

FEDERAL RESERVE BANK OF NEW YORK



MONTHLY REVIEW

AUGUST 1965

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The Business Situation

The domestic economy posted a good gain in the second quarter, and early indications of July developments point to continued strength. The solid expansion in business activity in the April-June period brought over-all output to a seasonally adjusted annual rate of \$658 billion, higher than had generally been expected. Notwithstanding the fact that steel stocks probably will be run off over the latter portion of the year, there are good indications that business activity will remain on an uptrend over the balance of 1965. Businessmen's spending plans, which point to rising outlays for plant and equipment in the months ahead, may become somewhat firmer against the background of recently released highly buoyant second-quarter profits reports; Federal tax and expenditure programs should provide a more expansionary impact on activity than was the case in the first half of the year; state and local government expenditures should advance further; and consumers appear to be in a mood to continue spending their rising incomes. Thus, providing there is no major steel strike, prospects seem good for realizing or perhaps even exceeding somewhat the "standard" forecast, made at the start of the year, of \$660 billion for 1965 as a whole.

It is, of course, much too early to draw any firm conclusions about the prospects for still further advances during the early months of 1966. To be sure, it is entirely possible that the expected rundown of steel stocks may spill over into the first part of 1966. Moreover, the recently enacted increase in social security taxes will drain more from the private economy's income stream than will be restored through the second round of excise tax cuts scheduled for January 1. On the other hand, it is clear that the Administration's recent decisions with regard to Vietnam will result in additional Federal spending in the months ahead. The potentialities of stimulus from other areas of demand such as plant and equipment spending and residential construction will, of course, become easier to assess as the

months unfold. It is reassuring that the Administration has indicated its continued concern with developing feasible fiscal policies that could be used to help sustain balanced over-all economic expansion should the need arise. In this connection, the Chairman of the President's Council of Economic Advisers recently stated that "we have the means, and I believe the will, to adjust the budget if that should be necessary, in a way which will contribute to the steady and adequate expansion of private purchasing power in the economy". The widespread confidence that much has been learned in recent years about the uses of fiscal policy to encourage business expansion will itself be a positive influence on business and consumer spending decisions.

While the prospects for continued economic expansion are bright, there remains the danger that such gains might spark further upward pressure on prices. The wholesale price index rose by 0.7 percentage point in June, the largest monthly advance since January 1964, and at 102.8 per cent of the 1957-59 average, the index was at a new high for the fourth consecutive month and 2.8 per cent above June 1964. Most of the June advance was attributable to higher prices for processed foods and meats, although prices for industrial commodities continued on their uptrend of the past several months, with price increases for hides and textile products supplying much of the pressure. The industrial component of the wholesale price index apparently edged up again in July amid reports of further price increases for hides. In the consumer sector, prices rose by 0.5 percentage point, the largest month-to-month advance in two years, and the index at 110.1 per cent of the 1957-59 average was 1.9 per cent above the figure in the corresponding month a year earlier. The June increase in the over-all level of consumer prices took place despite lower prices for new automobiles and air conditioners, on which excise taxes had been reduced retroactive to May 15, and was due mainly to sharply higher food

prices. The substantial June run-up in food prices apparently reflected unfavorable weather conditions that are also expected to contribute to additional food price rises in July. This expected upward pressure, however, may be offset to a somewhat greater degree than was the case in June by lower prices for a large number of items on which the excise tax reduction did not take effect until June 22, after the data for the June index had been collected.

PATTERNS OF DEMAND IN THE SECOND QUARTER

Gross national product (measured at a seasonally adjusted annual rate) rose by \$9.2 billion in the second quarter, according to preliminary estimates of the Commerce Department (see Chart I). The second quarter advance was, of course, markedly less than the unusually strong rise of \$14.2 billion in the previous quarter, and would have been still less had there not been a sharp turnaround in net exports, which had been depressed by

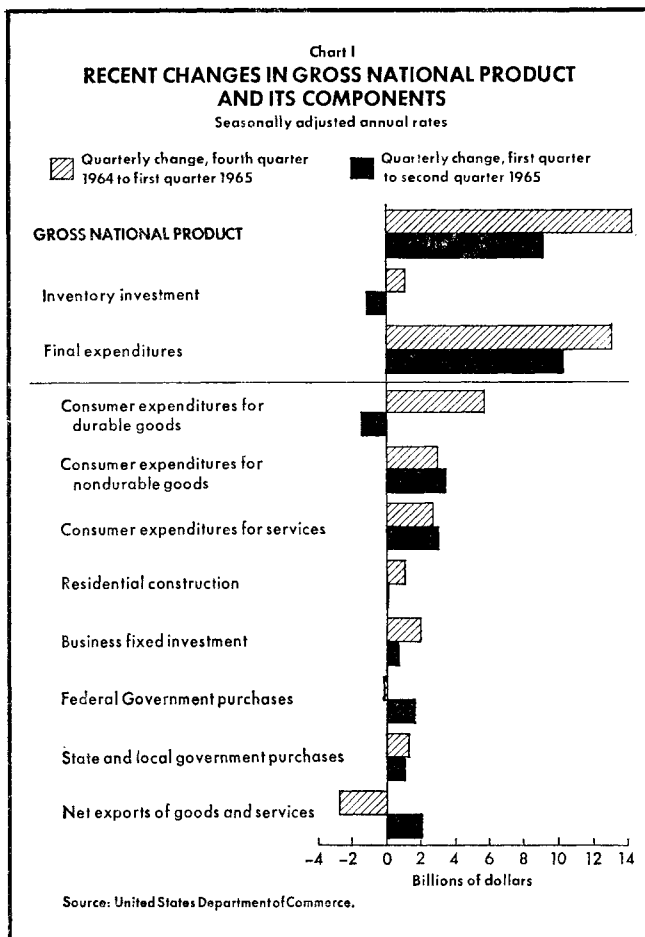
dock strikes in the January-March period. Even after allowing for this development, however, the slowing in business activity that did occur from the first to the second quarter seems to be largely accounted for by the absence of the special circumstances stimulating the steel and automobile industries that had served as a temporary boost to over-all output in the opening months of the year.

The only two major GNP sectors that showed declines in the second quarter were consumer purchases of durable goods and business inventory investment. In the consumer sector, the decline largely reflected the fact that automobile sales returned to a more "normal" level in the second quarter following the first-quarter surge. Consumer spending on nondurables and on services, in contrast, both rose by more than the increases in the first quarter, indicating that consumers continued to be in an over-all spending mood. In July, unit sales of new automobiles chalked up another strong performance, while the dollar volume of total retail sales apparently moved past the record set in May.

The decline in the rate of inventory investment during the second quarter can be traced in good part to recent fluctuations in the pace of steel stockpiling. With steel users facing the possibility of a steel strike after April 30, the rate of stockpiling was heavy in the fourth quarter of last year and in the first quarter of this year. While steel inventory building continued after the interim labor settlement was reached in April, the pace was much less rapid. That industries generally have continued to maintain close over-all control on their inventory positions is suggested by the further decline in inventory-sales ratios during the second quarter.

Among other sources of demand, business spending for plant and equipment moved up by \$0.7 billion in the second quarter, right in line with the gain called for by the latest Commerce Department-Securities and Exchange Commission survey. This rise in capital outlays, a good part of which was apparently devoted to an expansion of capacity, has been reflected in a further continuous rise in industrial and commercial construction. Residential construction outlays, which turned up in the first quarter following movements on the down side in the three previous quarters, rose very slowly in the April-June period. Fore-shadowing indicators of residential activity, however, continue to hold out the possibility of some further modest strength in this sector. Thus, nonfarm housing starts were up a bit in June, with the average for the second quarter some 4 per cent higher than in the opening quarter of the year (see Chart II).

In the government sector, outlays were up by \$2.6 billion in the second quarter, with purchases at both the Federal and the state and local levels showing appreciable



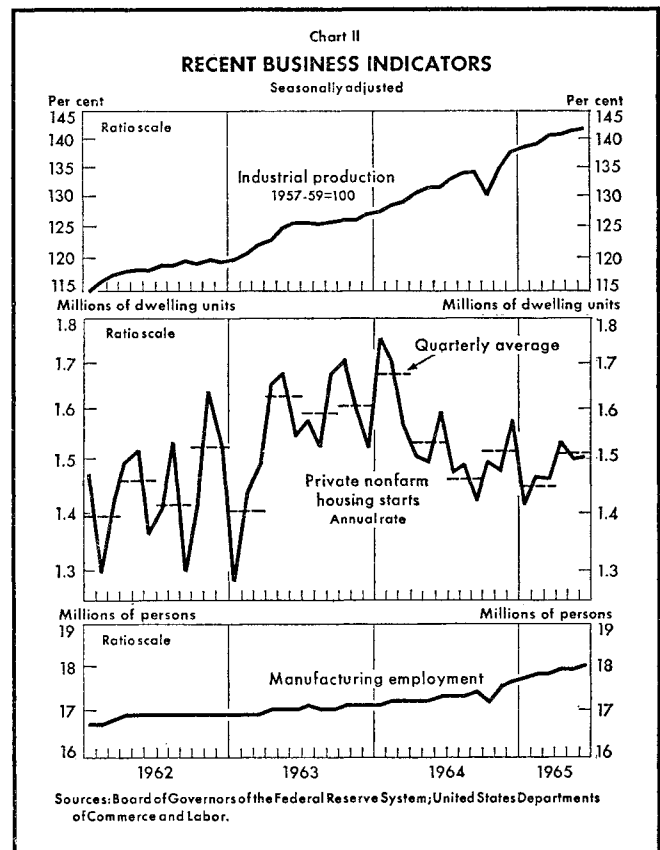
gains. Even with the rise, however, Federal purchases were still little changed from the level of a year earlier. In the months ahead, however, Federal expenditures on goods and services are scheduled to expand further, in part, owing to stepped-up outlays for defense. The recently enacted increase in social security benefits will add substantially to Federal cash disbursements in the last half of this year and thus add to private spending.

PRODUCTION, ORDERS, AND EMPLOYMENT

The Federal Reserve Board's seasonally adjusted index of industrial production rose in June for the eighth consecutive month, advancing by 0.5 percentage point to 141.9 per cent of the 1957-59 average (see Chart II). The June gain for the most part reflected a considerable further expansion in output of industrial materials, although production of consumer goods and equipment also showed small advances. The step-up in materials output, in turn, was apparently largely attributable to further increases in seasonally adjusted steel production. Weekly data for July indicate that automobile workers assembled new cars at a pace close to the seasonally adjusted annual rate of 9.6 million units of the month before, despite shutdowns at some plants for model change-over toward the latter part of the month. Steel ingot producers, on the other hand, increased their already advanced rate of activity in an effort to work down their order backlogs before a possible strike that could take place on or after September 1.

New orders booked by manufacturers of durable goods in June were essentially unchanged following a decline in the month before. New bookings in the transportation equipment producing industry fell off in June, largely because of a sharp cutback in the often erratic and volatile flow of orders registered by producers of aircraft and parts. Excluding the transportation equipment producing industry, new orders for hard goods actually posted a modest advance. At the same time, the backlog of unfilled orders held by such producers moved up for the eighteenth month in a row, and the ratio of unfilled orders to shipments, at 2.8, was over 5 per cent above the figure in the corresponding month a year ago.

The number of persons on nonfarm payrolls rose by



208,000 (seasonally adjusted) in June to 60.3 million, a solid 2.2 million above the reading for the corresponding month last year. Employment gains were widespread in June, with a particularly large increase in the manufacturing sector as producing and fabricating industries added significantly to the number of workers on their payrolls (see Chart II). In July, according to the household survey, total employment expanded for the ninth month in a row, and the gain was considerably greater than the concurrent increase in the civilian labor force. As a result, the overall unemployment rate moved down 0.2 percentage point to 4.5 per cent, the lowest reading since October 1957, with all major worker groups sharing in the improvement.

Recent Banking and Monetary Developments

Total bank credit advanced substantially in the second quarter. To be sure, the rise was less rapid than in the unusually strong January-March period, primarily reflecting some slowdown in the pace of over-all economic expansion following the exceptional first quarter. Nonetheless, the advance held above the average recorded earlier in the current business upswing. Business loan demand remained the dominant factor in the general strength of bank credit. Despite scattered evidence of somewhat less liberal lending conditions, funds extended to business borrowers rose during the quarter at a rate more than half again as fast as in 1964. At the same time, commercial bank deposit liabilities, created during the quarter as a counterpart to the over-all credit extended by these banks, continued to grow more rapidly than the nation's output of goods and services. A larger than average rise in the Treasury's cash balance, which closed the fiscal year ended June 30 at a record level, contributed to this growth in total deposits. The public's holdings of deposits along with other liquid instruments, however, also rose to new highs. As a result, for the quarter as a whole, the ratio of total liquid assets held by the non-bank public to gross national product moved up again, virtually equaling the highest level of the past ten years.

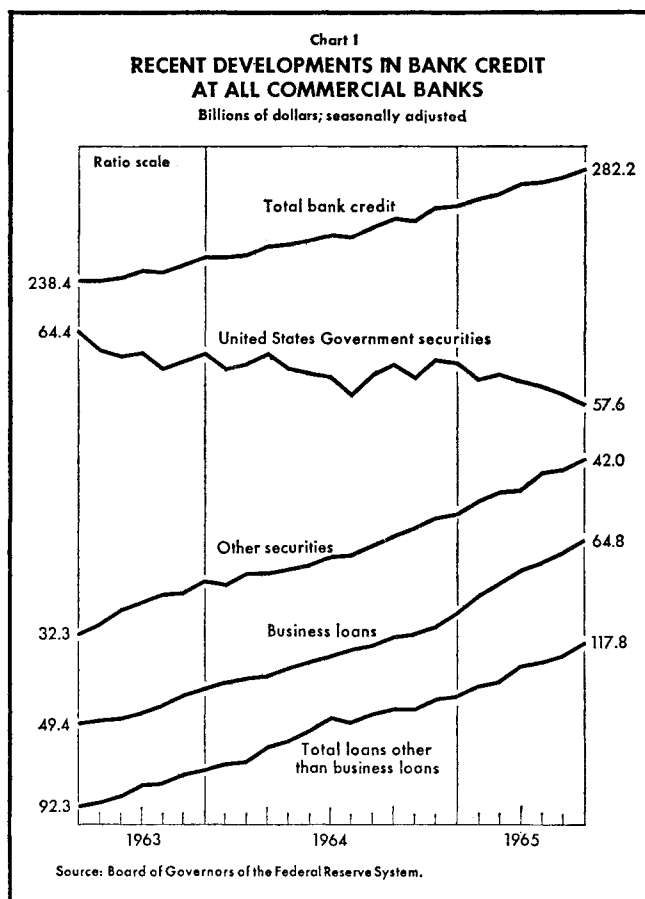
COMMERCIAL BANK CREDIT AND LIQUIDITY

Total loans and investments at all commercial banks increased at a 9.7 per cent seasonally adjusted annual rate in the second quarter, following an exceptionally rapid 12.4 per cent rate of advance in the first quarter. Over the first six months of the year as a whole, bank credit grew at an annual rate of 11 per cent, compared with the generally steady 8 per cent per annum rate of growth that had characterized the preceding four years of general business expansion.

As has been generally true since mid-1963, the second-quarter advance in bank credit was accounted for almost entirely by a further expansion of loans. Indeed, banks again ran down their holdings of Government securities during the quarter (see Chart I), but continued to acquire other

securities (primarily obligations of state and local governments) so that total investments were about unchanged.

Among the loan categories, gains were widespread. Loans to commercial and industrial borrowers were up sharply during the quarter, at an annual rate of 18 per cent at all commercial banks. While this was less than the extraordinary 26 per cent annual rate of increase in such loans in the first quarter, which stemmed in part from enlarged foreign lending, it remained appreciably above

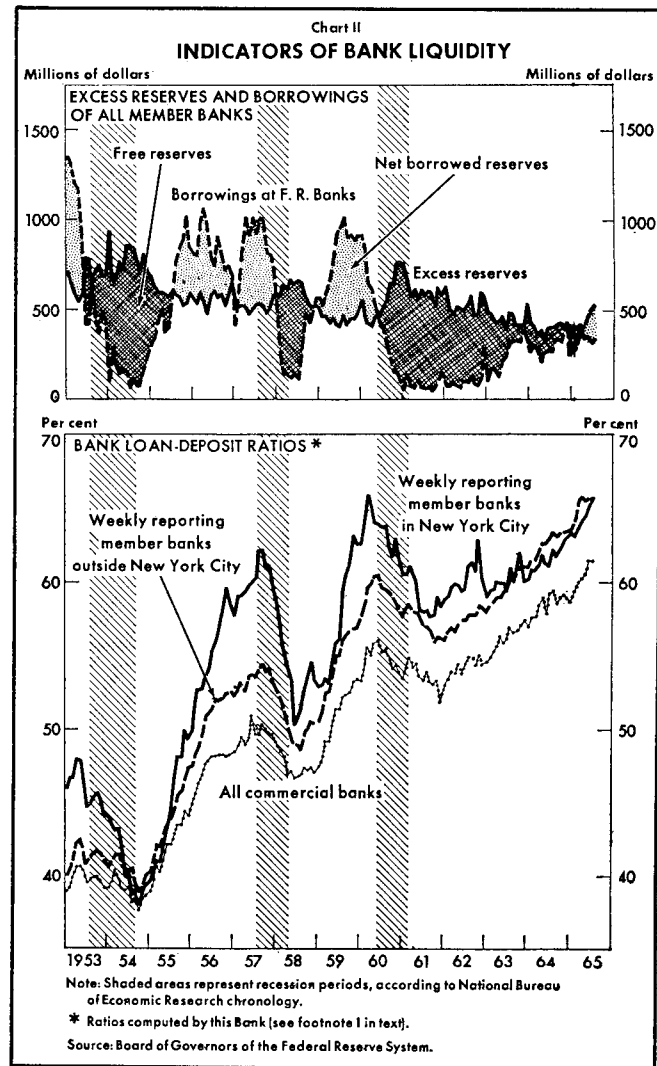


the 12 per cent rise experienced during 1964. In part, this strength in business loans probably reflects the need for financing the further buildup in steel inventories that occurred during the second quarter. Loan demand extended far beyond steel-using industries, however, as businesses generally sought funds to finance their expanding capital investment projects. There was also heavy borrowing over the June dividend and tax dates, a good part of which apparently remained on bank ledgers for a longer period after the mid-June period had passed than had been the case in other recent years.

With bank asset growth continuing to take place mainly in loan portfolios, loan-deposit ratios¹ moved further upward in the second quarter. At the end of June, the ratio for all commercial banks as a group stood at 61 per cent (see Chart II), the highest level since the end of World War II. The willingness of bankers to channel a larger proportion of their funds into loans appears to be related to a number of factors. Portfolio management has become more effective. In addition, the ability of banks to cover their liquidity needs through purchase of Federal funds, and sometimes through sale of negotiable certificates of deposit, has probably made them willing to live with higher loan-deposit ratios. These developments, together with a rise in the proportion of deposits held in relatively nonvolatile forms, such as savings accounts, would tend to permit banks to operate with average loan-deposit ratios that would have represented considerable stringency in times past. Moreover, a long period of relatively stable growth in economic and financial activity has also encouraged the acceptance of relatively high loan-deposit ratios.

Nevertheless, there appears to have been some concern developing on the part of bankers about declines in liquidity positions, and there have been increasingly frequent reports that some banks are introducing or enforcing more selective lending policies in an attempt to prevent their portfolios from becoming unbalanced. To the extent that banks give closer attention to their loan-deposit ratios, further increases in total bank credit may begin to be split more evenly between loans and investments, rather than consisting almost entirely of loans as has been the case since mid-1963. If this were to happen, businesses and individuals could find it somewhat less easy to obtain accommodation in the months ahead than earlier in the current business expansion.

¹ Loan-deposit ratio equals loans (adjusted), less loans to brokers and dealers, as a percentage of total deposits (less cash items in process of collection).



DEPOSITS AND BANK RESERVES

With bank credit continuing to expand, total commercial bank deposits and the private money supply also moved up during the second quarter. During the first two months of the year, time deposits were rising at an unusually rapid rate in the wake of the November rise in maximum interest rates permissible under Regulation Q, while the daily average money supply showed no net growth. In the March-June period, however, the money supply grew at a seasonally adjusted annual rate of 3.9 per cent, only moderately below the 4.3 per cent expansion that had occurred in 1964. Over the same March-June

period, time deposits grew at an 11.2 per cent annual rate, moving back to a rate of expansion actually slightly below the 12.8 per cent rise in 1964.

Private deposits probably would have grown more rapidly during the first half of the year had it not been for an abnormally large buildup in Treasury deposits. This buildup reflected both lower Federal cash outlays and larger tax receipts than had been foreseen at the beginning of the year. Treasury deposits always show very wide fluctuations over the year in response to differences in timing of expenditures and tax receipts. Typically, Government deposit balances are low at the end of a calendar year and then rise appreciably during the spring and early summer to a peak around midyear. This year the size of the upswing was much larger than in other recent years. By the end of June, Treasury balances at commercial banks had reached a postwar record of \$11.9 billion, up \$3.5 billion from the end of March and almost double the balance at the end of 1964. Addition of this growth in public deposits (after some estimate to allow for normal seasonal movements) to the advance in private deposits produces a series for total deposits that more adequately reflects the large size of the recent expansion in bank credit.

Supporting the growth of deposits, bank reserves increased further in the second quarter. The rise in member bank nonborrowed reserves mainly reflected Federal Reserve net open market purchases of \$1,509 million of Government securities over the three months from the beginning of April to the end of June. These purchases more than offset reserve drains stemming from movements of market factors, primarily a \$629 million decline in the gold stock and a \$872 million net increase in currency in circulation. The rise in the average level of nonborrowed reserves for the quarter as a whole was, however, not so great as the buildup of reserves required to support deposit growth. Member banks thus found it necessary to resort to the Federal Reserve "discount window" on a larger scale to meet their reserve needs, with total borrowings averaging \$501 million in the second quarter, compared with an average of \$373 million in the first quarter. With these increased borrowings, the net borrowed reserve position of member banks (borrowings less member bank excess reserves) rose to an average of \$157 million for the quarter as a whole. This is the first calendar quarter since 1960 in which average borrowings of the banking system have exceeded average excess reserves (see Chart II).

Monographs on Banking Structure and Bank Mergers

The Board of Governors of the Federal Reserve System has announced the availability of two monographs in a series of studies on banking structure.

The first monograph, entitled *Bank Mergers & The Regulatory Agencies: Application of the Bank Merger Act of 1960*, by George R. Hall and Charles F. Phillips, Jr., presents an analysis of bank merger decisions for the period May 13, 1960-December 31, 1962. It compares the policies of the three Federal banking agencies regarding bank mergers and examines the similarities and differences between the standards applied in the Bank Merger Act of 1960 and those applied under the Clayton Act.

The second monograph, entitled *Banking Market Structure & Performance in Metropolitan Areas: A Statistical Study of Factors Affecting Rates on Bank*

Loans, by Theodore G. Flechsig, presents the results of a statistical analysis of the relationship between various structural characteristics of commercial banking markets in major metropolitan areas and bank performance as measured by rates charged on short-term business loans.

Requests for copies of the monographs should be sent to the Division of Administrative Services, Board of Governors of the Federal Reserve System, Washington, D. C. 20551. Remittances should accompany orders and be made payable to the Board of Governors of the Federal Reserve System. Price of first monograph \$1.00 each—85 cents each when 10 or more copies are sent to the same address. Price of second monograph 50 cents each—40 cents each when 10 or more copies are sent to the same address.

The Money and Bond Markets in July

The money market was generally firm throughout July, though the degree of firmness was somewhat greater in the first half of the month than in the second. Federal funds traded predominantly at $4\frac{1}{8}$ per cent, with small amounts trading as high as $4\frac{1}{4}$ per cent in the early part of the period. At the same time, member bank borrowings from the Reserve Banks ranged around \$600 million. Later, Federal funds traded as often at 4 per cent as at $4\frac{1}{8}$ per cent, and member bank borrowings receded. Treasury bill rates rose until around midmonth, as the high cost of financing inventories led to increased professional offerings of bills. Thereafter, bill rates declined in response to a good investment demand and an increased willingness of dealers to hold inventories with the approach of the Treasury's August refinancing.

Prices of Treasury notes and bonds fluctuated in a narrow range during the month. Activity was light, and the atmosphere was cautious. Investment interest was dampened by a sizable flow of corporate offerings and by the proximity of the Treasury's refinancing of August maturities, announced after the close of business on Wednesday, July 28.

In the corporate bond market, prices were initially firm in the wake of the successful distribution of a very large volume of new issues in June. Subsequently, the sizable flow of new corporate bonds offered in July encountered mixed receptions, and reoffering yields on issues marketed late in the month were slightly above June levels. In the tax-exempt market, demand picked up and dealers were able to work down their inventories despite large offerings of new issues.

THE MONEY MARKET AND BANK RESERVES

Nationwide net reserve availability and member bank borrowings fluctuated somewhat more widely on a week-to-week basis during July than in other recent months, but the over-all tone of the money market remained generally firm. Federal funds traded mainly at $4\frac{1}{8}$ per cent through the first half of the month, and on occasion there was some trading at $4\frac{1}{4}$ per cent. During the second

half of the month, however, it was as common for Federal funds to trade at 4 per cent or below as at $4\frac{1}{8}$ per cent (see left-hand panel of the chart on page 163). Rates quoted by major New York City banks on new call loans to Government securities dealers were predominantly in a $4\frac{3}{8}$ to $4\frac{5}{8}$ per cent range through the middle of July, while rates on renewal call loans were quoted most frequently in the $4\frac{3}{8}$ to $4\frac{1}{2}$ per cent range—in both cases about $\frac{1}{8}$ of a percentage point higher than the range of such rates quoted in other recent months. After midmonth, rates dropped back to a predominant range of $4\frac{1}{4}$ to $4\frac{1}{2}$ per cent on new loans and of $4\frac{1}{4}$ to $4\frac{3}{8}$ per cent on renewals. Offering rates for new time certificates of deposit issued by leading New York City banks were essentially unchanged over the month. On July 1, the major finance companies lowered their offering rates of 30- to 89-day directly placed paper by $\frac{1}{8}$ of a percentage point to $4\frac{1}{8}$ per cent. Their offering rates on 90- to 270-day paper, however, were maintained at $4\frac{1}{4}$ per cent. Rates on bankers' acceptances were reduced by $\frac{1}{8}$ of a percentage point late in the month, as dealer inventories of acceptances dropped to relatively low levels. The new rates on 90-day prime acceptances were set at $4\frac{1}{4}$ per cent bid- $4\frac{1}{8}$ per cent offered.

At the beginning of the month, banks in the central money market were under substantial reserve pressure. In part, this pressure reflected heavy demands for loans by Government securities dealers whose inventories were swollen by allotments of the June one-year bill as well as by bills which had been pressed on the market by commercial banks following the midyear bank statement date. At the same time, banks sought to avoid accumulating large reserve deficiencies over the long Independence Day weekend. While Federal Reserve open market operations offset the bulk of the reserve drain stemming from the preholiday increase in currency in the hands of the non-bank public, Federal funds were in particularly strong demand at $4\frac{1}{8}$ per cent. A small amount, however, traded at $4\frac{1}{4}$ per cent. Member bank borrowings from the Reserve Banks rose, but net reserve availability was changed little from the preceding week.

Over the middle two statement weeks of the month, there

Table I
CHANGES IN FACTORS TENDING TO INCREASE OR DECREASE
MEMBER BANK RESERVES, JULY 1965

In millions of dollars; (+) denotes increase,
(-) decrease in excess reserves

Factor	Daily averages—week ended				Net changes
	July 7	July 14	July 21	July 28	
"Market" factors					
Member bank required reserves*	- 264	+ 244	+ 108	+ 196	+ 284
Operating transactions (subtotal)	- 536	- 76	+ 478	- 266	- 400
Federal Reserve float	+ 40	+ 165	+ 323	- 532	- 4
Treasury operations†	+ 215	- 273	- 62	+ 4	- 86
Gold and foreign account	- 233	+ 16	- 33	+ 12	- 298
Currency outside banks*	- 805	+ 52	+ 143	+ 228	- 382
Other Federal Reserve accounts (net)‡	+ 277	- 36	+ 106	+ 23	+ 370
Total "market" factors	- 800	+ 168	+ 586	- 70	- 116
Direct Federal Reserve credit transactions					
Open market instruments					
Outright holdings:					
Government securities	+ 310	- 63	- 221	+ 33	+ 59
Bankers' acceptances	-	- 1	- 2	- 2	- 5
Repurchase agreements:					
Government securities	+ 408	+ 45	- 485	+ 116	+ 84
Bankers' acceptances	+ 1	- 2	- 12	-	- 13
Member bank borrowings	+ 96	+ 38	- 195	+ 54	- 7
Other loans, discounts, and advances...	- 2	- 9	- 1	- 2	- 14
Total	+ 813	+ 8	- 916	+ 198	+ 103
Excess reserves*	+ 13	+ 176	- 330	+ 128	- 13
Daily average level of member bank:					
Total reserves, including vault cash*...	22,171	22,103	21,665	21,597	21,884§
Required reserves*	21,822	21,578	21,470	21,274	21,536§
Excess reserves*	349	525	195	323	348§
Borrowings	582	620	425	479	527§
Free reserves*	- 233	- 95	- 230	- 156	- 179§
Nonborrowed reserves*	21,589	21,483	21,240	21,118	21,358§

Note: Because of rounding, figures do not necessarily add to totals.
* These figures are estimated.
† Includes changes in Treasury currency and cash.
‡ Includes assets denominated in foreign currencies.
§ Average for four weeks ended July 28, 1965.

was a marked divergence between statistical reserve availability and money market conditions. In the statement week ended July 14, there was a sharp increase in nationwide net reserve availability. "Country" banks, however, built up their excess reserves to an unusual degree in the first week of their new statement period, reducing the supply of Federal funds to the market. Consequently, the money market was quite firm, and member bank borrowings from the Reserve Banks rose to \$620 million for the week. In contrast, the money market was distinctly less taut in the statement week ended July 21, even though net borrowed reserves rose to \$230 million. Country banks—now in the second week of their settlement period—worked down their excess reserves to \$142 million from \$482 million in the previous week. At the same time there was an improvement in the basic reserve positions of the money center banks, and Federal funds traded in volume

at both 4 per cent and 3¾ per cent after the weekend. Thus, even with the sharp drop in over-all net reserve availability, member bank borrowings from the Reserve Banks declined to \$425 million.

The money market continued free of stress in the final statement week of the month. The major New York City banks developed a substantial reserve surplus, and there was a good flow of Federal funds at both 4⅛ per cent and 4 per cent. Member bank borrowings were also moderate at \$479 million.

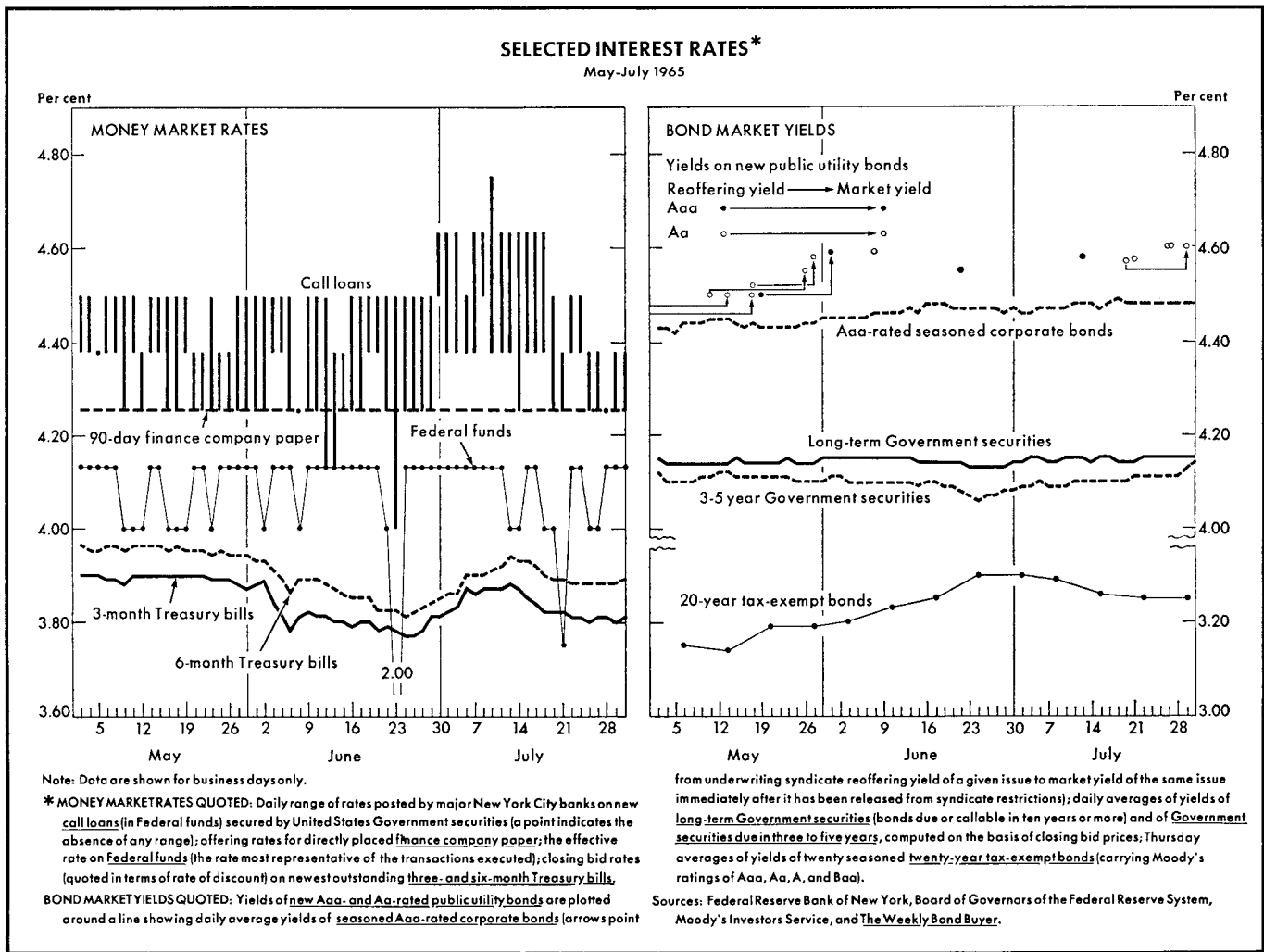
Over the month as a whole, "market" factors absorbed \$116 million of reserves, while System open market operations provided \$125 million. The weekly average of System outright holdings of Government securities rose by \$59 million from the final statement week in June through the last week in July, and average System holdings of Government securities under repurchase agreements increased by \$84 million. Average net System holdings of bankers' acceptances, both outright and under repurchase agreements declined by \$18 million during the month. From Wednesday, June 30, through Wednes-

Table II
RESERVE POSITIONS OF MAJOR RESERVE CITY BANKS
JULY 1965

In millions of dollars

Factors affecting basic reserve positions	Daily averages—week ended				Average of four weeks ended July 28*
	July 7	July 14	July 21	July 28*	
Eight banks in New York City					
Reserve excess or deficiency(-)†.....	23	6	15	13	14
Less borrowings from Reserve Banks...	181	172	43	7	101
Less net interbank Federal funds purchases or sales(-)	338	481	244	- 429	159
Gross purchases	930	922	866	660	845
Gross sales	592	441	622	1,089	686
Equals net basic reserve surplus or deficit(-)	- 497	- 648	- 272	435	- 246
Net loans to Government securities dealers	929	654	696	479	690
Thirty-eight banks outside New York City					
Reserve excess or deficiency(-)†.....	18	15	13	- 3	11
Less borrowings from Reserve Banks...	118	157	119	177	143
Less net interbank Federal funds purchases or sales(-)	512	670	756	581	630
Gross purchases	1,293	1,227	1,324	1,240	1,271
Gross sales	781	556	568	658	641
Equals net basic reserve surplus or deficit(-)	- 611	- 812	- 862	- 761	- 762
Net loans to Government securities dealers	285	402	426	304	354

Note: Because of rounding, figures do not necessarily add to totals.
* Estimated reserve figures have not been adjusted for so-called "as of" debits and credits. These items are taken into account in final data.
† Reserves held after all adjustments applicable to the reporting period less required reserves and carry-over reserve deficiencies.



day, July 28, System holdings of Government securities maturing in less than one year rose by \$131 million, while holdings of issues maturing in more than one year remained unchanged.

THE GOVERNMENT SECURITIES MARKET

An atmosphere of caution prevailed in the market for Treasury bills during the first half of July. The taut money market conditions and associated high costs of inventory financing at the beginning of the period led to an expansion in professional offerings early in the month. The resulting upward movement in bill rates (see left-hand panel of the chart) was accelerated by sizable bill sales on the part of commercial banks following the June 30 statement

date. Investment demand began to improve at the higher rate levels around midmonth, however, and as professional selling tapered off, a better atmosphere developed. At the same time, the more comfortable money market conditions after midmonth made it less expensive for dealers to finance their positions. In this environment, Treasury bill rates again moved lower—spurred in part by professional expectations that the Treasury's August financing would be likely to generate additional demand.

At the last regular weekly auction of the month, held on July 26, average issuing rates were 3.803 per cent for the new three-month issue and 3.873 per cent for the new six-month bills, about 2 and 5 basis points higher than the average issuing rates at the last weekly auction in June. The \$1 billion of new one-year bills sold in the July 27

auction at an average issuing rate of 3.875 per cent, compared with 3.807 per cent for a comparable issue sold on June 24. A more hesitant tone developed in the wake of the July auction and persisted through the end of the month, as reinvestment demand from the refunding proved disappointing. The newest outstanding three- and six-month bills were bid at rates of 3.81 per cent and 3.89 per cent, respectively, at the close of the month.

In the market for Treasury notes and bonds, the downward drift in prices that had begun toward the end of June continued in early July as investor activity remained light. (The right-hand panel of the chart shows the rise in bond yields that accompanied this decline in prices.) A temporary firming in market tone appeared at the end of the first week, partly in response to press discussion regarding the tenability of the current interest rate levels and the improved atmosphere in the corporate bond market. Activity once again subsided, however, and buyers became more price conscious. A contributing factor to the renewed caution was the high volume of new corporate issues being marketed combined with the relatively wide rate differential between Government and corporate bonds. As the month progressed, market activity was further restrained by reports of a deterioration in the Vietnamese situation and by the approach of the Treasury's August refinancing. Discussion of the possibility that an intermediate issue might be offered led to declines, during July, of generally $\frac{1}{2}$ to $\frac{3}{4}$ in prices of issues maturing in two to five years. Prices of most longer issues also closed lower over the month.

After the close of business on Wednesday, July 28, the Treasury announced that holders of \$7.3 billion of $3\frac{7}{8}$ per cent notes maturing on August 13—about \$3.2 billion of which was publicly held—would have the opportunity to exchange their holdings for either new 4 per cent 18-month notes or reopened 4 per cent $3\frac{1}{2}$ -year bonds. The new 4 per cent notes, which will mature on February 15, 1967, were offered at 99.85 to yield about 4.10 per cent. The reopened 4 per cent bonds of February 15, 1969 were offered at 99.45 to yield about 4.17 per cent. Subscription books were open from August 2 through August 4, with payments for and delivery of the securities scheduled for August 13. While the terms of the financing were considered attractive, the trading activity that developed was only moderate, and prices tended to ease further after their initial adjustment to the refunding terms.

OTHER SECURITIES MARKETS

Attention in the markets for both corporate and tax-exempt securities in July was dominated by the substantial

volume of new issues that were offered during the month. Activity in both markets was light at the beginning of the month as investors awaited the terms of the new issues, the major portion of which was scheduled to be offered later in the month. In the corporate market, a better tone emerged at the beginning of the month as the market assessed the successful sale of the preceding month's heavy volume of offerings. Subsequently, investors became selective, resisting efforts of underwriters to price new issues aggressively. This investor resistance restrained underwriter bidding and led to slightly higher yields on offerings late in the month. A \$150 million negotiated offering of the Baa-rated debentures of a leading merchandising chain was quickly sold out at a reoffering yield of 4.90 per cent in late July.

In the tax-exempt market, an element of caution prevailed early in the period, reflecting the slow sales of older issues and still sizable dealer inventories. Around mid-month, however, the demand for new offerings and for unsold balances of old offerings picked up substantially as commercial banks began to show renewed interest in tax-exempt securities. Later, investor interest became more selective, but dealers were able to hold down their inventories, despite the substantial supply of new issues coming into the market. Over the month as a whole, the average yield on Moody's seasoned Aaa-rated corporate bonds rose by 1 basis point to 4.48 per cent. During the same period, the average yield on *The Weekly Bond Buyer's* series for twenty seasoned tax-exempt issues (carrying ratings ranging from Aaa to Baa) declined by 5 basis points to 3.25 per cent. (These yield series are shown in the right-hand panel of the chart.)

The volume of new corporate bonds publicly floated in July amounted to an estimated \$535 million, compared with \$720 million in June 1965 and \$230 million in July 1964. The largest publicly offered new corporate bond issue of the month consisted of the offering—mentioned above—by a leading merchandising chain of \$150 million of $4\frac{7}{8}$ per cent sinking fund debentures nonrefundable for five years and maturing in 1990. New tax-exempt flotations totaled about \$980 million, as against \$885 million in June 1965 and \$835 million in July 1964. The Blue List of tax-exempt securities advertised for sale closed the month at \$756 million, compared with \$834 million at the end of June. The largest new tax-exempt bond flotation during the month was a \$175 million municipal Baa-rated offering. It consisted of \$111 million of general purpose bonds reoffered to yield from 2.80 per cent in 1967 to 3.565 per cent in 1995 which were quickly sold, and \$64 million of bonds maturing in 1966-70. The latter were awarded at a net interest cost of 3.499 per cent, but reoffering was delayed pending settlement of a legal question.

Interregional Interest Rate Differentials

By RICHARD G. DAVIS AND LOIS BANKS*

The various regions of the United States in many important respects form a single, well-nigh perfectly unified capital market. In this "national" market, transactions in comparable securities take place on identical terms at different points of the compass, and borrowers located in different areas, but otherwise identical as to creditworthiness, are accommodated on an equal basis. Obviously, a national market exists for securities of the Federal Government and its agencies as well as for such private money market instruments as Federal funds, bankers' acceptances, prime commercial paper, and negotiable certificates of deposit. By and large, the securities of state and municipal governments and of the larger and better known corporations also can be regarded as trading in a national market. For these widely accepted securities, the going rate of interest on a given issue (or on comparable issues) is the same in California as in New York, while the price received for a new issue does not depend upon the borrower's location or state of incorporation—except to the extent that these are directly associated with risk or tax factors. For securities trading in the national market, interregional interest rate differentials, when they exist at all, tend to be very quickly eliminated as buyers seek the lowest available price while sellers seek the highest.

For some important types of debt instruments, in contrast, there are persistent regional differences in going interest rates. In magnitude, to be sure, these differentials are considerably smaller than the interest rate differentials which can arise between the capital markets of different nations. Moreover, the scattered evidence available sug-

gests that these interregional differentials are considerably smaller today than they were in the late nineteenth and early twentieth centuries. Nevertheless, by the standards of the modern capital market, where differences of a few cents per thousand dollars can be of consequence, these interregional rate differentials seem by no means negligible.

The persistence of regional interest rate differentials over very long periods and the tendency for particular regions to show persistently higher or lower than average rates for a variety of different instruments strongly suggest that differences in regional interest rates stem at least in part from underlying differences in the balances between regional supplies and demands for capital. Interregional rate differentials would be expected to set in motion flows of funds from regions of relative capital abundance to regions of relative capital scarcity, and there is ample evidence that such flows are in fact important. Nevertheless, for a variety of reasons—some legal, some institutional, and some related to investor attitudes toward the risks of investing in geographically remote areas—interregional flows of capital have not been large enough to offset completely the differences in intraregional balances of supply and demand for capital.

This article examines the characteristics of interregional rate differentials in the United States and seeks to explain why these differentials do persist. The significance of the findings for the efficiency of interregional capital allocation is also briefly assessed.

CHARACTERISTICS OF INTERREGIONAL RATE DIFFERENTIALS

The available statistical evidence on the existence and extent of interregional interest rate differentials is confined to a few series on savings deposit and savings share

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rates, mortgage rates, and rates on bank loans to business. Interregional rate differentials may well exist in other markets, however, such as the market for consumer credit. Indeed, if the rate differentials for which data are available do stem basically from differences in regional supply-demand balances, then it would not be surprising to find regional rate differentials in other markets as well. Nevertheless, the "hard" evidence on regional rate differentials is pretty well limited to the markets discussed in this article.

Interregional interest rate differentials in six different series are plotted in Chart I for the 1949-64 period. Note that the chart shows *maximum* regional differentials, that is, for a given instrument the difference between the highest regional interest rate prevailing at a given time and the lowest regional rate prevailing at that time. The geographic identities of the highest and lowest rate regions are not necessarily the same from one period to the next. Never-

theless, as discussed below, there has in fact been a tendency for highest and lowest average rates to be located rather consistently in particular parts of the country.

The top panel of Chart I records interregional differentials in average rates paid on commercial bank time and savings deposits and in average rates paid on savings and loan shares. The middle panel shows differentials in average rates paid on conventional mortgages for single-family homes and differentials in the yield equivalents of prices paid in the so-called "secondary market" for mortgages on one- to four-family dwellings insured by the Federal Housing Administration (FHA). Finally, the bottom panel shows regional differentials for average rates charged by commercial banks on short-term loans to business for loans within the \$1,000 to \$10,000 size-class, the smallest sized class for which data are available, and differentials for the largest sized class, loans of \$200,000 and over. The ranges of the differentials plotted in the

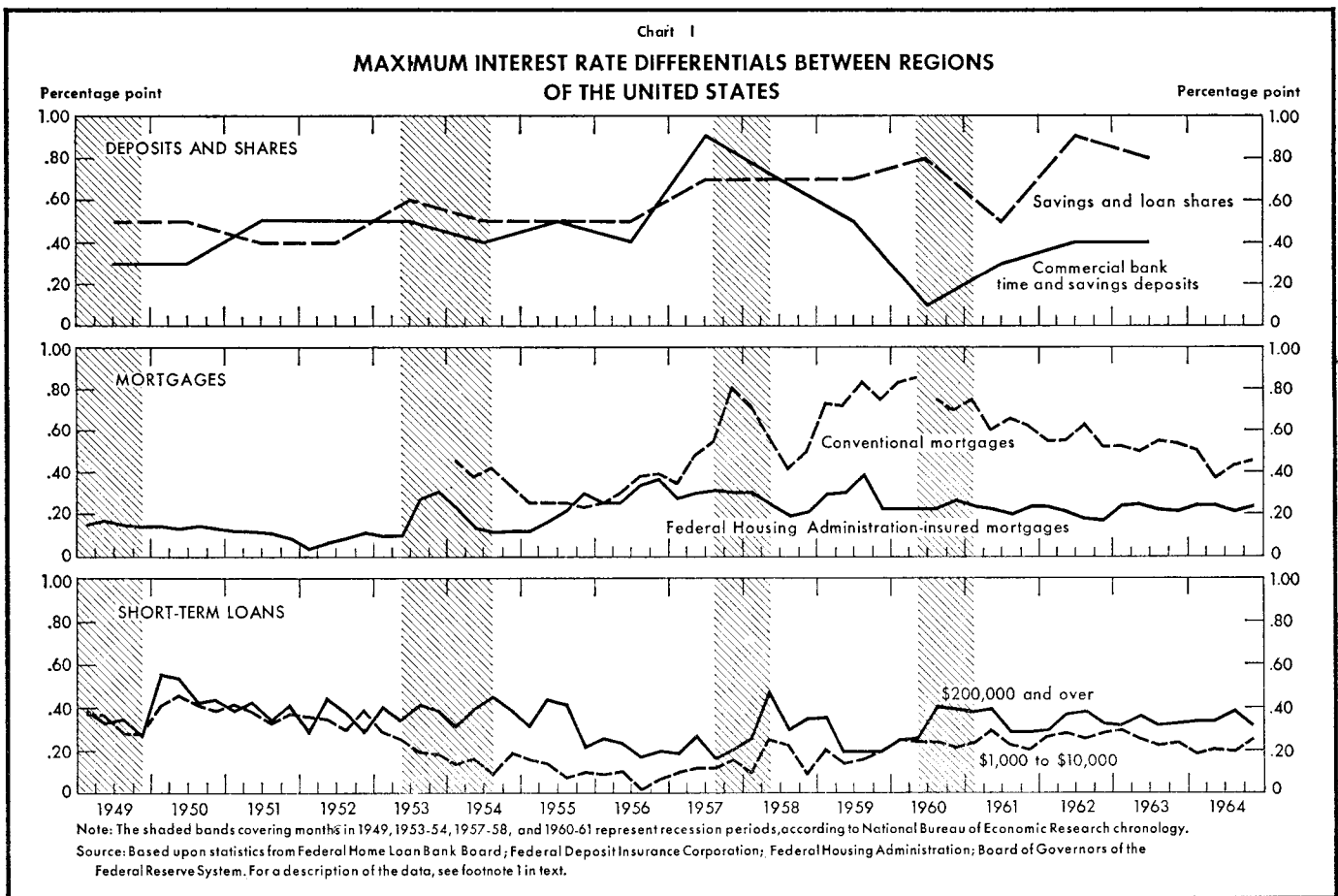


chart are given in the following table.¹

As Chart I and the table indicate, the interest rate differentials in all these series show a good deal of variation over time, but as a group do not exhibit any consistent response to the business cycle. There is no evidence of a trend toward a narrowing of the differentials during the postwar period, although some scattered data for much earlier periods give the distinct impression that interregional rate differentials were once a great deal larger than they have been in the more recent past. For example, Census data indicate that maximum interregional mortgage rate differentials were as high as 3.80 percentage points in 1890, more than four times the largest differential seen in recent years, and that they showed a progressive, long-term tendency to narrow as the decades passed.² Similarly, some data for average rates charged by banks in large cities on various types of short-term business loans indicate that differences between the highest and lowest rate regions averaged nearly 1 percentage point during the early and mid-1920's.³ Comparable differentials averaged only about half as large in the 1950's and 1960's. In view of the vast improvements in transportation and communication, the greater uniformity of economic structure, and the development of financial intermediaries, including such governmental agencies as the Federal National Mortgage Association (FNMA), it is hardly surprising that interregional rate differentials should have narrowed over the decades. The facilities for trans-

RANGES OF INTERREGIONAL
DIFFERENTIALS FOR VARIOUS INTEREST RATE SERIES
1949-1964

Series	Differential	
	Smallest	Largest
	In percentage points	
Commercial bank time and savings deposits* .....	.16	.88
Savings and loan shares* .....	.38	.91
Conventional mortgages† .....	.20	.85
Federal Housing Administration—insured mortgages.....	.02	.43
Bank short-term business loans by size of loan:		
\$1,000 to \$10,000 .....	.02	.45
\$10,000 to \$100,000 .....	.01	.39
\$100,000 to \$200,000 .....	.04	.39
\$200,000 and over .....	.16	.55

Note: Ranges, for the years covered, are taken from data showing difference between highest and lowest rate region at any given point of time.

* Data through 1963 only.

† Data cover 1954-64.

ferring capital from surplus to deficit regions have vastly improved, and the risks of lending to geographically remote areas have been greatly reduced. What is somewhat surprising at first sight is that, despite these changes, significant differentials between regions still exist.

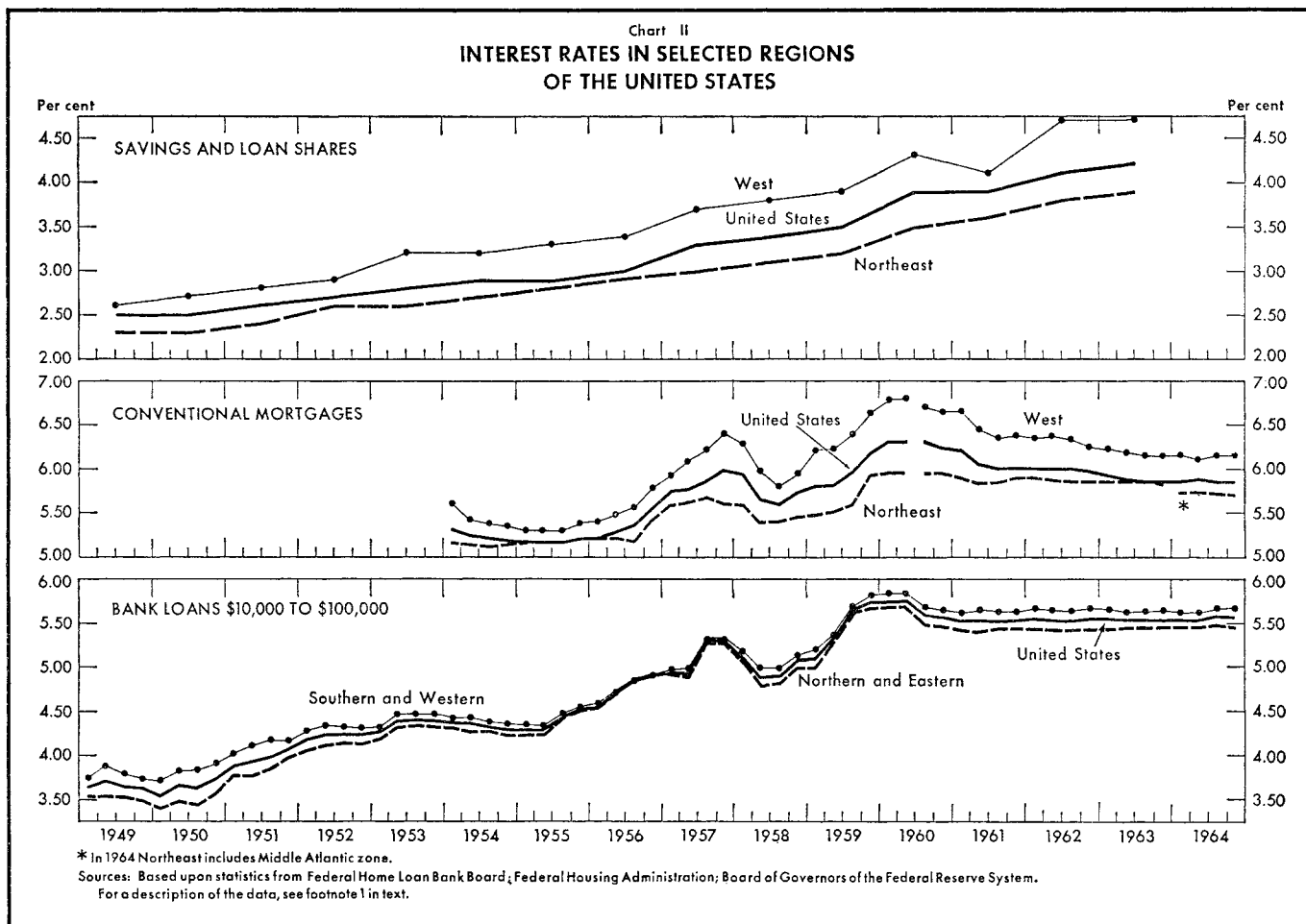
GEOGRAPHIC CHARACTERISTICS. Interregional interest rate differences show a marked degree of geographical stability. By and large, the "Northeast" tends to be a low interest rate region while the "West" tends to be a high rate region—a pattern which has always existed. It is somewhat more difficult to generalize about the relative positions of the other regions, and it is true, of course, that the definition of a region is bound to be somewhat arbitrary. With one exception noted below, the "Northeast", as used in the available data, includes the six New England states and New York, while the "West" includes the Rocky Mountain states, the three Pacific Coast states, plus Alaska and Hawaii. Obviously there is no clear-cut basis for including some of these states or excluding others, and changes in the precise geographical content of the regional averages would result in some differences in the rate differentials observed. Moreover, the very concept of a regional average conceals the sharp differences in rates that may exist within a region, particularly between urban and rural areas. Indeed, these differences may be larger than the average rate differences between the broad regions themselves.

In Chart II, interest rate levels have been plotted for the Northeast, the West, and for the nation as a whole in

¹ The regional breakdowns for all series other than the bank loan series correspond to the FHA regions: Northeast (which includes New York State), Middle Atlantic, Southeast, Southwest, West, and North Central. (In 1964, the FHA combined the Northeast and Middle Atlantic regions.) The bank loan data are derived from the Federal Reserve Board's *Quarterly Interest Rate Survey*. New York City, shown separately in the Board's published data, has been included in the data for other "Northern and Eastern" cities. Commercial bank time deposit interest rates were obtained by dividing total interest paid on time and savings deposits by average levels of these deposits. The necessary state data were obtained from the *Annual Report, 1949-63*, of the Federal Deposit Insurance Corporation. A similar procedure was used to compute regional rates on savings and loan shares, with the data coming from the *Combined Financial Statements, 1948-63*, of the Federal Home Loan Bank Board. Data on conventional and FHA-insured mortgages are released by the FHA. The conventional series covers new and existing homes combined prior to May 1960. Data since then represent the quantitatively more important existing home category. The FHA-insured mortgage data represent conversion of price data into yield equivalents by assuming a 25-year maturity and a 12-year prepayment period. Data for 1956 and later years are in fact solely for mortgages with 25-year maturities.

² See Leo Grebler, David Blank, and Louis Winnick, *Capital Formation in Residential Real Estate* (New York: National Bureau of Economic Research, 1956), p. 229.

³ See Winfield Riefler, *Money Rates and Money Markets in the United States* (New York: Harper, 1930), pp. 101-103.



various series. As can be seen, rates paid by savings and loan associations have been substantially lower in the Northeast than in the West for every year plotted. A fairly similar pattern has existed for West-Northeast differentials in average rates paid on time and savings deposits at commercial banks (not shown on the chart). These latter differentials have narrowed at times, however, when general pressures on interest rates have pushed a substantial proportion of banks up against geographically uniform Federal rate ceilings.

Differentials on mortgage rates also display a consistent geographic pattern. As Chart II shows, average rates on conventional mortgages have been significantly higher in the West than in the Northeast in every year plotted. Rates on FHA-insured mortgages (not plotted) have also been persistently higher in the West, though the differentials have been generally smaller. In the data

cited earlier for the more distant past, Western mortgage rates were also invariably higher than rates charged in the East.

Unfortunately the data do not permit comparison of business loan rates in the FHA "Western" and "Northeastern" regions since only an even broader geographical breakdown—"Northern and Eastern" versus "Southern and Western"—is available. Differentials in business loan rates between these latter regions have been relatively small and, as Chart II shows, there have been periods when the differences have melted away altogether. Nevertheless, when measurable differences have existed—which has been most of the time—rates have almost invariably been higher in the "Southern and Western" region. This is true not only for the \$10,000 to \$100,000 loan class plotted in the chart, but also for the smaller and larger classes not plotted. Moreover, it is virtually certain that,

if a further regional disaggregation were made in the bank loan data, so that separate data on Western cities (exclusive of the South) and on Northeastern cities were available for each loan size-class, larger and even more consistent interregional differentials would be visible. Indeed, data representing these additional geographical breakdowns for average rates charged on loans in all size-classes do support this conclusion. Again the data for the more distant past cited earlier confirm a pattern of relatively high Western rates on bank loans.

ADEQUACY OF THE DATA. The persistence of interregional differences in the interest rate data for a variety of series and the stability of the regional pattern of these differences over time leave little doubt that the apparent regional differences in capital market conditions are in fact a reflection of real differences in regional economic characteristics. Nevertheless, it should be noted that the data on interregional rate differentials are less than ideal. One limitation of the bank loan data, for example, is that they do not take explicit account of whatever regional differences may exist in the average characteristics of borrowers or in the average nonrate characteristics of loans. To the extent that such differences exist, regional interest rate data would reflect them and therefore might not be indicative of true regional differences in rates charged on loans of comparable risk. There seems to be good reason to believe, however, that stratification of the data by size of loan greatly reduces the risks of major distortions due to any regional differences in borrower characteristics. The available evidence suggests that the average size of a group of loans is highly correlated with such borrower characteristics as the proportion of corporate to noncorporate borrowers and the average asset size of borrowers.⁴ The size of borrowers, in turn, is likely to be associated with average credit standing and access to alternative sources of credit. Hence, loans that are homogeneous as to size may tend to be roughly homogeneous with respect to average borrower characteristics, so that data from different regions for loans in a given size-class probably tend to be roughly comparable.

It is still possible, however, that regional differences with respect to industrial composition of borrowers, average compensating balance deposits, or other nonrate features of lending might tend to make Eastern (or Western) borrowers in each loan size-class more desirable at a

given interest rate than Western (or Eastern) borrowers, thus tending to distort the meaning of average rate differentials. It is conceivable, for example, that interest rate data for New York City may be biased downward somewhat by a relatively heavy concentration of industries that typically obtain lower than average rates for any given loan size. Moreover, average New York City interest rates in the largest loan size-class (\$200,000 and over) may be pushed down by a particularly heavy concentration of borrowing at the "prime rate" by the very largest firms. Even if New York City is removed from the data, however, the general tendency for Southern and Western rates to exceed rates in the Northern and Eastern region remains.

With regard to mortgage rates, data on nonrate contract terms raise the possibility that for conventional mortgages at least, the nominal interest rate differential between the East and West may overstate to some degree the true differential on mortgages with similar nonrate characteristics. Rates on conventional mortgages for new homes in Boston and Philadelphia, for example, currently average around 5.30 per cent, compared with an average of around 5.95 per cent for the Los Angeles-Long Beach and San Francisco-Oakland areas. On the other hand, the average term to maturity of the Western mortgages is around 28.5 years, compared with a shorter average of about 23.5 years for the two Eastern cities. Moreover, the ratio of the amount of the loan to the price of the property for the West Coast cities is about 77 per cent, as against a loan-price ratio averaging only about 69 per cent in the two East Coast cities. Whatever their cause, these easier nonrate terms on the West Coast represent a partial offset to the higher average interest rates charged.⁵ It seems very doubtful, however, that the offset is complete in view of the size of the interest rate differentials, the fact that substantial rate differentials also exist in FHA-insured mortgages of comparable terms,⁶ and in

⁴ Mona Dingle, "Interest Rates on Business Loans", *Business Loans of American Commercial Banks* (ed. B. H. Beckhart, New York: Ronald Press, 1959), pp. 336-43.

⁵ Relatively restrictive legal maximum term to maturity in some Eastern states may be a factor, and legal restrictions may also play a role in the apparently lower average loan-value ratio in some Eastern states. It might also be noted that there may be some nonrate considerations that have the effect of *understating* the size of the true East-West differentials for mortgages of seemingly comparable features. Thus, for example, the average age of existing houses is almost certainly lower on the West Coast, which would tend to push average rates for mortgages on existing homes *down* relative to areas where the average age of the housing stock is older.

⁶ To ensure maximum uniformity, data on FHA-insured mortgages (from which the regional differentials are computed) for 1956 and later are based on new homes with 10 per cent downpayments and 25-year maturities.

view of the persistent ability of the Western mortgage market to attract Eastern funds.

RATE DIFFERENTIALS AND INTERREGIONAL CAPITAL FLOWS

The problem of interregional (and international) interest rate differentials is intimately bound up with the problem of interregional (or international) capital flows. Regions may differ with respect to the balance between local supplies and local demands for funds. In the absence of interregional capital flows, these differences would tend to result in higher interest rates in areas of relative capital scarcity. Suppose, however, that capital moves freely across regional lines with borrowers seeking to borrow at the cheapest rates regardless of the geographical location of the lender and with lenders lending at the highest available rates regardless of the location of the borrowers. Flows of funds should take place from surplus to deficit regions, with claims against the borrowing region rising accordingly. Indeed, the rate of these interregional flows should be just sufficient to eliminate any differences in regional interest rates. Any lesser rate of flow (or no flow at all), leaving rates in the deficit region high relative to the surplus region, would provide the incentive for an acceleration in the rate of lending across regional lines. On the other hand, a rate of interregional capital flows in excess of the rate necessary to eliminate regional rate differentials would be similarly self-correcting.

A zero interest rate differential, it should be noted, would be perfectly compatible with the flow of some part of the new savings of the surplus region into the deficit region. In a dynamic world, new savings are constantly being generated, as are new investment demands, and in the geographically unified market assumed, savers would not require any special incentive to lend to borrowers in remote areas. Indeed the lack of a need for such a special incentive is the distinguishing feature of a "geographically perfect" capital market. Yet, if a rate differential does open up, a special incentive for funds to flow to the deficit area does exist and such flows should therefore accelerate until the differential is eliminated.

In a modern economy, of course, funds are not generally lent directly by individual savers to the ultimate borrowers but, instead, pass through financial intermediaries such as banks, savings and loan associations, insurance companies, and the like. Under these conditions, capital flows between surplus and deficit regions can take two forms. Savers in capital surplus regions can lend their savings to financial intermediaries in the deficit

regions attracted by relatively high rates paid for savings in those regions. At the same time, intermediaries in the capital surplus regions can be induced to extend credit to the ultimate borrowers in the deficit regions by the relatively high interest rates these borrowers are willing to pay.

Up to a point, these general features of the interregional capital market mechanism are reasonably well exemplified by the behavior of the United States market. It is not at all difficult, for example, to think of reasons why the West Coast should be a region of relative capital shortage, or the Northeast a region of relative capital abundance. The West is a rapidly growing, comparatively "new" region with higher demands for new capital than the settled, more slowly expanding Northeast. From 1950 to 1960, the population of states here defined as the "West" expanded by fully 39 per cent, compared with an increase of 19 per cent for the nation as a whole. In the capital-surplus Northeast, population rose by only 13 per cent over this period. Similarly, housing units grew by 43 per cent in the West and by only 23 per cent in the Northeast.

Given the rapid advance experienced by the West, a persistent strain on the local supply of savings has existed, leading to upward pressures on local interest rates. Furthermore, the upward pressure on rates has attracted outside capital—capital which has, in turn, moderated the upward pressure on local rates and at the same time has provided the needed funds for a continuation of the rapid rate of growth. Finally, outside capital has been attracted from areas such as the Northeast, which has high per capita wealth and the capacity to generate heavy flows of savings but which also has a relatively lower demand for new capital.

EAST-WEST FLOWS OF FUNDS. While there are no complete data on flows of funds between states and regions, the data that are available point to the conclusion that funds have, in fact, tended to flow into California from the East and other parts of the country—at least in some of the markets where interregional interest rate differentials exist. Thus, savers in other parts of the country have evidently been induced to transfer funds to financial intermediaries located in California. One study suggests that some 15 per cent of savings and loan shares outstanding at California savings and loan associations in 1960 were held by out-of-state sources.⁷

⁷ Leo Grebler, "California's Dependence on Capital Imports for Mortgage Investment", *California Management Review* (Spring 1963), p. 48.

At the same time, a substantial portion of California mortgage debt appears to be held by out-of-state lenders. Thus the study just cited indicates that some 7 per cent of California mortgages were held by mutual savings banks.⁸ These institutions, which do not exist at all in California, are located mainly in New England and the Middle Atlantic states. In addition, a substantial proportion of California mortgages in 1960 appears to have been held by national lenders such as life insurance companies, while FNMA has also been a significant net supplier of funds from the rest of the country to the California mortgage market.

There is additional evidence that local or regional capital shortages are associated with generally higher local interest rates and with capital inflows. Thus there appears to be a positive statistical association between one measure of the importance of past capital inflows, the proportion of mortgage debt in a large metropolitan area held by lenders located outside the area, and average mortgage rates on residential properties located within the area.⁹ There also appears to be a significant (though weaker) tendency for rates on short-term bank loans to business in the \$1,000 to \$10,000 and in the \$10,000 to \$100,000 size-classes to be higher, on average, the larger the portion of residential mortgage money supplied outside the metropolitan area. This finding lends some support to the view that the relationship between local capital shortages and interest rates reflects a general shortage not confined to the mortgage market alone.

In summary, the available evidence is consistent with the presumption that areas of capital shortage tend to be associated with higher interest rates and that these rates attract funds from other regions, both indirectly through flows of outside savings to local intermediaries and directly through lending by outside intermediaries to local borrowers. There is no reason to doubt, moreover, that these interregional flows have tended to narrow interregional rate differentials greatly, compared with what they would otherwise have been. Thus, the only element in the situation that remains to be explained is the fact that interregional differentials, though reduced, still do exist. There are, however, a number of interferences to interregional capital flows that prevent these flows from being large enough to wipe out remaining rate differentials completely.

IMPEDIMENTS TO THE INTERREGIONAL FLOW OF FUNDS

THE MORTGAGE MARKET. The mortgage market is the most important single sector of the capital market and is a major channel for interregional movements of funds. Nevertheless, impediments to the free flow of funds in the mortgage market are numerous and complex, reflecting the complexity of the market itself. Mortgages, whether conventional or Federally insured, may be "originated" by commercial and savings banks, savings and loan associations, mortgage companies, and insurance companies as well as by others. In some cases the originator of the loan expects to sell the mortgage to an ultimate investor and may obtain a commitment by such an investor to purchase the mortgage even before its origination. Mortgages originated by mortgage companies, for example, are intended mainly for resale. In addition, commercial banks often originate mortgages for resale, as do other financial institutions though less frequently. The bulk of trading in the so-called secondary market consists of sales between originators and ultimate investors rather than of sales of seasoned mortgages from one long-term holder to another.¹⁰ Interregional lending in the mortgage market generally takes the form of a purchase by an outside financial institution of a mortgage originated by a local lender in expectation of later resale. In such cases the local originator will frequently continue to service the mortgage during its life for a fee. In some cases, however, the outside financial institution will maintain regional offices that originate and service mortgages.

Why does the existing interregional mortgage market fail to generate a flow of funds from surplus to deficit areas large enough to eliminate the existing regional rate differentials? A "perfect" interregional market in mortgage funds capable of eliminating rate differentials on mortgages of similar quality would require (1) that all lenders be permitted to allocate their funds geographically solely according to their best business judgment, (2) that the tangible and intangible costs of making mortgages of given quality be the same for out-of-state as for local properties, and (3) that lenders be completely indifferent between local and out-of-state mortgages equal in quality and yielding an equal net return. None of these three conditions is met in the American market.

First, as a result of a complex web of customs and of

⁸ Grebler, *op. cit.*, p. 48.

⁹ Theodore Flechsig, "The Effect of Concentration on Bank Loan Rates", *Journal of Finance* (May 1965), pp. 301-302.

¹⁰ See Saul Klaman, *The Postwar Residential Mortgage Market* (Princeton, 1961), pp. 195-213.

state and Federal laws and regulations, only life insurance companies among the main institutional lending groups in the mortgage market have had, as a group, substantial freedom to allocate their conventional mortgage lending among regions on the basis of business judgment alone. Regulations and custom have greatly restricted nonlocal lending by savings and loan associations—though in recent years there has been a moderate amount of such lending, mainly through purchases of “participations” in loans originated by out-of-state associations. A number of states forbid nationwide lending in the conventional mortgage market by mutual savings banks and these institutions have had only a very limited impact on interregional flows of funds in the conventional market.¹¹ Similarly, commercial bank participation in the nationwide market has been restricted by law and, more importantly, by custom, particularly with regard to conventional mortgage lending.

Second, the tangible and intangible costs associated with the making of both conventional and Federally underwritten nonlocal mortgages appear to be higher than those associated with local mortgages. Thus, the servicing costs of out-of-state mortgages may be higher than for local mortgages. Moreover, there are legal uncertainties associated with out-of-state lending relating to state-by-state differences in the rights and obligations of creditor and debtor, the liability of the out-of-state lender to state and local taxes, and the rights of the out-of-state lender in local courts.¹² Coping with these problems may involve additional legal costs and may add a psychological barrier to out-of-state lending. Lenders will be willing to undertake these additional costs and worries only if rates on out-of-state mortgages are somewhat higher than rates obtainable on local mortgages.

Third, lenders may hold back in their purchases of mortgages from high interest rate regions even if no legal barriers exist and even if the yield on out-of-state mortgages is more than sufficient to compensate for any special costs of out-of-state lending. Some thrift institutions, for example, may feel an obligation to meet all demands for credit by qualified local borrowers even when more profitable out-of-state investments exist. Furthermore,

geographical diversification of mortgage portfolios is one way of hedging against risk, and this consideration may mean that out-of-state lending is not always directed at regions with the highest prevailing rates. In summary, while interregional mortgage lending represents profitable business for lenders and does take place on a fairly large scale, it is, for various reasons, unlikely to result by itself in the complete elimination of interregional rate differentials.

It should perhaps also be noted that differences in legal maximum interest rates permitted under the laws of the various states do not appear to have been a significant factor in accounting for differences in average mortgage rates between areas such as the West and the Northeast. In the case of the data on FHA-insured mortgages, which represent the yield equivalents of the prices paid by one lender to another for mortgages purchased in the secondary market, these legal maxima are not a relevant consideration. For the conventional mortgage data, which do reflect the terms made with the borrower, differences in legal maxima could be a factor in determining average regional rates. It is doubtful, however, that any substantial part of the Northeast-West differential has in fact been due to differences in legal maximum rates among the states of these regions. First, legal maxima are not uniformly higher in the states of the West than in the states of the Northeast. Second, the average rate on conventional mortgages in the Northeast has always been below the lowest legal maximum of 6 per cent applying in some Northeastern states, and over a large part of the postwar period the average rate was much lower than 6 per cent. Of course, it is likely that there have been some mortgages drawn up at 6 per cent that would, in the absence of a ceiling, have been contracted at a higher rate. Instances of this sort would tend to depress average New York State rates, for example, where the maximum is 6 per cent, relative to average rates in a state such as California where the legal maximum rate is higher. Yet the question still arises as to why a lender would be willing to make such a deal rather than use the funds to purchase a California mortgage of at least comparable quality at a higher rate. The answer must lie in one or more of the impediments to interregional lending already mentioned.

IMPEDIMENTS TO INTERREGIONAL BANK LENDING TO BUSINESS. Barriers to interregional bank lending and the resulting persistence of interregional rate differentials are bound up with the need for a reasonably close bank-customer relationship. The credit standing and reputation of the small- or medium-sized business will usually be unknown outside

¹¹ For a discussion of out-of-state lending in the conventional market by mutual savings banks, see John Krout, “How to Operate Nationwide Conventional Loan Programs”, *Savings Bank Journal* (April 1965), pp. 40-42; see also George Hanc, “Report on Out-of-State Lending”, *ibid.*, pp. 42-45.

¹² J. J. Redfield, “Problems Facing Savings Banks in Out-of-State Mortgage Purchases”, *Mortgage Banker*, January 1956.

its own locale, and in the great majority of cases, such firms will simply not have the option of borrowing from banks in remote areas. In addition, the rate charged to a given business borrower by a bank, and even the willingness of a bank to lend at all, is frequently related to the volume of deposits the potential borrower maintains with the bank. Naturally a small- or medium-sized business would normally tend to keep its working balances at banks located in the area where most of its business is actually transacted. This factor further limits the ability of such firms to borrow from nonlocal banks at competitive rates and thereby reduces their opportunity to escape whatever borrowing conditions the local balance of supply and demand for funds may impose.

Of course the larger and better known a firm is, the more likely it is to have the option of borrowing from banks in different areas. Indeed for the very largest firms, nationwide borrowing from a large number of banks is common. As might be expected, interregional interest rate differentials generally do not exist for these largest borrowers who are able to borrow in a truly national market at the so-called prime rate, a rate that has generally tended to be uniform throughout the country.¹³

IMPEDIMENTS TO INTERREGIONAL SAVINGS FLOWS. Despite the expanded use of such techniques as banking by mail and advertising, the flow of savings from surplus regions to financial intermediaries in deficit regions remains insufficient to eliminate either the savings rate differentials themselves or, indirectly, lender-rate differentials such as exist in the mortgage and bank loan markets. Commercial bank demand deposits, of course, carry no monetary interest rate at all so that there can be no rate incentive to transfer funds. Commercial bank savings depositors are presumably motivated at least as much by convenience factors as by interest rate considerations, and hence regional differences in deposit rates probably have little or no power to induce interregional flows of funds. Holders of savings and loan shares may be assumed to be more rate conscious as a class, and there are no legal or significant cost factors that would inhibit this class of savers in seeking out the

highest available savings and loan dividends. Yet it is undoubtedly still true that the greater convenience of having an account with local associations and the greater sense of security that many savers feel in keeping their funds near at hand are important factors in restricting movements in response to geographic rate differentials. Perhaps the classic explanation once offered by David Ricardo for the persistence of international interest rate differentials also has some relevance to interregional differentials. He noted that "the fancied or real insecurity of capital, when not under the immediate control of its owner . . . [will] induce most men of property to be satisfied with a low rate of profits in their own country, rather than seek a more advantageous employment for their wealth in foreign nations".¹⁴

THE EFFICIENCY OF INTERREGIONAL CAPITAL ALLOCATION

The existence of differences in regional interest rates may seem to raise questions about the efficiency of the United States market in allocating capital geographically. To be sure, this problem—if it is a problem—would have to be regarded as of relatively minor importance: the differentials that do exist are limited in size. Moreover, aided by a myriad of factors as diverse as national rating services for new bond issues and the facilities for a national market in Federal funds, the bulk of capital market transactions takes place virtually without regard to geographical considerations. Nevertheless, where regional differences in rates exist, there may appear to be some presumption that a type of regional "misallocation" of capital also exists. Thus, to the extent that relatively high financial interest rates in a given region are mirrored by a relatively high social productivity of real capital at the margin in that region, transfers of capital into the region from other parts of the country might mean a gain in real productivity for the country as a whole. In theory, only when interest rates are uniform throughout the country is capital allocated in such a way that all opportunities for socially useful redistributions among regions have been exhausted. Only at this point can the regional allocation of capital be said to meet the minimal requirements of efficiency.

There is a difficulty with this argument, however. It ignores the fact that, in significant part, the interest rate

¹³ As would be expected, the largest loan size-class in the available statistics (\$200,000 and over) contains a far larger proportion of lending at the prime rate than any of the other loan size-classes. It is therefore somewhat surprising at first sight that the data show regional differentials for this group of loans to be typically somewhat larger than for the smaller loans. This is most likely due to an uneven geographical distribution of these prime rate borrowers, however. There is a tendency for prime rate loans to be relatively more important in the East, and particularly in New York City, than in the West and South.

¹⁴ *Principles of Political Economy and Taxation* (G. Bell and Sons: London 1922), p. 117.

differentials that do exist between regions reflect some real costs, tangible or intangible, of transferring capital across regional lines. The existence of such costs was noted in the interregional mortgage market. In connection with bank lending to small- and medium-sized business, moreover, the absence of interregional lending can be interpreted as indicating in part that the costs of evaluating potential nonlocal borrowers are prohibitive or, alternatively, that the rate premiums required to offset the risks involved are prohibitive. In the savings deposit market, the reluctance of many savers to deposit their funds

with geographically remote institutions may or may not seem well-founded, but such attitudes can no more be dismissed from the economic calculus than other kinds of consumer preferences.

The influence of these economically real, though sometimes intangible, costs of transporting capital can be likened to the role of transportation costs in producing geographical differentials in the prices of goods. As long as such costs exist, the absence of geographical uniformity in prices or in interest rates need not indicate geographical misallocation of goods or capital.