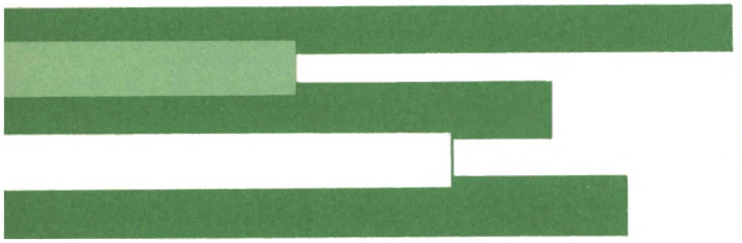

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ECONOMIC PERSPECTIVES

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New six-month money market certificates—explanations and implications

Paul L. Kasriel

Banks and savings institutions were authorized to begin issuing on June 1 a new kind of savings certificate with a maturity of six months. What is different about this new certificate is that its maximum issuing rate floats weekly with the average issuing rate on six-month Treasury bills established in the weekly T-bill auctions.

Because the offering rate on these new certificates is tied to the rate on T-bills, which are money market instruments, they are known, among other things, as *money market certificates* (MMCs). The maximum simple annual interest rate that commercial banks can offer on MMCs is the average discount rate at which six-month T-bills were awarded in the most recent auction. Savings institutions (mutual savings banks and savings and loan associations) can offer MMCs at one-quarter percent above the average T-bill auction rate.

The new certificates were introduced so that depository institutions subject to statutory maximum offering rates on deposits (Regulation Q ceilings) could compete more effectively for funds when open market interest rates are above Regulation Q ceiling rates.

MMCs versus T-bills

Several criteria can be used to show how MMCs offered by commercial banks and savings institutions fare against T-bills.

Yield—Over the range of T-bill rates paid during periods of "high interest" since World War II, the ranking of the three alternatives from highest *pretax* yield to lowest would be MMCs offered by savings institutions, T-bills, and MMCs offered by commercial banks. However, as T-bill rates (on a discount basis) reach 10 percent, T-bills take over first place in terms of yield.

To compare yields of the three alternatives, an investor must take into account how the different yields are computed and quoted so the comparisons can be made on a consistent basis. The rate usually quoted on T-bills and the rate on which MMC offering rates are based is called the *bank discount rate* or simply the *discount rate*.[1] This is an annualized rate that determines the dollar discount from face value at which T-bills are sold.[2] For example, a T-bill with 182 days (six months) to maturity selling at a 7 percent discount could be purchased at a dollar discount of $353.89 per $10,000, or a price of $9,646.11 ($10,000-$353.89).

The discount rate, however, is not an accurate reflection of the investor's actual annual percentage yield on the T-bill, because the investor's return is $353.89 on an actual investment of $9,646.11, not $10,000, and a 365-day year should be used in computing the yield rather than a 360-day year, as is used in calculating the discount. Furthermore, to make the T-bill yield comparable to the way banks and savings institutions are allowed to quote yields on MMCs, the investor should compute a semiannually compounded annual yield on the T-bill. With all these factors taken into consideration, an investor's

[1]The discount rate used in reference to T-bills should not be confused with the interest rate charged on member bank borrowings from Federal Reserve Banks, which is also referred to as the discount rate.

[2]In contrast to all other marketable Treasury securities that pay a specified coupon rate of interest in semiannual instalments, T-bills bear no explicit rate of interest. Rather, the interest earned on T-bills is solely the difference between their purchase price and their sale price if sold prior to maturity or their face value if held to maturity.

semiannually compounded annual yield to maturity on a 182-day T-bill purchased at a 7 percent discount would be 7.49 percent.

Although the maximum simple annual interest rate at which commercial banks can offer MMCs is the average discount rate at which six-month T-bills were awarded in the most recent weekly auction, the effective yield to the depositor can be increased at the bank's discretion if the interest is compounded. One common method of daily compounding would raise a base rate of 7 percent to an effective 7.35 percent annual yield.

In addition to compounding interest, savings institutions can add another quarter percent to the T-bill discount rate. Assuming a bank discount rate of 7 percent, savings institutions could offer MMCs at an effective annual yield of 7.63 percent.

The accompanying table compares pretax compounded annual yields for the three investment alternatives at various discount rates on 182-day T-bills. The investor must be aware that these compounded annual yields assume that at the end of 182 days, the original funds plus the accrued interest can be reinvested for another 183 days at the original simple annual interest rate. This assumption cannot be guaranteed, since the discount rate at which six-month T-bills are auctioned changes from week to week.

Tax considerations—In comparing yields, investors should also consider the tax consequences of investing in T-bills against those of investing in MMCs. Earnings on both are subject to federal income taxes. Earnings on T-bills, however, are exempt from state and local income taxes, while earnings on MMCs are not. For residents of states of the Seventh District, the difference in tax exemption reduces the attractiveness of the MMCs relative to T-bills. In Indiana, where the state income tax rate is a flat 2 percent of adjusted gross income, residents would earn a higher after-state-tax income on six-month T-bills selling in excess of 6.63 percent (discount basis) than on MMCs offered by savings institutions based on these bank discount rates. This assumes savings institutions' maximum one-quarter percent differential and daily interest compounding. In Illinois, where the state income tax rate is 2½ percent of net income, the breakeven discount rate would be 6.29 percent. Breakeven rates after state income taxes would be substantially lower in Iowa, Michigan, and Wisconsin. Michigan's state income tax rate is 4.6 percent of taxable income. Iowa and Wisconsin have graduated state income tax rates. In Iowa, a family with a taxable income of $17,500, would be taxed at a rate of 8 percent. In Wisconsin, it would be

Yield comparisons—T-bills and MMCs[1]

Six-month T-bill discount rate	T-bill yield	Commercial bank MMC yield[2]	Savings institution MMC yield[3]
		(percent)	
6.00	6.37	6.27	6.54
6.50	6.93	6.81	7.08
7.00	7.49	7.35	7.63
7.50	8.06	7.90	8.17
8.00	8.63	8.45	8.72
8.50	9.21	9.00	9.28
9.00	9.79	9.55	9.83
9.50	10.37	10.11	10.39
10.00	10.96	10.67	10.95

[1]Yields calculated on a compounded annual basis (see Appendix).

[2]Based on the six-month T-bill discount rate compounded daily, using a 360-day year.

[3]Based on the six-month T-bill discount rate plus 0.25 percent compounded daily, using a 360-day year.

taxed at a rate of 11.4 percent.

Purchase denominations—Under this criterion, MMCs have an advantage over T-bills. The minimum denomination for both is $10,000. However, MMCs can be issued in any amount above the $10,000 minimum. Additional T-bills must be bought in minimum increments of $5,000.

Transactions cost—MCCs can be bought with no transactions cost other than the time and effort involved. Transactions costs of buying T-bills are sometimes higher, but they need not be significantly higher. Investors can hold down costs by submitting tenders directly to the Federal Reserve. Tenders in weekly auctions can be either presented at the Federal Reserve Bank or its branch or mailed to the Federal Reserve Bank along with the payment in a form acceptable to the Treasury. Examples of acceptable payment are currency, certified personal checks, cashier's checks, and maturing T-bills.

If an investor buys T-bills through a commercial bank or securities brokerage firm, transactions charges can reduce any yield advantage T-bills might have over MMCs. For example, a service charge or brokerage commission of $25 paid at the time of purchase of a $10,000 six-month T-bill at a 7 percent discount will lower the compounded annual yield from 7.49 percent to 6.95 percent.

Certainty of amount and yield—In that MMCs can be bought at a known yield, they may have an advantage over T-bills.[3] If an investor wants to buy T-bills, he must submit a tender in a weekly auction for the amount he is interested in buying. The tender can be either competitive or noncompetitive. Either way, there are uncertainties. In submitting a competitive tender, the investor states the face-value amount of T-bills he wants to buy at the bank discount rate he is willing to accept. There is uncertainty, then, in the amount of bills he will be able to buy. If his bid is too high in terms of rate—which means too low in terms of price—he may receive only part of what he wanted, or none of it.

[3]Regulations allow but do not require the downward adjustment of MMC yields prior to maturity if so stated in the issuing institutions' terms of sale.

As considerable market judgment is needed to submit a successful competitive tender, only the most sophisticated T-bill investors, including government securities dealers and large banks, usually submit this type of tender. Others, to avoid the uncertainty of how many T-bills they will be able to buy, are more apt to submit noncompetitive tenders. Noncompetitive tenders allow them to receive the amount tendered for at the weighted average discount rate at which accepted competitive tenders were awarded. With this type of tender, the investor is sure of the amount he can buy but he cannot be sure of the yield.

Liquidity—A T-bill is a negotiable instrument that can be sold before maturity. But because T-bill rates, and therefore T-bill prices, fluctuate in the secondary market, an investor cannot be sure about the price he can sell his T-bills for. Sales in the secondary market are also subject to transactions costs that usually vary inversely with the amount of T-bills involved.

MMCs, on the other hand, are not negotiable. If a certificate holder wants to withdraw his funds early, he must forfeit 90 days' interest with the regular passbook interest rate applying to the rest of the time the funds were on deposit. The maximum passbook rate is 5¼ percent at savings institutions and 5 percent at commercial banks. Though not required to make such loans, institutions issuing MMCs can make loans to certificate holders up to the amount of the certificate at an interest rate not less than 1 percent above the rate at which the MMC was issued. But some lending institutions and brokerage firms also take T-bills as collateral for loans.

Likely economic effects

The introduction of MMCs is expected to increase the relative flow of deposit funds to savings institutions, helping keep residential mortgage rates lower than they would be otherwise. Higher borrowing rates in other credit markets are also implied by the increased flow of deposit funds to savings institutions.

In the past, when yields on competing financial assets have risen above Regulation Q ceilings on deposits, savings institutions have found it increasingly difficult to attract new deposits. In some cases, they have suffered disintermediation, a net outflow of deposits.[4] With the coming of MMCs, savings institutions are better able to compete for funds. And since savings institutions are the single most important source of residential mortgage credit, an increased flow of deposit funds to them (or a decreased net outflow) should tend to keep residential mortgage rates from rising as much as they would without MMCs.

Some argue that because disintermediation at savings institutions is expected to be reduced, MMCs will reduce the effects of monetary policy on the general economy. In their view, disintermediation is the "cutting edge" of monetary policy. With a reduction in disintermediation, interest rates other than those on residential mortgages will have to rise more than they would otherwise to produce the same degree of economic restraint.

There is nothing here, however, to imply that MMCs have reduced the effectiveness of monetary policy. Rather, the implication is that the direct impact of monetary restraint on the residential housing industry will be alleviated and the impact on other industries increased.

Squeeze on profits?

Profits of savings institutions are usually squeezed in the latter stages of an interest rate cycle, as their average cost of funds rises relative to their average return on assets. Some analysts have warned that to the extent that MMCs increase the average cost of funds, they will make the situation worse.

The reason savings institutions are particularly vulnerable to this kind of squeeze is related to the average maturity of their assets. Mostly mortgage loans, their assets are longer term than their liabilities. Portfolios are often heavily weighted by lower yielding mortgages made when interest rates were generally lower. Liabilities, on the other hand, are often heavily weighted by fairly short-term funds that are being acquired at progressively higher rates of interest.

This problem is alleviated to the extent that an institution has variable rate mortgages in its portfolio. These are mortgages with rates that can be adjusted as the institution's average cost of funds changes. Larger state-chartered savings and loan associations in California have been leaders in variable rate mortgages—and they have been more enthusiastic about MMCs than savings and loans in other regions.

MMCs are not as apt to affect the profits of banks as much as those of savings institutions. Commercial banks usually have closer matches in the maturities of their assets and liabilities. And more of their loans are already booked on a floating rate basis.

There is little doubt that as short-term interest rates rise, MMCs will lead to a higher average cost of deposit funds to savings institutions. It is less certain, however, that the average cost of funds from all sources will be higher for savings institutions than if there were not MMCs. MMCs should make it possible for savings institutions to attract new funds and retain other deposits that, in pre-MMC days, would have been lost to higher yielding competing assets. To the extent that the cost of funds raised through MMCs is less than the cost of advances from the Federal Home Loan Bank System[5] and of other

[4]For a discussion of this cyclical deposit-flow problem see Eleanor Erdevig, "Disintermediation Again?", *Economic Perspectives*, Federal Reserve Bank of Chicago (May/June 1978), pp. 10-13.

[5]MMC rates paid by savings institutions are currently below rates being charged by Federal Home Loan Banks on advances. During the 1973-74 disintermediation period, however, hypothetical MMC rates exceeded Federal Home Loan Bank advance rates [see Dennis Jacobe and Thomas J. Parliment, "Take Another Look at Savings Strategy," *Savings & Loan News*, United States League of Savings Associations, (July 1978), pp. 50-54.]. Restrictions are placed on the outstanding amount of advances that an individual member savings institution can have from its Federal Home Loan Bank. Therefore, a lower stated advance rate may not be a lower effective rate than the MMC rate if an individual savings institution has reached the limit of its line of credit on advances.

sources of funds, such as large CDs exempt from Regulation Q ceilings, MMCs will have a salutary effect on the average cost of funds at savings institutions. Countering this salutary effect, however, could be a tendency toward a higher average cost of funds resulting from the substitution of MMCs for lower yielding deposits by depositors that, in the absence of MMCs, would have left their funds in lower yielding deposits and even added to them.

Appendix

I. Dollar discount and price of T-bills:

$$\text{Dollar discount} = \frac{\text{discount rate}}{100} \times \frac{\text{days to maturity}}{360 \text{ days}} \times \text{T-bill face value in dollars}$$

$$\text{Dollar price} = \text{face value in dollars} - \text{dollar discount}$$

Example: What is the dollar discount and dollar price of a 182-day $10,000 face value T-bill selling at a 7 percent discount?

$$\text{Dollar discount} = \frac{7.00}{100} \times \frac{182}{360} \times \$10{,}000 = \$353.89$$

$$\text{Dollar price} = \$10{,}000 - \$353.89 = \$9{,}646.11$$

II. Semiannually compounded annual yield on 182-day T-bill:

$$\text{Yield} = \left[\left(1 + \frac{\text{dollar discount}}{\text{dollar price}}\right)^{\frac{365}{182}}\right] - 1$$

Example: What is the semiannually compounded annual yield on a 182-day T-bill selling at a 7 percent discount?

$$\text{Yield} = \left[\left(1 + \frac{\$353.89}{\$9{,}646.11}\right)^{2.005}\right] - 1 = 7.49 \text{ percent}$$

III. Daily compounded annual yield on MMC based on a 360-day year:

$$\text{Yield} = \left[\left(1 + \frac{\text{simple annual rate}}{100 \times 360}\right)^{365}\right] - 1$$

Example: What is the daily compounded annual yield on an MMC based on a 7 percent simple annual rate?

$$\text{Yield} = \left[\left(1 + \frac{7.00}{100 \times 360}\right)^{365}\right] - 1 = 7.35 \text{ percent}$$

Competitive equality and Federal Reserve membership— The Board of Governors' proposal

Anne Marie Laporte

> To promote competitive equality among member banks and other financial institutions and to encourage membership in the Federal Reserve. . .

This is the stated objective of a Federal Reserve proposal sent to Congress July 7. There are two components of the proposal: legislation requiring all financial institutions to hold reserves at the Federal Reserve against transaction accounts and a comprehensive program providing for explicit pricing of Federal Reserve services and for reducing the cost of Federal Reserve membership.

Some positive action is needed to stem the withdrawal of banks from membership in the Federal Reserve. Over the past decade, the percentage of commercial bank deposits held at member banks declined from 82.5 percent at the end of 1967 to 72.8 percent by the end of 1977. During that time, 551 banks, including 117 banks in the Seventh District, withdrew from membership. While the number of banks in the United States increased by 985 over those ten years, the number of member banks declined by 403.

Within the Federal Reserve, there has been growing concern that without corrective action, the trend would continue, undermining the nation's financial system and the ability of the Federal Reserve to implement monetary policy. As stated in the proposal:

> . . . a continued, probably an accelerated, erosion of membership and of deposits subject to regulation by the Federal Reserve . . . threatens to weaken the nation's financial system, as more and more of the nation's payments and credit transactions are handled outside the safe channels of the Federal Reserve, as fewer and fewer banks have immediate access to Federal Reserve Bank credit facilities, as a national presence in bank supervisory and regulatory functions becomes increasingly diluted, and as implementation of monetary policy becomes more difficult.

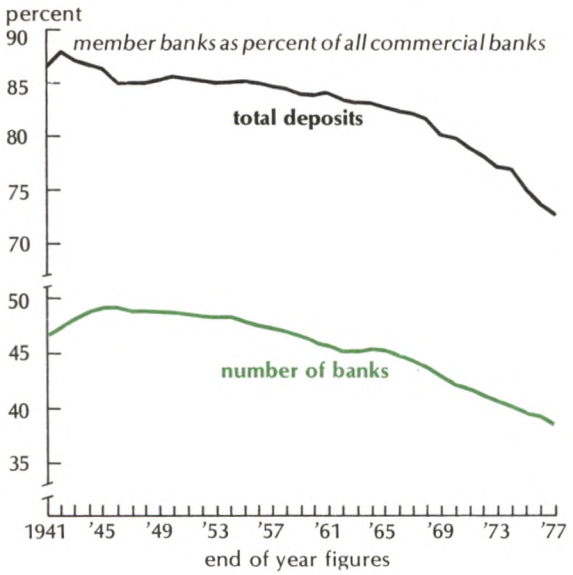
Attrition in Federal Reserve membership stems primarily from increasing competitive inequities between member banks and other financial institutions—that is, from the increasing burden of membership.

Burden of membership

Competitive inequities between member and nonmember banks result largely from differences in reserve requirements and types of assets that can be used to satisfy the requirements. Member banks have to hold specific percentages of their demand and time deposits in the form of vault cash and balances at the Federal Reserve. Neither earns interest.

Reserve requirements for nonmember banks vary from state to state. Illinois is the only state that imposes no statutory reserve requirements. All other states allow a nonmember bank to satisfy requirements with vault cash, demand balances at correspondents, or other assets a bank holds in the normal course of business. Many states, including Michigan and Wisconsin, allow

Federal Reserve membership declines



some of a bank's reserves to be held in the form of interest-earning assets. And some states, including Iowa and Indiana, allow cash items in process of collection to count as reserves.

On average, member banks hold a higher proportion of noninterest-earning cash assets (vault cash, reserve balances at Federal Reserve Banks, and demand balances due from banks) than do nonmember banks of comparable size. Earnings on cash assets that member banks have to forego but nonmember banks do not represents a cost member banks have to bear—a burden of membership.

The burden has become more pronounced in recent years, partly because of inflation and the associated rise in interest rates and partly because of increased competition from institutions other than banks in providing third-party payment services. Instruments such as credit union share drafts and negotiable orders of withdrawal (NOWs) work much like bank checking accounts. The big difference is that nonbank institutions do not have to hold noninterest-earning reserves against these check-like deposits as member banks do.

Universal reserve requirements

A key element of the Federal Reserve proposal is the Reserve Requirements Act of 1978. Under the bill submitted for congressional action, transaction accounts of more than $5 million at any depository institution would be subject to reserve requirements established by the Board of Governors of the Federal Reserve System. The bill defines a *transaction account* as "a deposit or account on which the depositor or account holder is allowed to make withdrawals by negotiable or transferable instrument or other similar item for the purpose of making payments to third persons or others." Like demand deposits, NOWs and share drafts are clearly included. A *depository institution* is defined for purposes of this act to include all federally insured commercial banks, mutual savings banks, savings and loan associations, and credit unions.

The first $5 million of an institution's transaction accounts would not be subject to reserve requirements. Specific reserve requirement ratios on transaction accounts exceeding $5 million would be determined by the Board of Governors within statutory ranges. Demand deposits of all depository institutions would be subject to average reserve requirements within a range of 7 to 22 percent. Similarly, all depository institutions would be required to hold reserves averaging from 3 to 12 percent on transaction accounts other than demand deposits.

The bill also proposes a downward adjustment in the statutory range of average reserve requirements on member bank time and savings deposits. Set now at 3 to 10 percent, the proposed legislation would change the range from 0.5 percent to 10 percent.

Required reserves of all depository institutions would be kept in the form of vault cash and reserve balances at Federal Reserve Banks. Institutions that are not members of the Federal Reserve would also have the choice of keeping reserves in a member bank or in the Federal Home Loan Bank, as long as the member bank or FHLB held the funds in the form of Federal Reserve balances. Funds

Proposed universal reserves legislation sets new statutory ranges on requirements

Current		Proposed	
Type of deposit	Statutory range (percent)	Type of deposit	Statutory range (percent)
Net demand deposits		Net demand deposits	
Reserve city member banks	10 to 22	All depository institutions	7 to 22
Other member banks	7 to 14		
		Other transaction accounts	
		All depository institutions	3 to 10
Time and savings deposits		Time and savings deposits (other than transaction accounts)	
Member banks	3 to 10	Member banks	0.5 to 10

passed through to the Federal Reserve would not be subject to reserve requirements or federal deposit insurance assessment.

If Congress passes uniform reserve requirements on transaction accounts as proposed in the bill, all depository institutions will compete for these accounts on a more equal basis. To ease the impact of these requirements on institutions that are not members, the Board has proposed that reserve requirements be phased in over a four-year period.

Once all depository institutions were subject to the same reserve requirements on transaction accounts, the Federal Reserve would be better able to implement monetary policy. Furthermore, periodic reports that the Board would be authorized to obtain on deposit liabilities of all depository institutions would also provide the basis for significant improvement in the Federal Reserve's monetary statistics.

Proposed Federal Reserve program

At the same time that the Board of Governors is seeking universal reserve requirements legislation, it is also considering a program that includes:

- Restructuring and reducing reserve requirements on demand deposits.
- Charging for services provided by the Federal Reserve.
- Compensating for required reserve balances held at Federal Reserve Banks.
- Transferring part of the Federal Reserve surplus to the Treasury during the changeover.

The proposed changes in reserve requirements on demand deposits are expected to partially offset the current burden of membership. In turn, the transfer from Federal Reserve surplus is expected to offset any Treasury revenue loss resulting from the program's implementation.

Competitive equity between member banks and nonmember institutions requires that all users of Federal Reserve services be treated equally. Explicit pricing provides a mechanism by which Federal Reserve services can be offered on an equal basis to all institutions in the same market area. At present, however, member banks effectively pay for Federal Reserve services by maintaining reserve balances. By imposing explicit charges for services without compensating member banks on the balances they hold, the Federal Reserve would effectively increase the burden of membership.

In the absence of universal reserve requirements, payment of interest on reserves

forms an integral part of the Federal Reserve's program. Charging for Federal Reserve services without compensating member banks for the balances they hold would only aggravate the burden of membership. Should Congress enact the proposed universal reserve requirements legislation, however, the Board would reevaluate the need to charge for services and pay interest on reserves in light of the legislation's effect on membership, monetary control, and operations of the payments system.

Reserve requirement actions—The Board would move in two phases, both to simplify the structure of reserve requirements and to reduce the reserve requirements on net demand deposits of member banks. The proposed schedule for reserve requirements on net demand deposits is shown in the accompanying table. A reserve city bank would be redefined as a bank with net demand deposits in excess of $600 million, compared with the current $400 million definition.

Such action would release an estimated $5 billion in reserves. Of that, about $2.75 billion would be released in the initial phase of the program. Only member banks with net demand deposits of less than $2 million would be unaffected by these actions. This is because reserve requirements on net demand deposits at banks of that size are already at the statutory 7 percent minimum.

Charges for services—In moving toward explicit pricing of Federal Reserve services, the Board intends to be competitive in setting prices so as to encourage innovations in the private sector, to promote competitive equality by charging all users of Federal Reserve services in the same market area on an equal basis, and to ensure a continued efficient functioning of the nation's payment mechanism.

Plans call for the proposed schedule of charges, which would be submitted for public comment, to be implemented in two phases. In the first phase, charges would be imposed on Federal Reserve payments services, such as check processing, check transportation, and automated clearing house services. Annual revenue to the Federal Reserve in the first phase has been estimated at about $225 million. That estimate is based on the current volume of services the Federal Reserve provides, and the associated costs, direct and indirect.

In the second phase, charges would be imposed for such services as shipment of currency and coin to member banks, transfer and settlement of reserve balances, and purchase, sale, safekeeping, and clearing of securities. Charges would not be imposed on such governmental-type functions as bank examinations, monetary policy, and some activities associated with the issuance and

Under the Federal Reserve program, member bank reserve requirements on net demand deposits are restructured and reduced in two stages

Current		Proposed			
		First phase		Second phase	
Net demand deposits *(millions)*	Reserve requirement *(percent)*	Net demand deposits *(millions)*	Reserve requirement *(percent)*	Net demand deposits *(millions)*	Reserve requirement *(percent)*
$ 0-2	7.00	$ 0-10	7.00	$ 0-200	7.00
2-10	9.50	10-200	9.50	200-600	10.00
10-100	11.75	200-600	12.50	over 600	16.25
100-400	12.75	over 600	16.25		
over 400	16.25				

destruction of Federal Reserve notes. Once both phases have been implemented, estimated annual revenue to the Federal Reserve would be about $410 million.

In setting the price structure, the Board of Governors would be guided by the following general principles:

1. Services for which the Federal Reserve charges would usually be priced separately by geographic area, activity, and class of work done. The price schedule, based on explicit per-item charges, would be as simple as possible. Prices would be adjusted as the Federal Reserve gained experience with service charges and saw the effects of pricing in the markets in which it operates.

2. No significant changes would be made in the services provided at the time charges are initially imposed. Once charges are in place, however, some Federal Reserve offices might find revision of their operating policies and prices is needed to maintain competitiveness and to enable the System to maintain a basic level of service nationwide.

3. All users in the same pricing zone (typically a Federal Reserve Bank, branch, or office area) would pay the same price for the same service. Identical services, however, might not be provided in all areas.

Guidelines for the pricing of Federal Reserve check and automated clearing house services include the following:

- Charges for check services would be imposed on depositing institutions.
- Prices for interoffice items deposited locally might include both a local processing and a uniform national charge.
- Charges for automated clearing house items could either be imposed on ACH associations or directly on financial institutions using the service.
- Prices for automated clearing house services would be set to encourage the use of the services and to reflect mature volumes of use.

Once charges on payments services are imposed, all depository institutions with third-party payment powers can deposit intraregional checks and drafts at Federal Reserve regional check processing centers—whether the institution is a member of the Federal Reserve or not. Commercial banks that are not members can deposit intraregional checks and drafts at RCPCs now. Nonmembers would be charged the same as members, and settlement would still be through reserve accounts of member banks.

When all service charges have been implemented and the effect on membership and the functioning of the payments mechanism has been evaluated, the Board expects to give all nonmember depository institutions full and direct access to Federal Reserve payments services, as well as other operational services of the Federal Reserve.

Compensation for reserve balances—As it began charging for services, the Federal Reserve would phase in payment of interest on reserve balances. To the extent nonmembers hold balances at Federal Reserve Banks, they will be treated the same as balances held by members. Compensation to nonmembers will be figured on the same basis as compensation to members.

In the first phase, interest at 2 percent would be paid on required reserve balances held at Federal Reserve Banks. First-phase interest payments to member banks would total an estimated $430 million. In the second phase, the interest rate on the first $25 million of required reserve balances would be one-half percentage point less than the average return on the Federal Reserve System's portfolio, valued at book. The rate paid on required balances over $25 million would be maintained at 2 percent.

Based on the System's average return in 1977, a rate of 6 percent would be paid on the first $25 million. Based on current levels of member bank deposits, the estimated second-phase interest payments to member banks would be about $765 million annually.

There would be a limit, however, on the amount that could be paid to member banks after deductions for service charges. As part of the program, the Board of Governors has submitted a second piece of legislation that would set the maximum amount of the net compensation (interest payments less service charges) at 7 percent of the Federal Reserve's

net earnings before payment of interest on required reserve balances.

Effect on Treasury revenues— While the program would reduce the burden of membership, the Board is also aware of the program's likely effect on Treasury revenues. Nearly all of the Federal Reserve's net earnings are now paid to the Treasury. Technically these payments are interest on Federal Reserve notes. In 1977, for example, the Federal Reserve paid the Treasury $5.9 billion—98.2 percent of its net earnings.

In the absence of universal reserve requirements, the loss in Treasury revenues over the three years while the program is implemented is expected to run about $575 million. Over this transition period, the Federal Reserve would transfer a like amount from the surplus accounts of Federal Reserve Banks to the Treasury, leaving Treasury revenues unaffected during the changeover.

Without the program, continuation of the decline in membership seems inevitable. The current rate of attrition would lead to a loss in Treasury revenues of about $80 million in four years. If the rapid rate of attrition experienced in New England became prevalent, the loss to the Treasury could be as much as $200 million.

Once the program was fully implemented, however, the cost to the Treasury above what it would have been without the program should be minimal. Revenues to the Treasury could, in fact, increase if the program led to increased membership in the Federal Reserve—and with universal reserve requirements, gains for the Treasury could be even greater.

Summary

Because of growing competitive inequities between member banks and other financial institutions, banks are withdrawing from Federal Reserve membership at an increasing rate. Continued erosion of membership threatens to undermine the nation's financial system and the ability of the Federal Reserve to implement monetary policy.

Under the proposal submitted by the Federal Reserve, competitive equality among financial institutions would be enhanced. All depository institutions would be made subject to the same reserve requirements on transaction accounts and all users of Federal Reserve services would be charged on an equal basis.

Membership in the Federal Reserve would be made less burdensome by restructuring and reducing reserve requirements on net demand deposits and by paying interest on required reserve balances at Federal Reserve Banks.

Liquidity ratios weakened at district banks in 1977

Elijah Brewer

Operations of member banks in the Seventh Federal Reserve District last year showed credit conditions had a far-reaching effect on bank liquidity. Response of member banks to strong loan demand resulted in declines in liquidity for banks in all sizes.

Liquidity—the ability of a bank to meet claims presented for immediate payment—reflects the distribution of assets among loans and securities. Because claims on a bank's cash can often exceed expected money inflows, prudent banks must keep a cushion either of cash and securities that can be readily converted into cash or of adequate borrowing capacity.

There has to be enough cushion to cover not only expected withdrawals and adverse clearings but also unpredictable deposit drains. It is also important for the bank, as a going concern, to keep a cushion that will cover withdrawals and clearings arising from deposits to be put on the books later, especially deposits created by new loans that are not accompanied by increases in cash inflows. This includes provision for takedowns that result from both the implementation of current loan commitments and the servicing of any additional loan demand that the bank decides to meet.

Just what the liquidity cushion should be, however, seems related to bank asset size.

Both sides of the balance sheet

The liquidity position of a bank, like that of any business, has two dimensions—the amount of cash it can raise and the amount it might have to raise. Liquidity, then, encompasses both sides of a bank's balance sheet, the liabilities that represent claims on assets and the assets themselves. This is the rationale underlying such basic measures of bank liquidity as the ratio of loans to deposits and the ratio of cash plus Treasury securities and obligations of U.S. agencies to deposits.

The ratio of loans to deposits indicates the extent to which banks have already used up their available resources to accommodate the credit demand of their customers—the presumption being that the higher the ratio the less able a bank will be to make more loans. The ratio of loans to deposits, however, shows nothing about a bank's other assets that might be converted into funds, either to meet deposit withdrawals or to make more loans. The ratio of cash plus Treasury and agency securities to deposits is a more accurate indicator of the amount of funds still readily available.

The inclusion of cash in the numerator does not mean these funds are an unencumbered source of liquidity. Rather, the far greater part of a bank's cash represents reserves required to support deposits. To satisfy reserve requirements and provide a working balance, member banks must have vault cash or deposits with the Federal Reserve. When its legal reserves have been used, a bank must replace them almost immediately, the only exception being any reserves freed by reduction in deposits.

In the absence of offsetting credits, a bank must look to other sources of liquidity that will restore its reserves to the required amount within the settlement period. The reserve settlement period for member banks

runs from Thursday through the next Wednesday. During the settlement week, banks have to hold average daily reserve balances as large as average daily required reserves. Because of this, the ratio of Treasury and agency securities to deposits is conceptually better than the ratio that includes cash in the numerator.

All such ratios, however, are inadequate measures of the actual state of bank liquidity. Actual liquidity depends on several factors:

- Composition of the loan portfolio.
- Composition and maturity distribution of the security portfolio.
- Secondary markets (or the lack of secondary markets) for various types of assets.
- Structure and relative volatility of deposits.
- Composition and maturity of liabilities other than deposits.
- Any seasonality in loan demands and deposit flows.
- Access to money market funds.

The ratio of loans to deposits is deficient as a measure of bank liquidity. Implicit in the ratio is the assumption that loans are not liquid assets. This assumption, that loans cannot be quickly converted into cash with little or no risk of capital loss, is not right. There is considerable liquidity in the loan portfolio of most banks.

On the one hand, some assets classed as loans, such as bankers' acceptances and FHA and VA-guaranteed mortgages, are readily marketable. Development of active secondary markets for some types of assets has changed the significance of an aggregate ratio of loans to deposits. Because some types of loans can be sold with little risk of capital loss, they provide an additional source of liquidity.

On the other hand, maturing loans can provide large cash inflows—and amortized loans are accounting for more of the total loans outstanding. Liquidity in the loan portfolio depends, then, on the overall composition of loans—their maturity, marketability, and degree of diversification.

Security portfolios also provide a source of liquidity—how much depending on the composition of the portfolios. With the broad market for both Treasury securities and obligations of U.S. agencies, all these government issues can be easily converted to cash with little risk of capital loss. There is no risk if the securities are short-term.

Markets for state and local obligations, on the other hand, are much more limited, and the credit ratings of borrowers are lower. Because the quality of municipal issues varies and considerable information is required for investment decisions, these securities may not be a dependable source of liquidity.

The pledging of securities against some types of deposits reduces liquidity in ways that are not reflected in either the ratio of loans to deposits or the ratio of government obligations to deposits. Pledged to secure government deposits, even short-term Treasury securities are not available to meet liquidity needs.

The change in the composition of deposits in recent years has had an important bearing on the need for liquidity. Despite secular swings, time deposits have usually shown more stability over the short run than demand deposits. As a result, with the growth in time and savings deposits, some banks may feel comfortable with fairly small holdings of liquid assets. Whether total deposits are actually more stable, however, given the large volume of time and savings deposits and the greater importance of fixed maturity certificates as a component of deposits, is not entirely clear. In a time characterized by growing sensitivity to differences in interest rates, some types of time deposits can be highly volatile, especially large negotiable CDs. The shift in the composition of deposits has made some banks more watchful of fluctuations in financial markets. It has also made their liquidity dependent on the composition of their deposits, and especially the maturity distribution of time deposits.

Seasonal fluctuations in loans and deposits, or either of them, create problems of both asset and liability management that some banks, especially small and medium-sized banks, seem unable to accommodate without impairing their liquidity positions.

Traditional measures of liquidity do not accurately reflect the impact of such recurring pressures on the liquidity positions of individual banks. In planning for seasonal changes in their liquidity needs, some banks can rely on money market sources for funds. Others, however, with few alternative sources, tend to rely mainly on government securities.

Some banks have turned to liability sources of liquidity in recent years both to meet deposit withdrawals and to satisfy loan demands. The implications of liabilities used as sources of liquidity are complex. The liabilities banks manage allow them to make loans and investments without selling other assets or, depending on deposit inflows, to provide the funds needed for liquidity purposes. As a result, traditional liquidity ratios have become less accurate measures of bank liquidity. Changes in the overall averages of the ratios may, nevertheless, provide broad implications of whether it is easier or harder for most banks to make the adjustments needed to meet potential deposit drains and loan demands.

Shifts in composition of assets

The increase in credit demands last year at banks in the Seventh District was accompanied by shifts in the composition of bank loans and securities. As a proportion of total deposits, bank holdings of all types of securities declined. The average ratio of loans to deposits increased. Although consumer loans also increased, real estate loans accounted for most of the gain in gross loans.

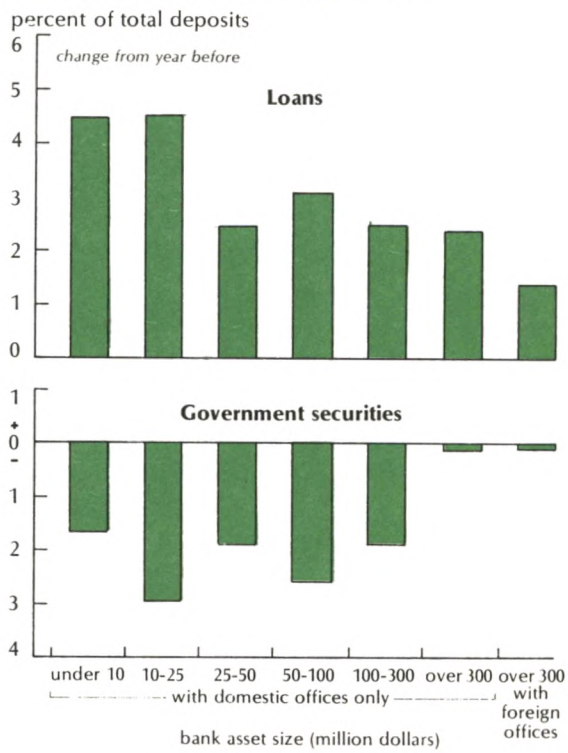
Reflecting stronger growth in loan demand, holdings of government securities declined as a proportion of total deposits at the average district member bank. Bank holdings of government issues usually follow a contracyclical pattern, declining when loan demands increase. On the basis of the ratio of federal government securities to deposits, the liquidity of the average member bank in the district declined from 22.8 percent in 1976 to 19.9 percent in 1977.

Contrasting with the declining proportion of government securities in bank assets, then, was the growing importance of bank loans. For the average member bank in the district, loans increased from 56.0 percent of total deposits in 1976 to 59.6 percent in 1977. As loans to private borrowers cannot be turned into cash quickly, this shift in the structure of bank assets represented a drift away from liquid, low-risk assets.

Within loan portfolios, structural changes exemplified by the rising importance of long-term mortgage loans also marked a loss of liquidity at banks in the district. As a percentage of total loans, real estate loans rose about a point, to 36.2 percent. At the same time, federal funds sold—an important source of liquidity for some banks—declined from 7.6 percent of total loans in 1976 to 6.2 percent in 1977.

The biggest shifts in the structure of loans and securities was at small and medium-sized

Banks' liquidity ratios weakened in the Seventh District in 1977, but change was less at large banks



banks. The average ratios at the largest banks in the district were essentially unchanged from 1976.

Pressures on smaller banks

There was deterioration last year in the ratio of government securities to deposits at banks of all asset sizes in the district. However, the most notable change was at small and medium-sized banks. While large banks felt the effect of the light loan demand from large businesses, smaller banks faced heavy loan demand and tight liquidity positions.

The deterioration was most pronounced at the banks with total assets between $10 million and $25 million. At these banks, the ratio of government securities to deposits declined from 25.0 percent in 1976 to 22.1 percent in 1977. By contrast, the liquidity ratio at large banks with foreign branches and subsidiaries declined by less than 1 percentage point, to 15.4 percent.

Similarly, the ratio of loans to deposits showed a comparatively small loss of liquidity at large banks with foreign branches and subsidiaries. With loans growing less relative to deposits than loans at other banks, the average ratio of loans to deposits at the largest banks in the district rose only about 2 percentage points, to 77.1 percent. That was compared with a 9 percentage point increase, to 54.5 percent, at banks on the other end of the scale, those with total assets of less than $10 million.

Loans to deposits showed a high degree of consistency in their implications for liquidity of all sizes of banks. The declines in the relative importance of government securities in bank portfolios was general throughout the district. This decline, however, was greater where loan volumes were low. Since banks with low loan-to-deposit ratios—the small and medium-sized banks—are also banks least able to meet their liquidity needs in other ways, the shift in the structure of bank assets greatly increased the vulnerability of smaller banks to a liquidity squeeze.

Large banks can substitute liquidity on the liability side of the balance sheet for liquidity on the asset side. On the liability side, they can trade day to day in, for example, CDs or federal funds. On the asset side, they can trade, again daily if need be, in government securities, especially Treasury issues. Smaller banks, being less able to substitute money market funds for liquid assets, are probably affected more by sudden deposit withdrawals, especially if they have already had a substantial expansion of loans.

Canadian–U.S. auto pact—13 years after

Jack L. Hervey

Canada and the United States agreed in 1965 to remove the duties on most automotive parts and equipment traded between the two countries. The agreement—known as the Automotive Products Agreement—recognized the similarity of the two markets in which practically the same automobiles are made and sold.

Although manufacturers in this country also make vehicles in Canada, until this agreement was reached, the two markets were separated by tariff restrictions. At the time of the agreement, in fact, the Canadian government was promoting development of the automotive industry in Canada by further trying to encourage production for export.

Objectives of the agreement were:

- To consolidate the two markets into a single automotive market, allowing increased benefits of specialization and large-scale production.
- To remove trade barriers, allowing industries in both countries to participate equitably in expansion of the market.
- To provide political and economic conditions that would allow market forces to determine patterns of investment, production, and trade in vehicles and parts on both sides of the border.

Though progress has been made, achievements in reaching these objectives still fall short of what both sides had hoped for 13 years ago.

Relations with Canada

Canada and the United States have long been close trading partners. About a fifth of the goods imported into the United States usually come from Canada, which, in turn, usually buys about a fifth of the goods exported from the United States. The two countries also rely heavily on each other as sources of investment. Nearly a fourth of U.S. direct foreign investment abroad is in Canada.

But for Canada, with an economy only about a tenth the size of the U.S. economy, these relationships are far more important than for the United States. Trade with the United States typically accounts for over two-thirds of Canada's foreign trade. And where Canadians own less than a fifth of the direct foreign investment in the United States, Americans account for four-fifths of the direct foreign investment in Canada.

The result has sometimes been friction between the two countries—Canadians feeling their economy is dominated too much by

Measured either in terms of employment or value added, the automotive industry is far more important in the Seventh District than in any other Federal Reserve district. The industry employs about an eighth of the manufacturing workers in these five states—Illinois, Indiana, Iowa, Michigan, and Wisconsin. Production of parts and vehicles accounts for roughly an eighth of the value added in manufacturing. In Michigan, it accounts for about a third of the jobs in manufacturing and a third of the manufacturing value added.

More than half the value added in the industry nationwide is accounted for at plants in the Seventh District. And close to three-fifths of the nation's automotive employment is in the district. More than two-fifths of the automotive jobs are in Michigan, and that state accounts for over a third of the nation's value added by the automotive industry.

Because of the importance of this industry in the Seventh District and the close ties between the industry in this country and the industry in Canada, automotive trade between the two countries remains a matter of continuing importance in the district.

the United States. Several times, to strengthen its position relative to the United States, Canada has adopted restrictive policies to protect its industries from trade with the United States. Just such a policy helped bring about the auto pact in 1965.

Canadian auto trade

Until the agreement was reached—up until 1968, in fact—the United States had a substantial surplus in its automotive trade with Canada. Canadian auto plants did not produce as many models as plants in the United States. And being operated mostly by subsidiaries of U.S. companies, they made models almost identical to those in the United States. Models that were not made in Canada were imported from the United States.

Canadian buyers, however, had to pay higher prices for roughly equivalent cars, whether the cars were produced here or there. Because of the smaller market in Canada, production runs were shorter there. Canadian plants had never reached the volume of output that had brought greater efficiencies and lower production costs at U.S. plants. To protect its industry from the more efficient U.S. industry, Canada taxed imported vehicles and parts. The tariff on assembled vehicles taken into Canada was 17.5 percent. Tariffs on some components ranged up to 25 percent.

Duties were imposed from both sides of the border. If anything, they were higher on this side. Tariffs on foreign cars brought into the United States ranged up to 25 percent. The tariffs, however, were aimed mainly at European and Japanese imports. Few Canadian-made vehicles came into this country. Almost identical cars were produced here at lower cost.

Duty remission program

To build up its own automotive industry, Canada initiated a duty remission program in the early 1960s. Some of the import duties on U.S. vehicles and parts sold in Canada would be returned to Canadian manufacturers that increased the Canadian value added in the vehicles and parts they exported. For every dollar increase in value added over a base period beginning in 1961, the manufacturer earned a dollar remission in import duties.

The program had the effect Canadians wanted. Investment in the Canadian auto industry increased. Although Canadian production also increased, there was no particular concern among auto makers in this country. They were also the big Canadian producers.

But some makers of parts in the United States felt the pinch. They charged that the program amounted to a subsidy on exports to the United States. Under the law of this country, the U.S. government had to respond to a Canadian export subsidy by imposing enough additional duty on vehicles and parts imported from Canada to offset the subsidy given Canadian producers.

Against this backdrop, the United States and Canada negotiated the automotive products trade agreement. The duty remission program was discontinued, and the stage was set for restructuring Canada's auto industry and unifying the industries in the two countries.

Restrictions in the agreement

Certain types of special purpose vehicles, such as fire engines, were excluded from the agreement, as were some types of equipment, such as tires. Generally, however, the two countries agreed not to impose duties on vehicles and the original equipment parts that went into their manufacture.

The main safeguard for U.S. companies has been a requirement that at least half of any vehicles or components imported from Canada be made either there or in the United States. This prevents a third country from shipping nearly completed cars into Canada, where with little more assembly work, the cars could be made ready for shipment to the United States as a final product, free of duty.

Safeguards for Canada are more restrictive. For a vehicle to be taken into Canada duty free, it has to be imported by a Canadian

manufacturer of that type vehicle, the types covered by the agreement being cars, trucks, and buses. The manufacturer must have produced that type vehicle all four quarters of the 1964 model year and every year since. Three-fourths of the manufacturer's sales of that type vehicle, moreover, has to be made in Canada. And the proportion of the value added in Canada must at least equal the value added in 1964.

In addition, the Canadian government asked manufacturers in that country for assurances that they would work to increase the Canadian part of the production shared by the two countries. These assurances, made outside the provisions of the agreement itself, nevertheless, became integral to it. Covered by letters of understanding by Canadian subsidiaries of U.S. companies, they committed manufacturers to increase the Canadian value added in automobiles by 60 percent of any year-to-year increase in sales over the 1964 base. The requirement for trucks and buses was set at 50 percent. These separate agreements also committed manufacturers to increase the Canadian value added in auto production at least $260 million (in Canadian dollars or $241 million in U.S. dollars at the 1968 exchange rate) over the 1964 level.

The agreement is still in effect, as are the letters of understanding between manufacturers and the Canadian government. The agreement contains no termination date, though either government can withdraw from the agreement on a year's notice.

The agreement is not a "free trade" agreement. It comes closest to that in the United States, where, with some exceptions, vehicles and parts can come in from Canada duty free. In Canada, duty-free entry still depends on conditions that promote development of the Canadian auto industry, as for example, entry of vehicles and parts only through Canadian manufacturers.

Effects of the agreement . . .

One of the first effects of the agreement was to bring the industry into a concerted effort to unify production in the two countries. As a result, there was considerable restructuring of the industry, especially in Canada, where auto makers began concentrating production of certain parts and particular models. Although fewer models were made in Canada, more vehicles were produced there overall. Models that were not made there could easily be brought in from the United States.

Much the same changes were going on in the United States, the difference being that because the industry was much bigger in this country, the changes were not as important here.

The upshot was that where equivalent models built in the two countries had been similar but not quite the same, they soon became almost identical. In recent years, in fact, Canada has been the sole source for some models.

. . . on production . . .

The agreement had been keyed, of course, to promotion of the industry in Canada. But auto production there was already on the rise. As in the United States, demand for vehicles was expanding. Spurred by the duty remission program, there had

Automotive production expands faster in Canada

Period	United States		Canada	
	Cars	Trucks and buses	Cars	Trucks and buses
	(thousands of units)			
1960-64 average	6,907	1,322	434	84
1965-69 average	8,485	1,806	803	232
1970-74 average	8,182	2,407	1,087	302
1975	6,740	2,251	1,057	390
1976	8,538	2,946	1,143	501
1977	9,294	3,424	1,167	603

SOURCE: *Annual Report of the President to the Congress on the Operation of the Automotive Products Trade Act*, January 1976, and March 1977. *Automotive News*, selected issues.

already been a surge in investment in Canada's automotives.

Canada's share of the combined production in the two countries increased from 4.6 percent in 1960 to 6.7 percent in 1964. By 1970, its share had climbed to 11 percent. In 1974 and 1975, when higher oil prices sparked demand for more gas-efficient cars, Canadian plants, being more geared for small cars than U.S. plants, saw their share of production jump to 13.6 percent. Since then, the Canadian share has eased back, probably to around 12 percent.

The Canadian share of truck production has continued a fairly steady uptrend, rising from 5.5 percent in 1960 to 6.5 percent in 1965 to 15 percent in 1977.

. . . trade . . .

The Canadian auto market expanded rapidly in the early 1960s. Unit sales increased 64 percent from 1960 through 1964. But automotive production increased even faster, expanding 69 percent. Growth in sales in Canada slowed considerably after that, increasing only 19 percent from 1964 to 1968. But production continued even faster, expanding 75 percent. Where Canadian production was slightly less than domestic sales in 1960, it exceeded sales by 23,000 units in 1964, 400,000 units in 1968, and 660,000 units in 1971.

Most of this extra production was exported to the United States, where sales began pulling ahead of production early in the 1970s. Reflected in the change was the shift in plant facilities as Canadian subsidiaries of U.S. companies expanded their value added in production to increase their share of the total.

As a result of the agreement, automotive trade between the two countries has increased dramatically. Last year, U.S. exports of automotive products to Canada reached $8.4 billion—a tenfold increase since 1965. But U.S. imports from Canada reached $9.1 billion—a fortyfold increase.

Until 1968, the United States had a trade surplus with Canada in vehicles and parts.

Canadian-U.S. automotive trade surges

SOURCE: U.S. Department of Commerce and the Ninth Annual Report of the President to the Congress on the Operation of the Automotive products Trade Act of 1965.

Since then, except for 1974 and 1975, when the recession brought a sharp drop in demand for vehicles in the United States, the surplus has been in Canada's favor.

Canada's surplus is based on the much larger export of assembled vehicles. The United States still has a surplus in automotive parts, the size of which accounts largely for its trade surplus with Canada in 1974 and 1975.

The Arab oil embargo in 1973 and 1974, the fourfold increase in prices of imported oil, and the decline in business activity in the United States in 1974 and early 1975 slowed auto purchases here much more than in Canada. Canadian purchases of vehicles in 1974 and 1975, in fact, were well above earlier levels, as were imports of parts and assembled vehicles from the United States.

Sales in the United States, on the other hand, were off sharply, unit sales averaging 16 percent less in 1974 and 1975 than in 1972 and 1973. Imports increased only marginally during the recession, and even that increase was due mainly to Canadian plants being oriented more to the production of small cars.

Dependence of Canadian plants on

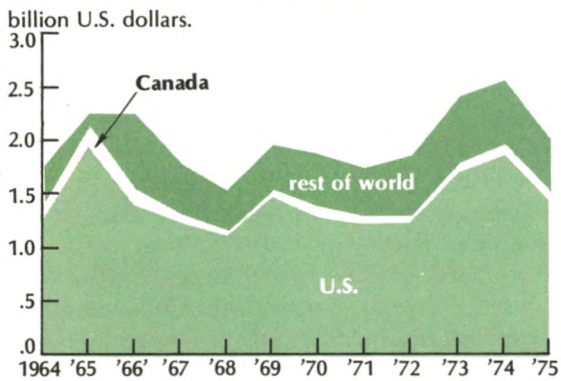
manufacturers in the United States for parts, in fact, has prompted independent manufacturers of parts in Canada to seek additional protection from parts imported from the United States.

. . . investment . . .

The automotive trade agreement did not, in itself, seem to have brought any great surge in investment in Canada's industry. There was a substantial increase in spending on automotive plant and equipment in the early 1960s. But that was due mostly to investments made to take advantage of the duty remission program. There was substantial investment later in the 1960s and early 1970s by independent manufacturers of parts and commercial vehicles. But Canada experienced no increase in the proportion of total investment in the two countries by the four largest auto makers.

Net new investment of these four companies in Canada totaled $125 million in 1964. That was 8.7 percent of the investment in automotives in the two countries that year. The Canadian share peaked the next year at $194 million. That was 9 percent of the 1965 total. Most of this spending in the year of the agreement had already been committed, however. Ten years later, Canadian plants accounted for only 6 percent of the net new investment these companies made in the two countries.

Capital expenditures on plant and equipment in Canada continue modest relative to the U.S.*



*Estimated capital expenditures on plant and equipment by General Motors, Ford, Chrysler, and AMC in the U.S., Canada, and the rest of the world.

SOURCE: Automotive Task Force, Review of the North American Automotive Industry, Canadian Department of Industry, Trade and Commerce, April 1977.

. . . and employment and labor costs

Employment in the automotive industry has fluctuated widely in both countries since the agreement went into effect. Some of the swings have, of course, come with shifts in demand for vehicles. Generally, however, workers have fared better in Canada than in the United States, the movement in employment there tending more consistently upward.

In 1975, for example, when the recession put a squeeze on auto sales, employment in automotives in the United States dropped to a level 8 percent lower than in 1965. In Canada, the number employed in the auto industry was 22 percent higher than when the agreement went into effect. Annual employment in the auto industry in the United States for 1970-74 averaged 1 percent higher than for 1965-69. In Canada, the average was 16 percent higher.

Though most of the difference is due to Canada's increased share of auto production, some of it may be due to the lower productivity in Canadian plants. Measured as value added per manhour, productivity is higher in both countries than when the agreement was made. But according to estimates by the U.S. International Trade Commission, the number of manhours needed to assemble a vehicle in Canada can be up to 6 percent more than in the United States.

This difference, in turn, helps account for the higher unit cost of vehicles assembled in Canada. Furthermore, Canadian assembly line workers draw pay on a par with their counterparts in this country. As a result, the difference in productivity adds further to the higher unit cost of vehicles assembled in Canada. But because of a different occupational mix in the automotive industries in the two countries, the average wage of auto workers in Canada still remains lower than in the United States, though the difference is narrowing.

Employment in automotive products manufacturing increases

Period	United States	Canada
	(annual average in thousands)	
1964	752.9	69.3
1965-69	861.0	84.6
1970-74	869.8	97.8
1975	774.1	98.9
1976	850.6	n.a.
1977	890.6	n.a.

SOURCE: *Tenth Annual Report of the President to the Congress on the Operation of the Automotive Products Trade Act of 1965.* The U.S. Department of Labor. *Statistics Canada.*

With overall production costs higher in Canada, prices of comparable cars are also higher there—though, here too, the difference is narrowing. The difference would have narrowed faster if buyers could have imported duty-free cars from the United States without having to go through Canadian manufacturers. In 1965, the suggested retail price of a typical medium-sized car ranged up to about a third higher in Canada than in the United States. In 1976, the difference was still about a sixth higher.

Automotive price differentials narrow for some models[1]

Year	United States	Canada	Canadian price differential over U.S. price
	(U.S. dollars)[2]		*(percent)*
1965	4,486	5,825	29.8
1974	6,542	7,853	20.0
1975	7,701	9,313	20.9
1976	7,898	9,201	16.5

[1]Manufacturer's suggested retail price of the same car in the United States and Canada. Prices quoted are for a two-door sedan with an eight-cylinder engine and comparable standard equipment. Price differentials vary according to make and model.

[2]Canadian prices are converted to U.S. dollars for December of the model year introduced. In U.S. cents per Canadian dollar, the rates are: 1965, 92.5; 1973, 100.06; 1974, 102.25; 1975, 98.63.

SOURCE: *Tenth Annual Report of the President to the Congress on the Operation of the Automotive Products Trade Act of 1965.*

Though employment in the auto industry overall has increased during the past 13 years, disruptive effects of the agreement show up in the adjustment assistance given to workers that lost their jobs to workers in the other country. The agreement committed both governments to assist affected workers, whether unemployed or threatened with the need to relocate. Under this commitment, which ran through 1968, assistance was given to 2,500 workers in the United States (63 percent of them in Michigan and Wisconsin) and 3,100 in Canada.

Assistance to U.S. workers continued after 1968. Following the surge in oil prices in 1974 and the increase in demand for small cars, most of which were imported, 110,000 workers filed applications for adjustment assistance. About half of the applications were filed on grounds that jobs had been lost to imports from Canada, the other half claimed losses due to imports from Europe and Japan. About half of all the applications were approved by the U.S. Labor Department.

Conclusion

After 13 years, the original hope that the automotive products agreement would lead eventually to a free-trade arrangement between the two countries has clearly not been fulfilled. There has been some success, the biggest accomplishment being the unification of the auto industry. Production in Canada has been reorganized. Plants there are more efficient than 13 years ago, and the difference in auto prices has narrowed. The agreement, however, still insulates the Canadian auto industry from the more efficient U.S. industry.

If the agreement were to be renegotiated, as has been proposed on both sides of the border, there would be pressure for the Canadians to give up some of their safeguards. While the safeguards would probably, at best, be given up only over a long period and would most likely take further restructuring of the Canadian industry, the change would be toward a more efficient automotive industry for the Canadians.