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*The Major Ports of the
Fifth District*

Floating The Prime Rate



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THE MAJOR PORTS OF THE FIFTH DISTRICT

The sustained growth of U. S. foreign trade in the decade of the 1960's had a significant impact on the four principal Fifth District ports—Baltimore, Hampton Roads, Wilmington, and Charleston. In 1970, 25% of U. S. export tonnage, valued at \$3.3 billion, was exported from the Fifth District ports. In that same year, 11% of U. S. import tonnage and 10% of the total value of U. S. imports passed through Fifth District ports. The dramatic growth that has brought the major ports of the Fifth District into the limelight is attributable to a myriad of factors, the most important of which this article will explore.

THE DISTRICT PORTS

The nation's volume of foreign waterborne commerce has grown dramatically since the early 1960's. Export tonnage in 1970 amounted to more than 240 million short tons, an increase of nearly 90% over 1960. The value of U. S. exports has also grown sharply during the past decade, increasing 79% to a 1970 high of \$24.8 billion. This expansion on the national level is reflected in the figures for the major Fifth District ports. For the past decade, the four ports of Baltimore, Hampton Roads, Wilmington, and Charleston have accounted for a relatively stable share of U. S. exports, but their growth has been impressive. Between 1960 and 1970 the export tonnage through Fifth District ports increased almost 90% to a level of 60 million tons. The value of these exports more than doubled, rising from \$1.5 billion in 1960 to \$3.3 billion in 1970.

Neither the national nor District growth has been confined to the export side of the foreign waterborne commerce activity. U. S. import tonnage increased 53% during the 1960's, while the value grew 120% to \$25.4 billion. In 1970, 11% of total import tonnage entered the U. S. through Fifth District ports. This percentage amounted to 35 million short tons. The value of goods imported into Fifth District harbors increased 133% during the 1960's, exceeding the national growth of 120%. These ports accounted for \$2.5 billion worth of imports in 1970 and, during

the 1960's, consistently accounted for nearly 10% of the value of the total U. S. import trade.

Export trade tonnage is relatively more important to the ports of the Fifth District than it is nationally. In 1970, 63% of total District trade tonnage was exports, while imports comprised 37%. The comparable national percentages were 43% and 57%, respectively. The greater relative importance of export tonnage in the District is accounted for by Hampton Roads, the nation's leading "export" port based on tonnage. At the Carolina and Maryland ports the emphasis is on import tonnage.

Both import and export trade tonnage through District ports is dominated by bulk cargoes such as coal, grain, and petroleum products. But general cargo items such as cotton, tobacco, woodpulp, and steel mill products are also important. Because of the variety of commodities that are imported and exported through each District port and because of the varying services and facilities that each provides, meaningful comparisons can be made only in the light of the prevailing characteristics of individual ports. Every port develops its own personality, so to speak; and it is this individuality that makes each port unique.

Hampton Roads

The port of Hampton Roads is at the southern end of the megalopolis that extends north to Boston. It is the gateway to international trade for an extensive hinterland embracing both southern and mid-western states. The port of Hampton Roads—well protected, ice free, and only 15 miles from the Atlantic—is located within 500 miles of one-half of the nation's population and ranks among the great harbors of the world. Hampton Roads encompasses terminals in the cities of Norfolk, Portsmouth, Newport News, and Chesapeake. Until 1970, these terminals competed with each other for the available trade, but in an effort to eliminate uneconomical utilization of facilities, the Virginia General Assembly created the Virginia Port Authority (VPA) in 1970. Through lengthy negotiations, the new

organization has gradually acquired the existing terminals in an effort to provide a unified and more efficient system of facilities and a more rational program of port development.

Foreign trade has been vital to Virginia's economy for many years. In 1970, each ton of general cargo handled at Hampton Roads contributed an estimated \$24.00 to the state's economy.¹ Bulk cargo made a smaller, but still significant, contribution. One of every eight persons employed in Virginia holds a job that is directly or indirectly related to state ports activities. This adds up to over a quarter million jobs and more than \$1.5 billion in wages each year. All but 5% of this activity is directly attributable to movements of traffic through the port of Hampton Roads.

Exports Since 1965, the port of Hampton Roads has led the nation in export tonnage, shipping roughly 50 million tons in 1970. This 1970 level of exports represented a 41% increase over 1965. Exports have consistently dominated port tonnage, accounting for 86% of Virginia's total trade in 1970. This dominance is directly attributable to the

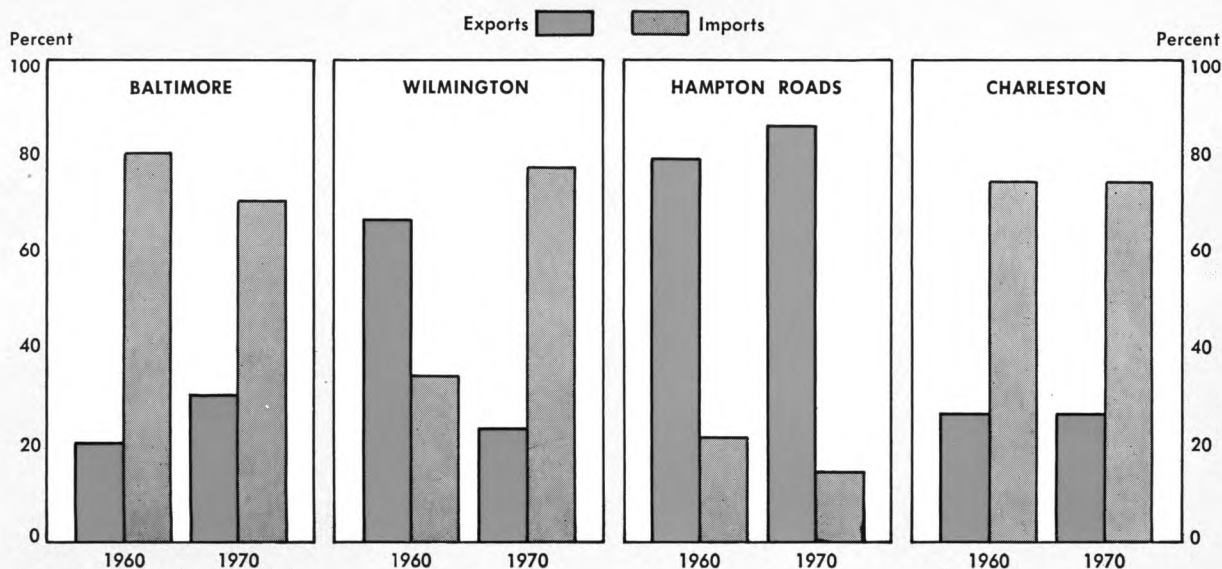
¹ Information on the port of Hampton Roads was obtained from the Virginia Port Authority.

enormous volume of coal shipments, which in 1970 comprised nearly 95% of the exports from Hampton Roads. Hampton Roads, as the largest coal handling complex in the world, processed approximately 90% of all the coal exported from the U. S. in 1970. Over half of the coal exported from Hampton Roads is destined for Asian countries, principally Japan (Chart 2). Other bulk cargo exports include grains and fertilizers. The major general cargo exports are tobacco and scrap metals.

Because coal is low in value relative to tonnage, Hampton Roads ranks second among the Atlantic Coast ports in the value of exports. In 1970, exports valued at \$1.8 billion moved through the port, a 93% increase over 1965. Because of labor difficulties that persisted throughout 1971, U. S. port activity experienced some declines; however, preliminary data indicate that Hampton Roads will retain its number one national rank in export tonnage.

Imports In import tonnage, Hampton Roads ranked fifth among the Atlantic Coast ports in 1970. Imports totaled 8.2 million short tons that year, a 39% increase over 1965. The leading import commodities are crude oils and petroleum related products, which accounted for roughly 80% of total imports into Hampton Roads in 1970. Leading

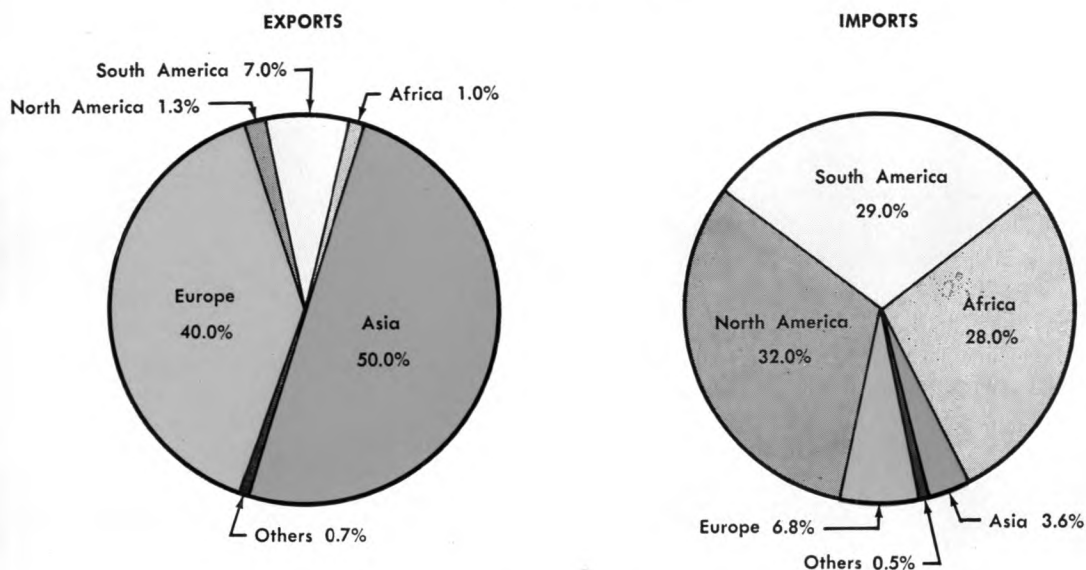
Chart 1
DISTRIBUTION OF TONNAGE AT EACH MAJOR FIFTH DISTRICT PORT



Source: U. S. Bureau of the Census.

Chart 2

HAMPTON ROADS' FOREIGN TRADE TONNAGE IN 1969 BY COUNTRY



Source: Virginia Port Authority, *The Ports of Greater Hampton Roads*, Annual 1971.

general cargo imports include cement and stone products.

The nearly \$650 million of imports that were processed through the Hampton Roads port in 1970 originated in a wide variety of countries with 90% coming from South America, North America, and Africa (Chart 2). Over 40% of the value of imported goods was derived from trade with European countries, although Europe accounted for only 6% of the import tonnage.

New Developments Containerization is the most significant development in port activity in recent years. Nearly 100 steamship lines serve Hampton Roads, offering regularly scheduled service to all parts of the world. Of these, 38 lines provide container service and 10 specialized full-container lines serve the ports. In 1970, the port ranked number two on the East Coast in number of units handled by containerization, with over 87,000 boxes transported across the piers. This represents a 108% increase over the number of containerized units handled in 1969. In 1968, when Hampton Roads first entered the container field, only 10% of the port's general cargo was containerized. This figure increased to

38% in 1970 and is expected to continue climbing.

For some Virginians, an exciting recent development is the emergence of Hampton Roads as an import terminal for passenger cruise ships. A new terminal has been constructed to provide a full range of services for the passenger trade, and especially for tourist cruises in the Caribbean and the Mediterranean. It is hoped that this will develop into a significant new operation for the port and for the state's economy.

Baltimore

Situated far from the sea, the port of Baltimore is nearer the Mideast than any other North Atlantic port. This location provides a proximity to mid-continent markets and commercial centers. The Baltimore port is unique in that it has two routes to the sea: via the Chesapeake Capes (100 miles) or the Chesapeake and Delaware Canal (125 miles). Although Baltimore is principally an "import" port, in 1970 it was the nation's third largest port in terms of total foreign trade volume, handling 28 million tons of cargo valued at \$2.7 billion. In 1968, the latest year for which data are available, it is esti-

mated that the direct value to the local economy of moving a ton of general cargo through the port was \$18.50.² In addition, a variety of other local service industries—such as banking, ship repair, and maintenance—benefited significantly from the ports. The port of Baltimore provided employment for 58,000 individuals in 1968. The figures for employment and the economic contribution of the port have been increasing steadily as processing and handling volume has skyrocketed.

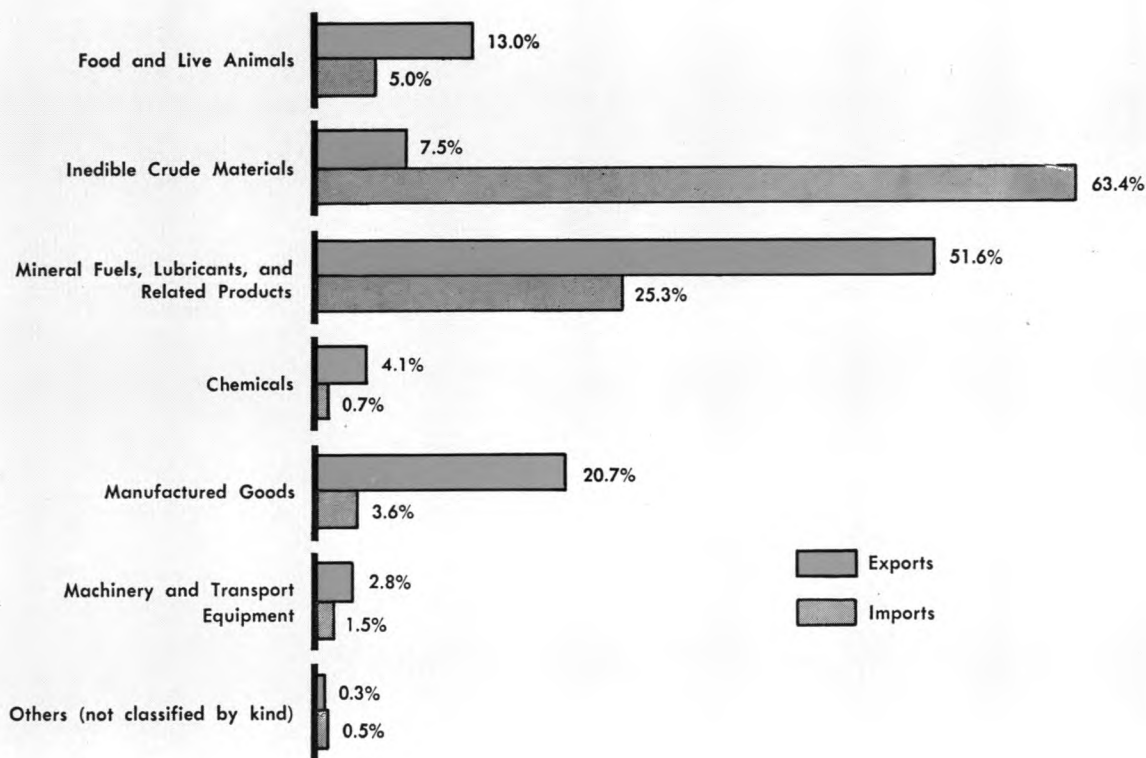
The port serves as a magnet drawing industries that require cheap transport of bulky raw materials into the area. Nearly half of the cargoes arriving at Baltimore receive some further processing in the local

² Based on data obtained from the Maryland Department of Economic Development.

community. A large number of industries that utilize the high volume of ore imports are located around the port. There is also a high concentration of metals industries around Baltimore.

Exports Exports made up one-third of foreign commerce at the port of Baltimore in 1970. The volume of export tonnage reached a peak of over 8 million tons, a 58% increase over 1969. The port's 1970 export tonnage represented 4% of U. S. export commerce and 13% of exports through North Atlantic ports. Bulk cargoes, such as coal, iron and steel products, coke and soybean meal, led the advance; however, shipments of general cargo rose 51.5% from 1.7 million tons in 1969 to 2.6 million tons in 1970. Based on tonnage, roughly 28% of exports from the port of Baltimore are destined for Japan, with coal shipments representing a large part

Chart 3
BALTIMORE'S 1969 FOREIGN TRADE TONNAGE
BY COMMODITY



Source: Maryland Port Authority, Port of Baltimore Handbook 1971-72.

of this percentage. The United Kingdom accounted for only 4% of export tonnage in 1970, but represented 8% of the value of export commerce or \$69.1 million. France and Germany also receive "high value" shipments from the Baltimore port.

Imports Traffic at the port of Baltimore centers around the import trade. In 1970, 70% of all foreign commerce at the port was import cargo. Import commerce increased from 18 million tons in 1969 to nearly 20 million tons in 1970, a gain of 8.2%. Both bulk and general cargo imports expanded, with iron ore, residual fuel oils, automobiles, and chrome ore showing the sharpest growth. The tonnage of bulk cargo imports into Baltimore jumped 8.5% between 1969 and 1970 to a level of 17.7 million tons. Outstripping that increase, general cargo import tonnage posted a 12.7% growth between 1969 and 1970 to reach 2.0% million tons. A prime factor causing the sharp jump in receipts of general cargo was the increased importation of foreign automobiles.

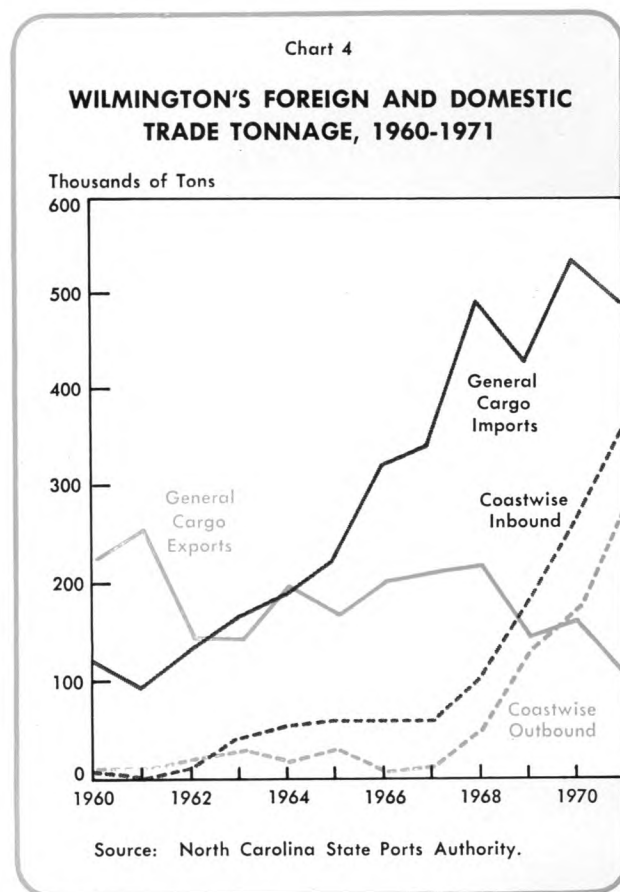
The 1970 level of import tonnage into Baltimore represented 6.8% of the foreign merchandise entering the U. S., and an 11.8% share of the import traffic at North Atlantic ports. Based on tonnage, nearly 50% of the import commerce at Baltimore originates in Venezuela or Canada, with shares of 29% and 19%, respectively. The importation of ores and residual fuel oils accounts for this volume. In 1970, 23.1% of Baltimore's import commerce originated in West Germany, with the United Kingdom contributing another 9%. The foreign automobile trade, along with the import of other motorized equipment, accounts for most of this volume.

New Developments As is true of other U. S. ports, a major technological change is occurring at the port of Baltimore, namely the increased use of containerization. The dramatic increase in general cargo traffic at the port in 1970 is to a large extent attributable to the growing use of containerization. More than one million tons of container cargo passed through the port of Baltimore in 1970, a greater than tenfold increase over 1965 volume. In 1970, the volume of containerized cargo shipments was nearly 200% greater than in 1969. Recent estimates indicate that containerized cargo tonnage could top the 2 million mark by the end of 1972. All projections indicate that the Baltimore port will continue to expand its import and export trade and will remain unchallenged as the leading import automobile center in the world.

Wilmington

Several decades ago most of the coast of North Carolina was inaccessible to large ships because of the shoals reaching far out to sea from the outer banks. Just after World War II, however, plans were initiated to develop the North Carolina ports situated south of the outer banks, and today North Carolina's coast bustles with activity at the ports of Wilmington and Morehead City.

The Wilmington port is situated 28 miles from the ocean on the Cape Fear River and dominates activity on the North Carolina waterfront. Total foreign and domestic cargo tonnage processed through Wilmington increased 245% between 1960 and 1971, from 352,000 tons to 1.2 million tons, with the bulk of the growth coming since 1965. In 1960, based on foreign trade tonnage, the port's primary emphasis was on exports, which accounted for nearly 70% of total tonnage (Chart 4). By 1971, Wilmington had become an "import" port, with import tonnage comprising 83% of the total. The principal import commodities include lumber products plus iron and steel pipes and tubing. Woodpulp, scrap iron and steel, and chemicals are the chief exports.



The North Carolina State Ports Authority estimates that every ton of general cargo, as distinguished from bulk cargo, passing through the port of Wilmington contributes \$24.41 to the economy of the area within a 30-mile radius of the port. For every ton of bulk cargo that moves through the port, \$7.00 is put into the economy; and, for every ton of bulk cargo that is processed or manufactured into a finished product within the port area, over \$43.00 per ton is injected into the local economy. The impact of the past decade's dramatic port development has spread throughout inland and coastal North Carolina as new industries have been drawn into the area.

Imports In 1971, general cargo import tonnage accounted for 40.8% of total foreign and domestic commerce at Wilmington, or 496,000 tons. This represents a threefold increase since 1960 and a 119% jump over 1965. The three primary import commodities in 1971 were plywood veneers, iron and steel pipes and tubing, and lumber and lumber products. These three items combined accounted for 201,000 tons of cargo or 40% of Wilmington's total 1971 import trade. Over half of the imports into Wilmington originate in Japan, Belgium, or Korea. Iron and steel products are primarily imported from Japan and Belgium, while plywood, lumber and lumber products come into the Wilmington port from Korea.

Exports Since 1960, export trade as a percent of total foreign and domestic commerce at the port of Wilmington has declined. In 1971, general cargo export tonnage was only 8.5% of total commerce, or 103,000 tons. A large portion of North Carolina's exports go through out-of-state ports, primarily Hampton Roads or Charleston. Seventy percent of the 1971 export tonnage is accounted for by three commodities: woodpulp, chemicals, and scrap iron and steel. Cargoes are shipped from Wilmington to all parts of the world over a variety of trade routes. One-third of these export commodities are destined for England, Italy, or France. In 1971, England received 18,000 tons of chemicals and tobacco from ships loaded at Wilmington. 11,000 tons of scrap iron and woodpulp were exported to Italy, and another 8,000 tons of woodpulp were shipped to France.

Domestic Trade Coastwise inbound and outbound trade was only 1.9% of total foreign and domestic commerce at the port of Wilmington in 1960. By 1971, the coastwise trade had increased more than tenfold to a level of 616,000 tons, over half of the gain coming since 1965. The 1971 level of coast-

wise tonnage trade through Wilmington represented 50.7% of the total foreign and domestic tonnage.

The coastwise inbound traffic increased 34% between 1970 and 1971 to a level of roughly 348,000 tons. The chemical xylene, a toxic hydrocarbon obtained from wood and coal tars or petroleum distillates, accounted for 42% of the coastwise inbound tonnage in 1971, while a variety of other chemicals such as ethylene glycol and methanol combined for the other 58%.

Xylene was not only a prime inbound commodity, but was also responsible for 56% of the 269,000 tons of Wilmington's coastwise outbound commerce in 1971. Shipments of iron ore represented 23% of the total, while the remainder was mostly methanol trade.

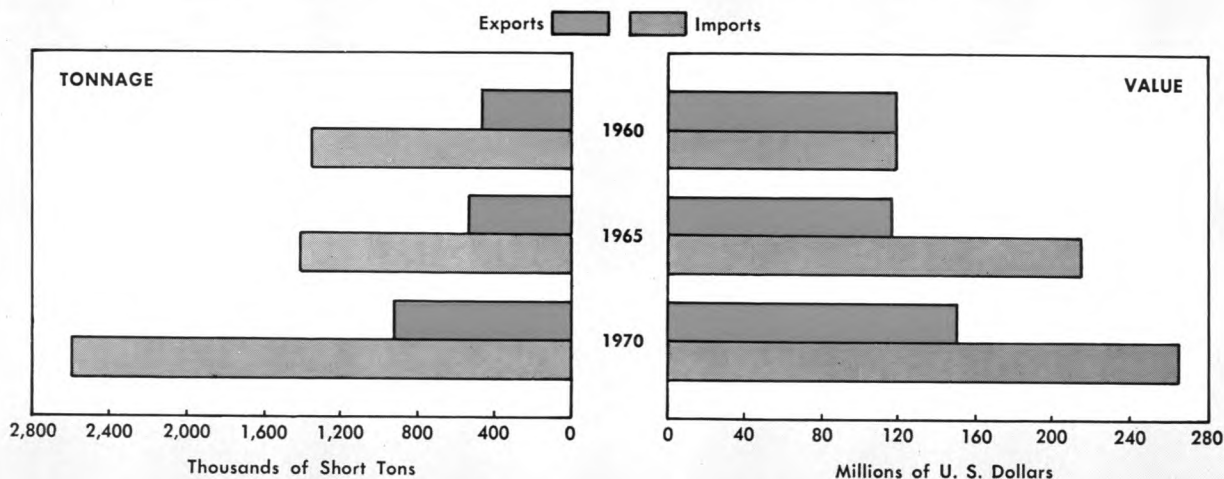
Future Developments Indications are that the port of Wilmington will experience a great deal of expansion in the next decade. Improved general cargo handling equipment and facilities at Wilmington appear imminent. The State Ports Authority has set forth a program to provide for the improved movement of general cargo. The plan is a four-part program to: (1) construct new facilities and acquire new equipment, (2) solicit cargoes that can be more efficiently handled at Wilmington or Morehead City, (3) obtain specialized equipment as changing shipping patterns necessitate, and (4) continue to meet operating costs from revenues generated by terminal operations. Currently 92% of Ports Authority employee wages and salaries and 100% of the remaining operating costs are paid for from port revenue. The Authority has made strides toward meeting the objectives set forth above. The provision of specialized facilities under contract to private companies has been responsible for generating approximately \$20 million in nontax supported capital improvements at the Wilmington and Morehead City terminals already.

Charleston

As the largest port in South Carolina, Charleston is situated at the head of the Ashley-Cooper River Bay. Linked by regular steamship service to all parts of the world and equipped to handle a myriad of import and export commodities, Charleston has served as a center of world commerce for nearly three centuries. Since 1942, the State Ports Authority has managed the port and, in 1971, had an investment in docks, warehouses, land, and related facilities of approximately \$85 million replacement value. Charleston has traditionally been an "import" port; and, until the decade of the 1960's, bulk cargo

Chart 5

CHARLESTON'S FOREIGN COMMERCE BY VALUE AND TONNAGE



Source: U. S. Bureau of the Census.

dominated import tonnage. Since 1960, the port has shifted its emphasis to the "higher value" general cargo imports, which in 1971 accounted for 65% of the total import tonnage. The port now handles more general cargo than any other South Atlantic port.

Compared to other South Atlantic ports, Charleston ranks near the top in terms of the total value of foreign commerce. In 1970, import and export trade totaled \$414 million, a 74% increase over 1960. The value of import trade experienced the sharpest increase, rising 122% between 1960 and 1970 to \$264 million; however, during the same period, the value of export commerce grew nearly 30% to a record \$150 million in 1970 (Chart 5).

The value of foreign trade is not the only item experiencing growth at Charleston. Estimated total port revenue for 1971 should hit \$54 million, up 64% over 1964. This growth influences not only the port and the local community but also the state as a whole. It has been estimated that port-using industries employ 63% of the state's total manufacturing employment, or 208,000 people.³ The benefits of port activity are not restricted to port-related industries or port cities, as both imports and exports move through the South Carolina ports to and from each county in the state. Thirteen hun-

dred companies in all of the state's 46 counties use the ports to some extent. The State Ports Authority estimates that the economic benefit of the ports to South Carolina's economy is over \$400 million a year. By 1975 this impact could be over \$600 million per year.

Exports Bulk and general cargo shipments from the port of Charleston go to over 100 countries in all parts of the world. Total export commerce at Charleston increased 96% from 472,000 tons in 1960 to nearly 1.0 million tons in 1970, while the value of export commerce grew from \$119 million in 1960 to \$150 million in 1970, or 28.2%. In terms of tonnage, the single largest export commodity in 1970 was dry bulk grain. Woodpulp and paper and paper products ranked second and third in terms of export tonnage. Combined, the top three exports accounted for over 40% of the total 1970 export trade from Charleston. Other principal exports include clay and clay products and waste materials. Most of the commodities exported from Charleston are destined for Europe and the Mediterranean. In 1968, 64% of total export tonnage was bound for these areas.

Imports Charleston has traditionally been an "import" port, with import tonnage averaging 75% of total foreign commerce. Charleston's import volume doubled between 1960 and 1970, rising from 1.3 million tons to 2.6 million tons. The value of

³ Information on the port of Charleston was obtained from the South Carolina State Ports Authority.

that tonnage registered a 122% gain during the same period, climbing to \$264 million.

Bulk and general cargo is received at Charleston from approximately 80 countries across the globe. In 1970, the primary import commodities were liquid bulk products (petroleum), veneers and forest products, and iron and steel, ranked in that order. Combined, the three commodities represent 63% of the total import trade at the port. Textiles and fruit are also major import items. Over one-third of import tonnage at Charleston originates in Latin American countries and the Caribbean, primarily because of the large volume of petroleum imported from the Netherland Antilles and Venezuela.

Future Developments Since the early 1960's, the port of Charleston has been in the midst of a massive building program to expand the basic port facilities, and, in particular, the cargo handling facilities. Charleston's large volume of general cargo renders it uniquely congenial to containerization. At present, two leading container lines call at the port, serving primarily the European trade. The recent inauguration of container service to Australia and New Zealand further strengthens Charleston's role as the leading container port of the South Atlantic.

CONCLUSION

The steady growth of foreign and domestic commerce over the past decade has exerted an important

impact on the major Fifth District ports and, through them, on the District's economy. Baltimore, Hampton Roads, Wilmington, and Charleston handled a larger percentage of total foreign trade in 1971 than in any other year in history. A greater portion of the total means rising tonnage volume and rising trade value. The competition among ports is keen; and, to stay abreast of the increased traffic, continued investment in docks, warehouses, and mechanized cargo handling equipment is vital. The ports of the Fifth District have not been able to rely entirely on profit-motivated private enterprise to provide the investment necessary for port expansion, so they have turned to the state governments through the State Ports Authorities. The Authorities have been compelled to provide the necessary investment required to make continued port growth a reality.

Increased export and import tonnage generates additional manpower needs and stimulates expansion of port facilities. This means millions in new investment with a corresponding increase in employment. The State Ports Authorities have worked aggressively during the past decade to broaden the scope of Fifth District trade and to expand the facilities available at Fifth District ports. They have stimulated a climate of expansion in which the District ports can continue to develop the economic potential they possess.

B. Gayle Burgess

FLOATING THE PRIME RATE

In the fall of 1971, a few large commercial banks adopted a floating prime rate in an effort to make their loan rates more responsive to the cost of attracting additional funds and also to remove bank loan rates from the political spotlight. During the second half of the 1960's, when banks were subjected to extended periods of tight credit conditions and high interest rates, the prime rate had formally been in existence for over 30 years. Because such conditions represented a marked change from those of the prior 30 years, many traditional practices in the financial community, the prime rate among them, came under close examination. Later, after credit conditions eased in the second half of 1970 and 1971, at least three large New York banks decided to test the feasibility of a floating prime rate. This article discusses the historical use of the prime rate, why a floating prime rate has been introduced, and the possible effects of the floating prime on banks and their customers.

History of the Prime Rate The prime rate was formally established by the banking community for the first time in the 1930's as a "floor rate" to prevent competition from driving rates below the level of administrative and servicing costs associated with bank loans. In the midst of the Great Depression, business activity had come to a virtual standstill, and accordingly business loan demand was negligible. Banks were flush with reserves and lending capacity, while interest rates had been forced to unusually low levels. Fearing that some banks might even be willing to make loans at, or below, cost as a short-run measure, many banks felt that a uniform minimum lending rate throughout the banking community would be appropriate. Thus emerged the prime rate at 1½%, where it remained until 1947. The term "prime rate" has been used because only the most credit-worthy, or prime, borrower has been allowed to borrow at that rate. Other borrowers are charged rates scaled upward from the prime rate.

After 1947 the prime rate was changed much more frequently, especially during the early and late 1950's. Although it remained unchanged during the first half of the 1960's, the prime rate was changed as often as several times a year in the second half of the

decade. Historically, however, movements of the prime rate have not provided an accurate index of changes in credit market conditions.

Behavior of the Prime Rate Because the decisions of individual banks to change the prime rate have been influenced to a large degree by nonmarket forces, such as institutional and political factors, prime rate changes have usually lagged movements in economic and credit market conditions. The prime rate has not moved in the same fashion as, for example, the Treasury bill rate, which fluctuates on a day-to-day basis in direct response to changes in supply and demand conditions. Instead, bank loans are very different from a typical, negotiable, open market, credit instrument. Bank loan rates are part of the unique arrangement a bank has with each of its customers, an arrangement that involves a number of noninterest rate factors such as compensating balances, additional lines of credit, or advice and counsel of bank officials. Furthermore, even though the length of a particular loan may be rather short, the relationship between a bank and a borrower usually extends over a number of loan arrangements. Thus, a bank must consider the long-term implications of changes in various aspects of the loan arrangement. Before a bank adjusts the interest rate on such a complex financing arrangement, it must make certain that a definite change in credit conditions has occurred. Daily or even weekly fluctuations in various short-term interest rates cannot be used by a bank as a reliable indicator of overall credit conditions. Such variables as movements in Federal Reserve policy, changes in deposit flows, as well as the general level of economic activity must be assessed. Moreover, a considerable time lag can occur while these variables are adjusting and banks are evaluating them.

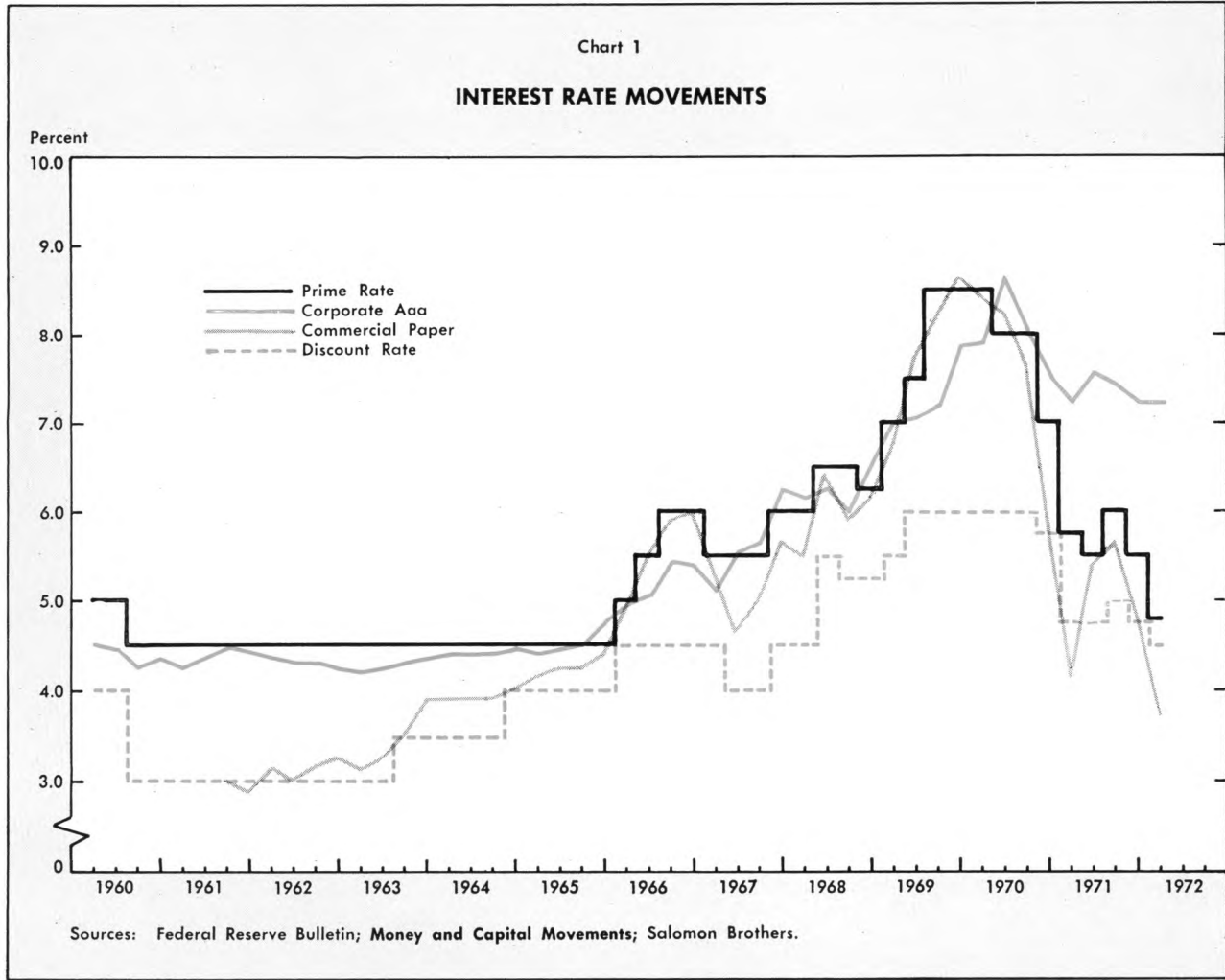
Other factors also contribute to the laggardness of changes in the prime rate. Even after bank officials become aware that changes in credit conditions are something more than temporary, the decision making process within the bank further delays the actual rate change. An element of gamesmanship also may be involved either within the bank or with

respect to attempts to anticipate the behavior of customers and other banks. When a given bank chooses to lead a change in the prime rate, it must be relatively certain that other banks will follow. If one bank raises its prime rate but other banks do not raise theirs, then the loans of the lead bank may be priced out of the market. On the other hand, if a bank lowers its rate but others do not follow, it may experience a substantial increase in loan requests. Because of the risk associated with leading changes in the prime rate, most moves have traditionally been initiated by very large banks or by small banks that are trying to establish a dynamic image.

Overall, the prime rate serves as the base or anchor rate of the banking system. Although the rate was originally designed to eliminate cutthroat competition among banks, today it plays an important role in the highly competitive national loan market. As described above, a bank must operate at the competitively determined rate or it will experience either

too much or too little loan demand. A uniform prime rate is also useful in the instance of the very large corporate borrower who obtains funds from several banks under a single loan arrangement.

Over the credit cycle, differing proportions of total loans are made at the prime rate. Analysis of the Federal Reserve Quarterly Interest Rate Survey reveals that a larger proportion of total loans is made at the prime rate during periods of limited credit availability and high interest rates than during periods of limited credit availability and high interest rates than during periods of easier credit conditions. One explanation of this phenomenon is that during periods of rising interest rates prime borrowers who were previously issuing commercial paper often turn to commercial banks because adjustments of the prime rate tend to lag behind changes in market determined rates. A second explanation is that banks tend to accommodate the loan requests of their prime borrowers ahead of loan requests by nonprime bor-



rowers during periods of limited credit availability.¹

In the latter 1960's, when credit conditions were tight and interest rates were higher and fluctuating more than in the past, the traditional prime rate presented problems to many banks. Finding it difficult to maintain lending rates in line with their costs, a few banks eventually sought an alternative method of adjusting their loan rates.

Forces for Change The forces for a change in loan pricing practices at commercial banks were of a political as well as an economic nature. The practice of moving the prime rate in one-quarter or one-half percentage point steps and then publicly announcing the move had made banks the frequent target of political attack. These attacks were especially strong in the last five or six years, because most of the prime rate changes were upward. When the prime rate was raised to its peak level of $8\frac{1}{2}\%$ in mid-1969, some politicians accused banks of contributing to inflation and of taking advantage of the small, defenseless borrower. The presence of historically high interest rates in nearly all sectors of the credit markets, which were pushing up bank costs, had little impact on the political bric-a-brac directed at the banking community.

With Phase II of the President's economic program imminent in November 1971, a few banks attempted to remove their actions from the political arena by tying their lending rates to market determined rates. Under a floating rate format, changes in the prime rate would be much more frequent and much less the subject of major announcements. Apparently, those banks that have opted to let their prime rate be directly determined by market forces have been successful in reducing the volume of political criticism. Since its initiation in late October, the floating prime rate has moved down to $4\frac{3}{8}\%$ from $5\frac{3}{4}\%$ and then back up to $5\frac{1}{4}\%$ with considerably less comment from its former critics.

The more important factor in the banks' decisions to move to a floating rate, however, was the substantial change in the relationship between bank costs and revenues during the second half of the 1960's. The groundwork for this change was laid in the early 1960's when banks began issuing negotiable certificates of deposit and in general managing their liability positions much more closely than they had in the past. As part of this approach to bank management, short-term money market funds became a rela-

tively more important source of funds. Thus, when credit conditions tightened in the face of strong loan demand at various times between 1966 and 1970, and interest rates rose to historically high levels and became much more volatile than in the past, bank profit margins on loans became quite unstable. Of course, the relative inflexibility and lag in the prime rate, in the face of volatile bank costs, contributed heavily to the instability of profits on loans.

In addition to the problem of unstable profit margins on loans, the traditional prime rate structure was a direct cause of certain fluctuations in bank loan demand. Rate-sensitive treasurers of large corporations shifted their borrowing between banks and open market sources in response to rate differentials between these sectors. As credit conditions tightened and open market rates rose relative to the prime rate, corporations shifted their borrowing to banks. On the other hand, when credit conditions eased and market rates fell, prime corporate borrowers shifted their loan demand back into the open market, again because of the lagged adjustment in the prime rate. Chart I indirectly shows the relationship between the prime rate and the commercial paper rate over the credit cycle. A hypothetical floating prime rate has been constructed for the period 1965-1971, based on the technique currently used to compute the floating prime rate. During periods of credit stringency the prime rate would have been higher than it actually was, but during periods of credit ease the prime rate would have been lower.

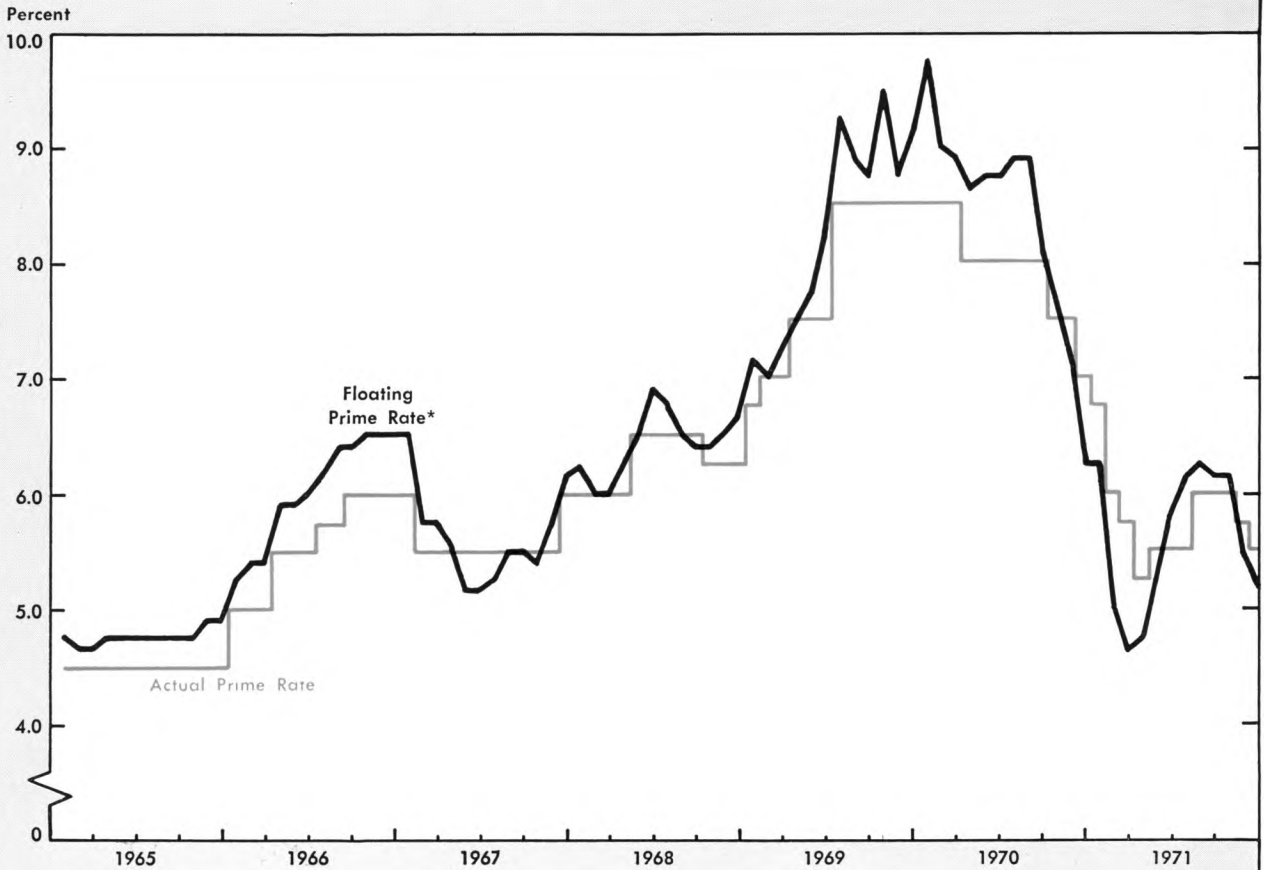
After the economy slowed down in 1970 and credit conditions eased, a few banks saw an opportunity to alter the degree of flexibility in their loan rate structure. Thus, in October 1971, First National City Bank of New York, the nation's second largest, adopted a floating prime rate.

How the Floating Prime Rate Works The three major New York banks using a floating prime rate have tied it to a commercial paper rate. Although one of the three also has been using the rate it pays on 89-day CD's as a prime rate determinant, the new floating prime rate will essentially be set at 50 basis points above the rate on 90-day commercial paper sold through dealers. Banks have chosen this rate as a base rate (1) because it is largely determined by impersonal competitive forces, (2) because commercial paper is a reasonably close substitute among many investors for large denomination CD's, (3) because commercial paper sales are an alternative source of funds to bank borrowing for prime corporate borrowers, and (4) because it has a

¹ Empirical investigation completed in recent years suggests that banks have been forced to ration credit among their various classes of customers during periods of tight money. Dwight M. Jaffee and Franco Modigliani, "A Theory and Test of Credit Rationing," *The American Economic Review* (December 1969), pp. 850-72.

Chart 2

HYPOTHETICAL BEHAVIOR OF A FLOATING PRIME RATE



*Floating Prime computed from 3-month Commercial Paper rate.

Sources: Federal Reserve Bulletin; Salomon Brothers.

maturity comparable to that on the typical short-term business loan.

Although the commercial paper market does not possess the size and competitive nature of the Treasury bill market, it is much more characterized by arm's length bargaining than is the business loan market at commercial banks. The commercial paper rate is essentially determined by freely fluctuating demand and supply conditions. Thus, changes in the prime rate, especially increases, determined by changes in a commercial paper rate could not be mistaken for attempts by the banking community to take advantage of the public. Certainly this reason for adopting a floating prime rate was an important consideration in the minds of many bankers at a time when interest rate controls were being advocated.

The high degree of substitutability between commercial paper and large denomination CD's in the portfolios of short-term investors suggests that interest rates on these two instruments are quite similar under most conditions. Since CD rates are a major component of the cost of funds to banks, a floating prime rate that is tied to a commercial paper rate tends to reflect changes in bank costs. The plan of one large bank to relate its floating prime rate to its CD rates as well as to a commercial paper rate indicates the importance bankers place on having loan rates move directly in line with costs.

There are some drawbacks, however, to using the 90-day commercial paper rate as the base rate. The commercial paper market does not generally operate with a large volume, and at times activity can be rather thin. Thus, there is the possibility that at

times commercial paper rates may be influenced by the policies of large banks or large borrowers. Further, no one rate can adequately reflect the costs incurred by an individual bank. At times the commercial paper rate might be out of line with other short-term interest rates. Such was the case on two occasions in late 1971. In both instances, however, paper rates became realigned with other short-term rates before those banks using a floating prime rate were forced to post a prime rate that was markedly different from other banks' loan rates. On balance, the 90-day commercial paper rate appears to be as useful a guide for determining the prime rate as any other short-term rate. Perhaps, as experience with a floating prime rate is gained, an improved method for determining the base rate can be devised.

Possible Effects of a Floating Prime Rate The most important effect of the introduction of the floating prime rate should be on the marginal relationship between bank costs and loan revenues during tight money periods. Whereas, in the past, costs of marginal, i.e., additional or extra, sources of funds

rose more rapidly than loan revenues during such periods, the use of a floating prime rate should help to keep revenues in line with costs. It is generally assumed that movements of commercial paper rates will be similar to movements of other short-term rates in size and timing, thus causing the prime rate to move in step with the costs of short-term funds.

It might be argued that even though only a very few banks are utilizing a floating prime rate, other banks will also benefit. Those banks with floating prime rates will most likely take the first step in adjusting lending rates. If other banks choose to follow, they will be able to justify their adjustments on the basis of the actions of the floating rate banks. Although not every move in the floating prime rate will be followed by the other banks, the old prime rate should be more flexible than it has been in the past. For example, the traditional nonfloating prime rate has changed six times in the last six months, as shown in Table I. During periods of similarly moderate credit conditions over the past 20 years, rate changes have only occurred two or three times a year. In contrast, the floating prime rate has changed 15 times during this period.

Greater flexibility in bank loan rates should also enhance the relative importance of the interest rate factor in bank lending arrangements. Compensating balances and other noninterest rate factors may be used to a lesser extent as a means of adjusting the effective interest rate. During past periods of tight money, banks often raised the minimum percentage of the loan to be left on deposit by the borrower instead of raising the interest rate. This action had the effect of increasing the finance charge to the borrower. With a more flexible loan rate, the need to adjust compensating balance will be reduced.

Conclusions In general, a floating prime rate should be beneficial to the commercial banking system, especially during periods of tight money. If the adoption of a floating prime rate by a few leading banks encourages the traditional prime rate to become more flexible, then most of the incentive for adopting a floating prime rate will be reduced for many banks.

Philip H. Davidson

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Table I

COMPARISON OF CHANGES IN THE NEW FLOATING PRIME RATE AND THE FIXED PRIME RATE

1971	Actual Floating Prime Rate	Fixed Prime Rate
Nov. 3	5.63	5.75
10	5.63	5.50
17	5.50	5.50
24	5.38-5.50	5.50
Dec. 1	5.25-5.38	5.50
8	5.25-5.38	5.50
15	5.25-5.38	5.25
22	5.25	5.25
29	5.25	5.25
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1972		
Jan. 5	5.00	5.00-5.25
12	4.75	5.00
19	4.63	5.00
26	4.63	4.75
Feb. 2	4.50	4.75
9	4.50	4.75
16	4.50	4.75
23	4.38-4.50	4.75
Mar. 1	4.38	4.75
8	4.50	4.75
15	4.75	4.75
22	4.88-5.00	4.75-5.00
29	5.00	5.00
Apr. 5	5.00	5.00
12	5.25	5.00
19	5.25	5.00-5.25
26	5.13-5.25	5.00-5.25

Source: Wall Street Journal.

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