BUSINESS REVIEW

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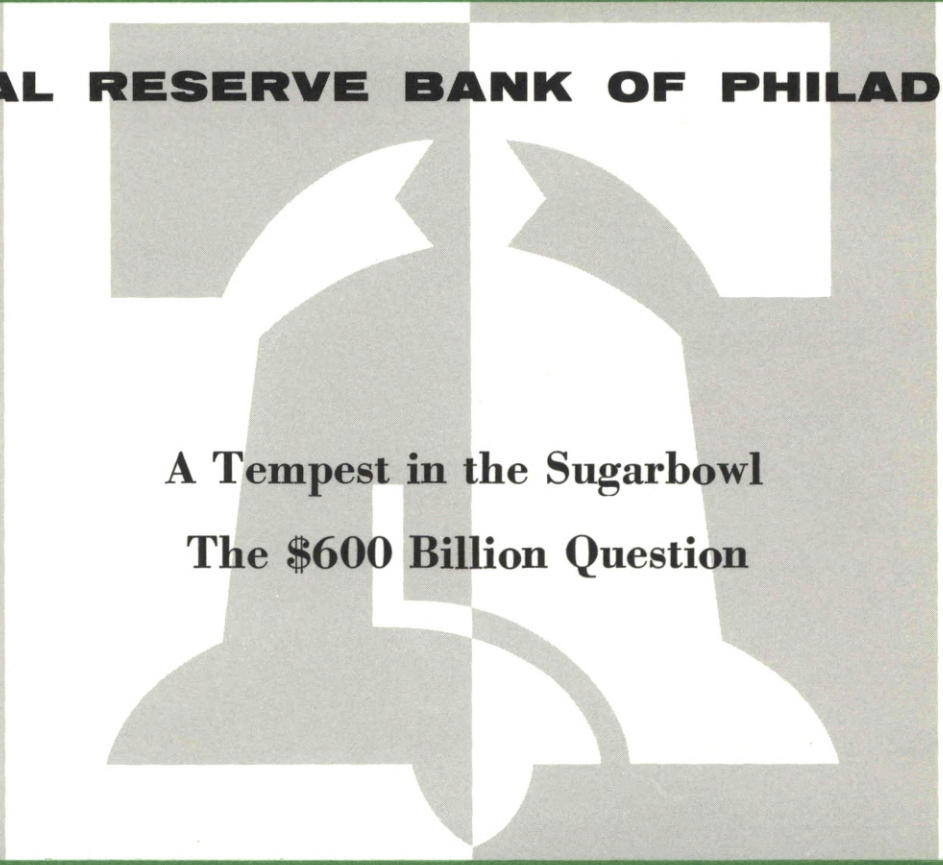

A Tempest in the Sugarbowl

The $600 Billion Question

DECEMBER 1963

BUSINESS REVIEW is produced in the Department of Research. Evan B. Alderfer was primarily responsible for the article, "A Tempest in the Sugarbowl" and Kathryn Kalmbach for "The $600 Billion Question." The authors will be glad to receive comments on their articles.

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A TEMPEST IN THE SUGARBOWL

You may not know it but you consume almost a hundred pounds of sugar a year. Multiply that by all the people in the country and it comes to almost 10 million tons. A monstrous mountain of sugar that would be; but it arrives in many smaller mounds from many places. Most of the craving for sweetness is currently appeased with sugar grown in half the states and imported from about 25 foreign countries.

Pennsylvania grows no sugar, but does considerable refining of raw sugar from nearby and faraway sources. Pennsylvania's refineries, both of them, are in Philadelphia hard by the Delaware River which affords deepwater access to the oceanic waterways of the world. Most ships coming up the Delaware are usually heavily laden with some industrial raw material such as iron ore for the smelting furnaces, crude oil for the petroleum refineries, or raw sugar for the sugar refineries.

Almost any time, a sugar ship may be seen moored with a stout hawser to the wharf of a refinery, and the chances are that the vessel has a Latin American name and flies a Latin American flag. Suspended from a high overhead structure reaching out over the vessel is a vertical flume. This is a marine leg supporting an endless chain with scoops that hoist raw sugar, like so much sand, out of the hold and dump it on a moving belt overhead for transport to the warehouse. Deep down in the hold, power-driven drag lines keep feeding the flume with sugar gathered from the remotest recesses of the hold until the entire cargo is unloaded.

Inside the warehouse sits a mound of raw sugar of 40 million or 50 million pounds. In another building sits refined sugar, packaged for shipment to retail outlets; and huge silos hold bulk sugar for the bakers, candy manufacturers, and other large buyers in Philadelphia and environs. The transformation of the raw amber-colored cane sugar into pure snow-white granulated table sugar and other finished forms adds comparatively little to the value of the raw material, and that is one reason why sugar refining is done by relatively few, but large, establishments operating expensive equipment. Whether in Philadelphia or elsewhere, sugar refining is a big-volume operation.

Sugar in abundance

The overwhelming abundance of sugar seen at a seaboard refinery should dispel all fears of a sugar shortage. Shelves in grocery stores and supermarkets are usually well-stocked with sugar, and the sugarbowls in the country's 55 million households are never empty—almost never. Sugar is a well-behaved household and industrial commodity. It is seldom given any thought, is seldom scarce, is generally taken for granted. As a source of energy, quick and sweet, sugar has long been a readily available, low-priced food.

Ordinarily, the price of sugar is well-behaved also. Unlike the prices of some commodities that are notoriously jumpy, the price of sugar is customarily calm, serene, sedate. Sugar prices are rarely noteworthy enough to be lifted out of the financial section of the press for front-page dis-

play, very seldom indeed. For almost a decade, the price of a hundred-pound bag, which the baker and the confectioner buy, has not varied as much as a half-dollar between the high and the low in any one year. And for years the price of the 5-pound bag that the housewife buys has hovered around 60 cents, plus or minus a cent or two.

Thar she blows

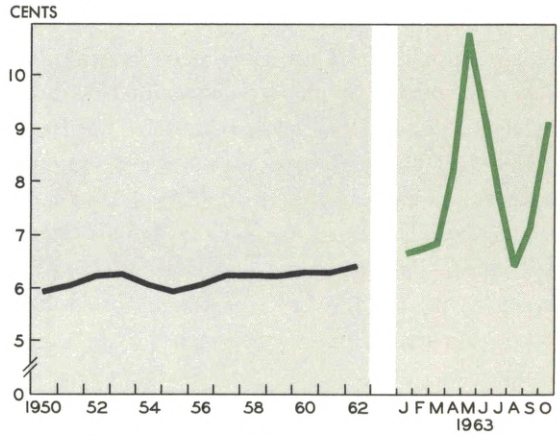
This year, sugar stepped out of character, abandoned its serenity, acted up. As the year opened, the spot price of raw cane sugar in the New York market was $6.62 per 100 pounds—nothing unusual. Soon, thereafter, the market strengthened and prices began to rise. Through the remainder of the winter and well into spring, sugar prices continued to climb. Late in May, the price reached a peak of $13.20—almost double the price at the beginning of the year. Nothing like this had happened in more than 40 years.

As a consequence of the sharply rising price of raw sugar, the price of refined cane sugar was raised a dozen times or more for a total increase of about 70 per cent. Sympathetic but smaller price increases occurred in retail sugar markets. Not since World War I had sugar attracted so much attention.

At the New York Coffee and Sugar Exchange, where the two commodities are bought and sold for future delivery, the sugar pit became a scene of feverish activity and pandemonium continues to prevail. Traders crowd around the ring gesticulating and shouting like madmen. What appears like mass lunacy is in fact an organized exchange, for the shouts and gestures are bids and offers, and proof of the fact that there *is* a meeting of the minds midst the apparent madness is the constant rushing of messengers back and forth between the ring and the board where latest prices are posted as fast as sales are consummated.

Two of the four walls of the Exchange floor are lined with telephone stalls connecting the sugar pit with the rest of the United States and other countries. Calls to buy and sell keep coming in constantly as the price of sugar jumps up and down. Some of the buying and selling is for purposes of hedging, some for speculation. When a commodity goes into orbit, as sugar did last spring, the phenomenon inevitably attracts "outsiders" who go along for the ride. Many also went along for the slide subsequent to the May 23 peak. Within a few weeks, sugar suffered a net decline of more than 400 points, which is 4 cents in the jargon of the trade. Thereafter, prices continued an erratic course, as shown in the chart.

RAW SUGAR: AVERAGE WHOLESALE PRICE PER POUND



End of the sugar surplus

The booming price did not mean that the country had gone on a sugar jag. Consumption of sugar changes very little from one year to another, except for a rising trend to accommodate the needs of a growing population. There was, of

course, some scare buying for the purpose of augmenting inventories. Even some housewives stocked up.

The basic reason for the tempest in the sugar-bowl is that the longstanding worldwide sugar surplus had come to an end. The trouble started in Cuba. Under Castro's mismanagement of the country, production of cane sugar in Cuba has declined to about half of what it was formerly. Coincident with the Cuban debacle, world production of sugar was adversely affected by two successive years of low-yield sugar beet crops in Europe owing to unfavorable weather conditions. Cuban production in the 1962–1963 crop year was an estimated 3.8 million metric tons in contrast with her 1960–1961 crop of 6.8 million tons. Western Europe's sugar beet production in the 1962–1963 crop year, estimated at less than 8 million metric tons, is in contrast with a 1960-1961 crop of 10.8 million tons. Curtailed output in these two important areas was chiefly responsible for an estimated worldwide production in 1962–1963 only slightly over 51 million metric tons.

Meanwhile the demand for sugar grows as the world population increases and living standards rise. Each year the world's population increases by about 60 million. Current world consumption of sugar is estimated at 56 million metric tons, or about 4 million tons in excess of production. A strange state of affairs for a commodity that has been in abundance, often overabundance, for so many years!

The shift in the world sugar situation altered numerous trade channels both here and abroad. Substantial changes were wrought in the United States because of our large sugar consumption and because of a complex sugar situation, partly self-imposed, that existed here before the world-wide supply-demand imbalance occurred.

Sources of our sugar

Sugar consumption in the United States is considerably in excess of our production, so we import from countries that grow more sugar than they consume. We obtain about 60 per cent of our requirements from domestic areas and buy the rest from foreign countries.

A little less than half of the sugar from domestic areas is beet sugar, and practically all of the imported sugar is cane sugar. The consumer, spooning sugar from the bowl, cannot tell whether he is sweetening his coffee with beet or cane. They look alike, taste alike, serve alike. Though cane and beet sugar serve the same dietary needs, they are of different botanic, geographic, and industrial origin.

Raising cane

Sugar cane, a giant-stemmed perennial grass, thrives best in the frost-free tropics and semi-tropics where sunlight and rainfall are abundant. It throve best of all in pre-Castro Cuba where the original stems produced seven or more good crops without renewal planting and with a corresponding saving in labor.

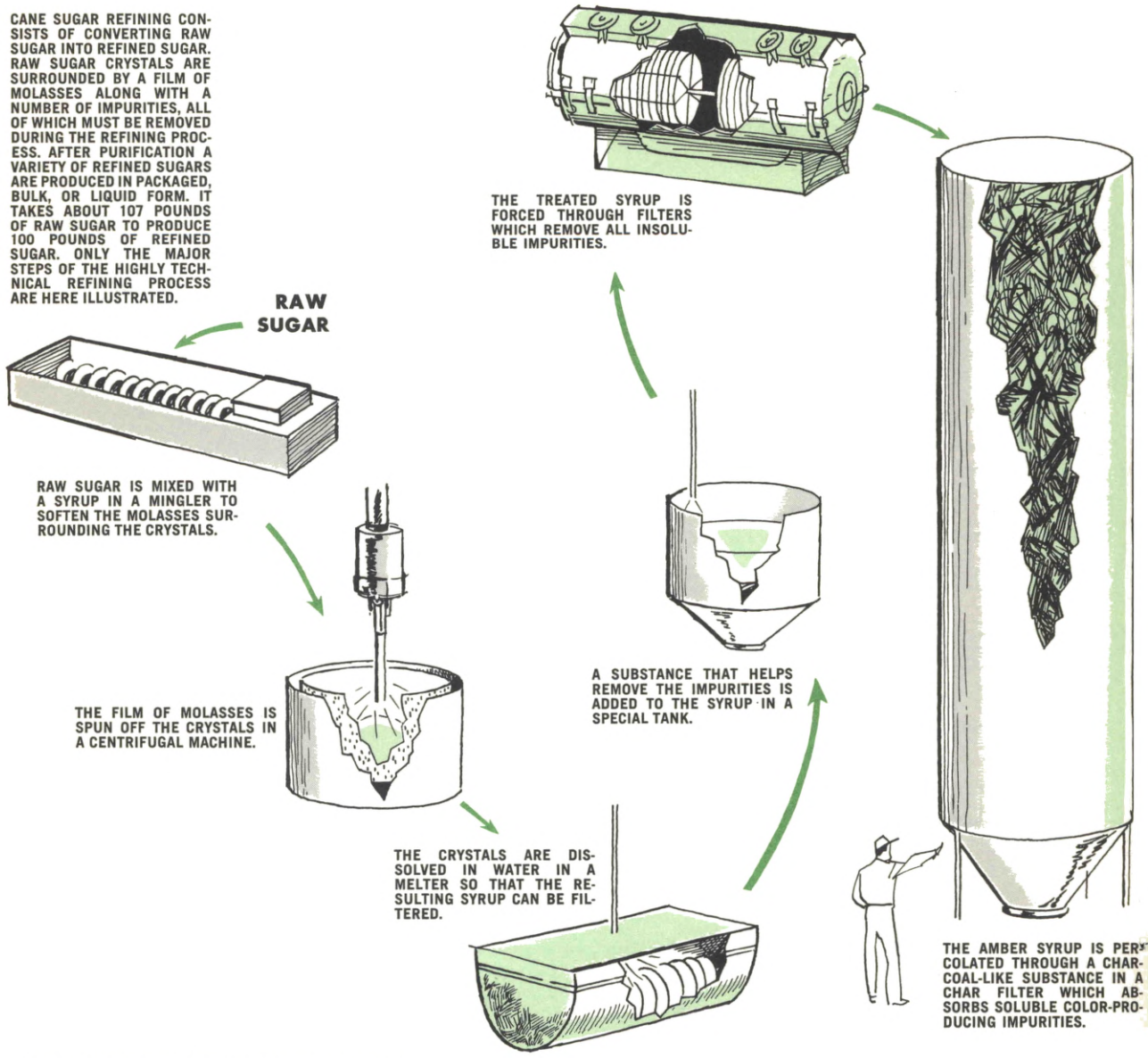
At harvest time, the tall stalks are cut and hauled to a nearby sugar mill where they are run through crushers to extract the juice. The juice is then treated to remove some of the impurities, after which it is processed into brown crystals of raw sugar retaining a protective film of molasses.

Three of our states produce cane sugar—Louisiana, Florida, and Hawaii. These states, together with the Commonwealth of Puerto Rico and, to a lesser extent, the Virgin Islands, are our leading domestic sources of cane sugar.

Refining cane

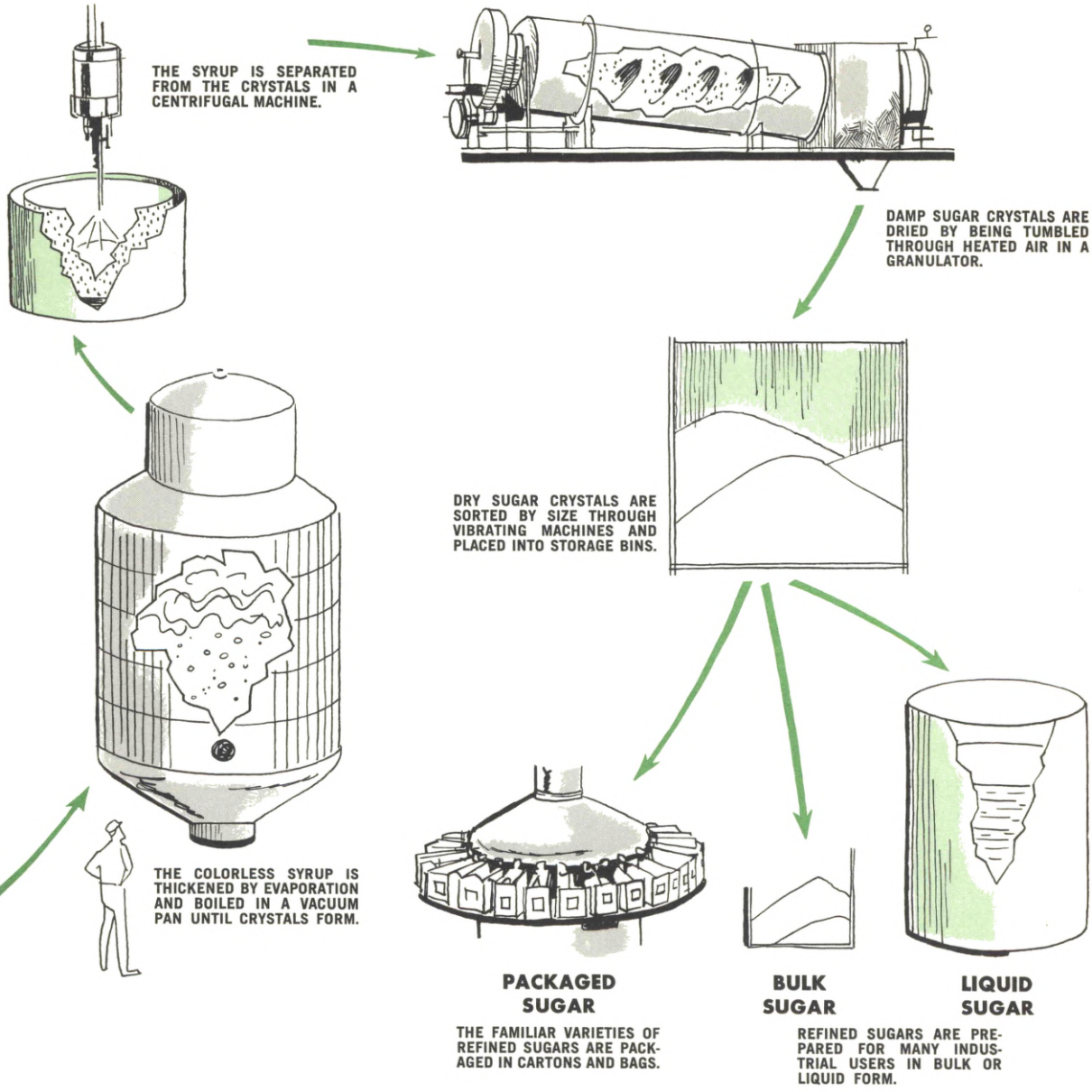
Refining of cane sugar in the United States is

THE CANE SUGAR REFINING PROCESS



Source: United States Cane Sugar Refiners' Association.

performed by 17 companies operating 22 refineries in 11 states—Massachusetts, New York, Pennsylvania, Maryland, Georgia, Louisiana, Texas, Missouri, Illinois, Wisconsin, and California. Those on tidewater are among the largest and have excellent locations and facilities for handling raw sugar arriving by the shipload from offshore areas.



It is amazing how much machinery and equipment is required to refine raw sugar, which is already all sugar except for the 2 or 3 per cent of impurities. A cane sugar refinery is a vast complex—centrifugals to separate molasses from the sugar crystals, huge melting tanks to reduce the crystals to a syrup, various types of filters to remove insoluble impurities, large char

cisterns for color removal, great vacuum pans for crystalization, automatic packaging machinery, and related equipment.

The sugar beet

A sugar beet looks like a beet, grows like a beet, is a beet. In most areas it is planted in the spring, diligently cultivated, and, if necessary, irrigated throughout the summer, harvested in the fall, processed for its 12 to 15 teaspoons of sugar, and tenderly godfathered by Uncle Sam.

At various times and different places throughout the country, efforts had been made to grow and process sugar beets. Prior to 1880 there were 14 such attempts and 14 failures. Eventually, the industry was established with the aid of a tariff and considerable technical assistance from both Government and private sources.

Sugar beets are grown in numerous states—with California, Colorado, and Idaho the leaders, in that order. Now a highly mechanized farming operation, beets are grown as a cash crop in a diversified rotation system. Beets must be processed as soon as possible after harvesting because of their perishability. Farmers grow beets on contract for the processor, who extracts the sugar and does the marketing.

The entire crop of approximately 2½ million tons is processed by about 60 regional sugar factories. At a factory, the beets are washed and sliced into long strips resembling shoestring potatoes. The strips are immersed in large hot-water tanks, called diffusion batteries. There the sugar juice escapes through the cell walls, which somehow trap most of the impurities. The subsequent processing of the sugar juice is similar to that of cane sugar refining.

Most of the domestic beet sugar is refined in the Western irrigated portion of the Great Plains, the inter-mountain and Pacific Coast states. About half of the sugar produced or refined in the West is traditionally marketed in Wisconsin, Illinois, Indiana, Michigan, and Ohio, where supplies from all markets converge. Curiously, beet sugar goes to market as just plain "sugar," while cane sugar is always marketed as "cane sugar"—probably because of consumer preference for cane sugar, particularly on the part of many housewives.

THE UNITED STATES SUGAR SYSTEM

Throughout the civilized world, sugar has long had a peculiar susceptibility to Government regulation. In the United States for almost a century-and-a-half—from 1789 to 1934—the sugar industry has been protected and regulated almost solely by tariff duties. Thereafter, regulations became more complex.

Since 1934 the industry has operated under a quota system. The Sugar Act of 1948, as amended and currently in effect, establishes marketing quotas for domestic producing areas and import quotas for foreign countries.

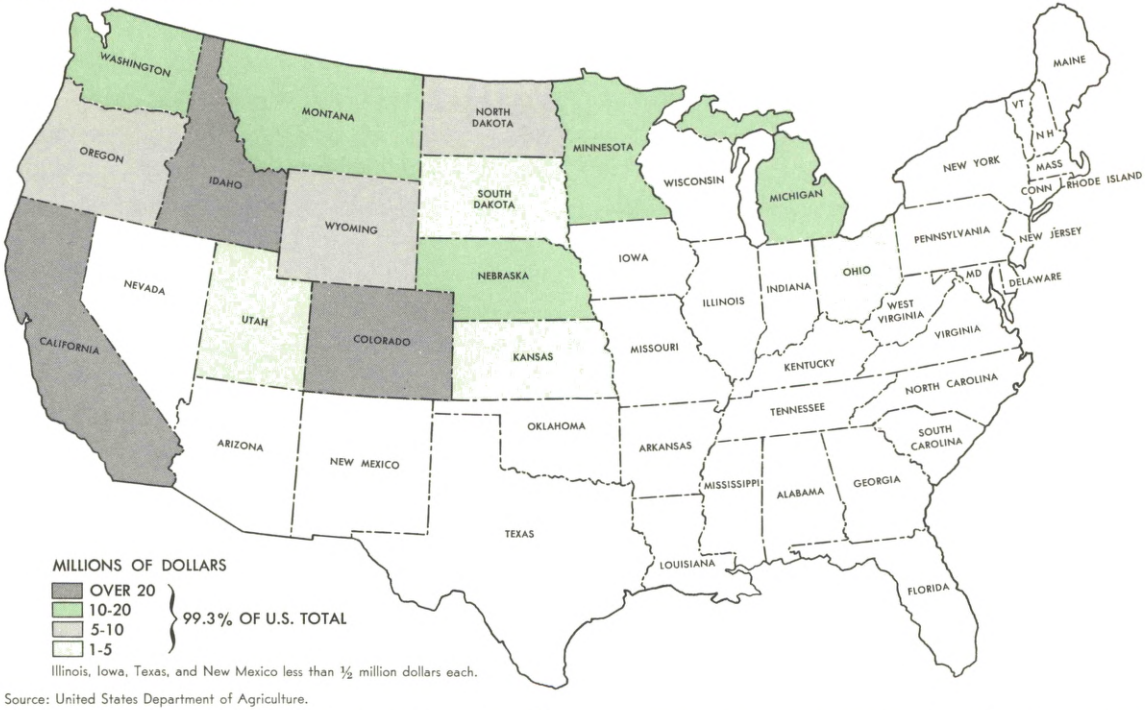
Under the provisions of the Act, the Secretary of Agriculture determines how much sugar will be needed in the Continental United States each calendar year. Thereupon domestic and specified foreign-producing areas are assigned quotas. Consumption for this year was originally estimated at 9,700,000 tons of which domestic areas were to supply 5,810,000 tons assigned as shown in the table.

BASIC QUOTA AT 9,700,000 TONS

Area	*Tons*
Domestic beet area	2,650,000
Mainland cane area (Louisiana and Florida)	895,000
Hawaii	1,110,000
Puerto Rico	1,140,000
Virgin Islands	15,000
Total domestic	5,810,000

SUGAR BEETS (GROWN FOR SUGAR)

Value of Production 1961.



Source: United States Department of Agriculture.

The difference between the total estimated consumption and the domestic quota assignments left 3,890,000 tons which was to be supplied by foreign countries. Among the foreign countries, the Republic of the Philippines has a priority assignment of 1,050,000 tons, which left 2,840,000 tons to be imported from about 25 other foreign countries including practically all the Latin American countries and faraway countries such as India, South Africa, Australia, and the Fiji Islands.

Along with the quota system, the Sugar Act also provides for Government payments in cash to growers, an excise tax on all sugar, and a tariff on sugar imports. In the 1962 amendments to the Act, the quota distribution formula was revised to give domestic areas a larger share of the market and also to give larger specific quotas to certain foreign countries. Another feature of the Sugar Act was a device to fill the gap created by the suspension, since mid-1960, of imports from Cuba. Until Cuba returns to the Free World, her quota to complete the United States sugar requirements is to be supplied by friendly foreign countries under a so-called "global quota," which means, in effect, on a "first come, first served" basis. In other words, having for the time being lost Cuba, we have lost a nice working arrangement for meeting our sugar import requirements and we are now thrust out into the world market where we must compete with other sugar-importing countries to buy our own import requirements.

Another significant feature of our sugar system is the provision in the Act for the quota premium recapture which was developed when

world sugars were selling well below domestic prices. The Act directs the Secretary of Agriculture to levy an import fee on certain foreign imports fixed at the difference between the world price and the (higher) United States price objective.

The Sugar Act with its quota system and related provisions was designed to support the American price above inordinately depressed world prices by limiting the marketable supply in the United States. When, however, the world sugar market tightened and rising world prices caught up with and surmounted our domestic prices, numerous adjustments had to be made.

As early as August, 1962, restrictions on production of the 1963 beet sugar crop were removed. Late in 1962 the import fee on global quota sugar was reduced, and in January of this year the import fee was eliminated. In March, 1963, acreage restrictions on domestic sugar cane were relaxed and unrestricted production of sugar beets was extended through 1964. In May unrestricted beet production was extended through 1965, and in the same month sugar-marketing quotas initially established at 9.8 million tons for 1963 were raised to 10.4 million tons. These and other administrative actions growing out of the Sugar Act were taken to cope with the rising price situation.

Competitive realignments

Subsequent to last spring's spectacular gyrations in sugar prices the market has been feverish. Both domestic and world prices are still at exalted levels in contrast with prices in former years of world sugar surpluses. The initial price disturbances and the continuing high levels have substantially altered competitive relationships in the United States market.

Cane sugar refineries are especially susceptible to the hazards of changes in inventory values caused by fluctuating prices because of the narrow margin on which they operate. Cost of raw material is about 80 per cent of the value of product. Rising prices, to be sure, bring unexpected profits but they can be wiped out just as quickly by falling prices. Moreover, with Cuba out of the picture the seaboard refineries have had to contend with the uncertainties and irregularities of arrivals from distant sources during chaotic market conditions.

Cane sugar marketing problems have multiplied. Philadelphia and other seaboard refineries from Boston to Baltimore have customarily served what the sugar industry calls the Northeast—which embraces New England, the Middle Atlantic States, the Virginias, the Carolinas, and the East-North Central states as far west as Chicago. The area known to the trade as Chicago-West, extending to the Rockies, has customarily been served by the beet sugar industry. Now, however, at higher price levels the beet sugar growers and processors can absorb freight and compete successfully in Eastern markets. Substantially increased amounts of beet sugar are being marketed in the "cane sugar states" of the populous East; in fact, beet sugar is being sold within the shadows of Philadelphia's cane refineries. Pennsylvania and Illinois are especially attractive markets because of the importance of the confectionery industry in both states.

The beet sugar industry understandably is taking advantage of the prevailing situation by expanding its operations. Last year the industry turned out a record crop of slightly in excess of 2.6 million tons raw value, and this year's beet-sugar output promises to be slightly over 3 million tons. As previously indicated, planting restrictions are off and processing facilities are

being enlarged to handle larger production. Moreover, in the maneuvering for larger quotas the beet sugar industry has the good fortune of abundant Congressional representation.

Brand-new, beet sugar ventures are being considered in other states such as Maine, New York, and Delaware. It may be difficult, however, to raise beets in these areas because of climatic shortcomings. It may also be difficult to raise the venture capital. A modern processing plant costs about $20 million and stands idle except for the few months during the beet harvest.

Continental cane sugar growing is also being expanded. Thus far the greatest expansion has taken place in Florida, where production has almost tripled since our Cuban imports have been cut off.

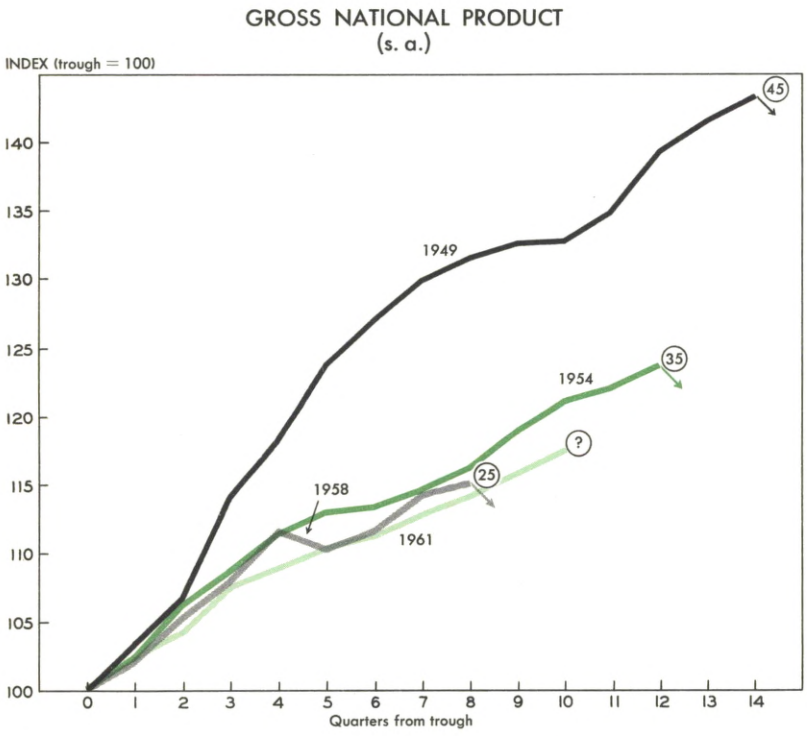
The entire sugar industry, cane and beet, is concerned about the growing competition of competitive sweets. Higher sugar prices have opened wide the gates for dextrose and corn sirup as well as synthetic sugar products. When sugar prices skyrocketed, these competitive products captured a larger share of the sweetening market—some of which they may retain permanently even if sugar prices ultimately return to former levels.

Another development of some concern to the sugar industry is the growing popularity of non-caloric soft drinks, particularly on the part of women eager to maintain their streamlined figures. That, of course, might be only a current fad destined to fizzle.

American consumers long in the habit of paying higher than world prices for sugar by reason of the Government-sponsored price-propping are seldom heard to complain. One reason may be that sugar, after all, is still relatively cheap and sugar had a long history of price stability prior to the recent upsurge. Another reason may be the fact that housewives no longer buy much sugar for home baking, canning, and cooking. A generation ago about two-thirds of the sugar consumption was bought at retail for use in the home. Now about two-thirds of the sugar goes to the commercial bakers, confectioners, canners, and manufacturers of soft drinks, ice cream, and other products, and only one-third is bought by housewives.

Although 1963 has been a most unusual sugar year, we make no predictions about next year. One might reasonably expect high sugar prices to stimulate production and perhaps ultimately restore the status quo. But sugar production cannot be increased overnight. Moreover, sugar is so worldwide and has so many ramifications—botanic, climatic, geographic, and politic—that we prefer to wait and see.

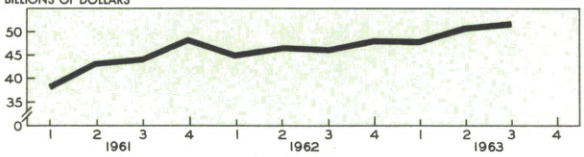
THE $600 BILLION QUESTION



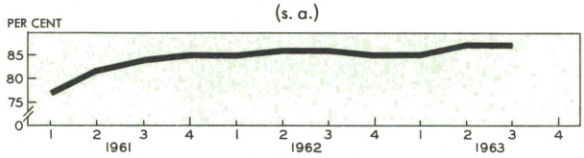
The present period of business expansion has reached a ripe age. It is already eight months older than the shortest postwar expansion. It only has to continue through February of 1964 to become the longest (except for 1949–53 which was influenced by the Korean War). Can it keep going all through 1964?

DEMAND

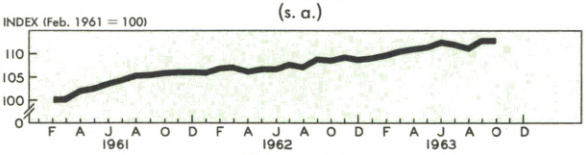
PROFITS
(s. a.; a. r.)



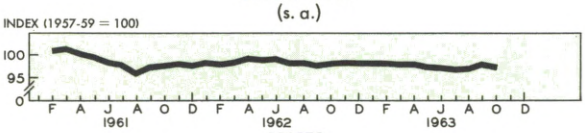
CAPACITY
(s. a.)



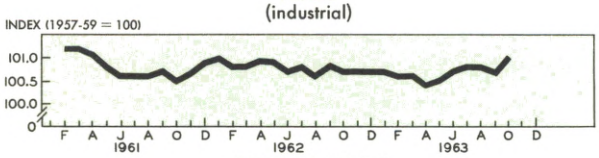
PRODUCTIVITY
(s. a.)



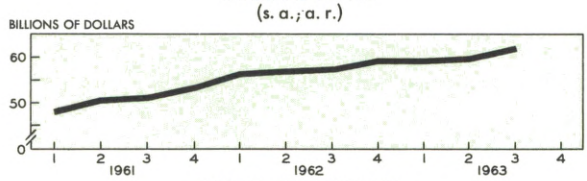
LABOR COST
(s. a.)



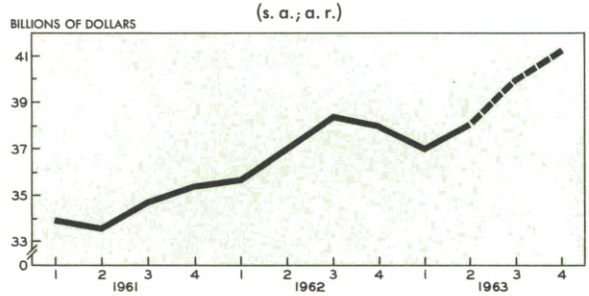
PRICES
(industrial)



INTERNAL FUNDS
(s. a.; a. r.)



CAPITAL EXPENDITURES
(s. a.; a. r.)



The picture looks good in the *corporate* sector—

Profits have increased throughout most of the present recovery period to a new high,

partly because producers have been using a rising proportion of capacity,

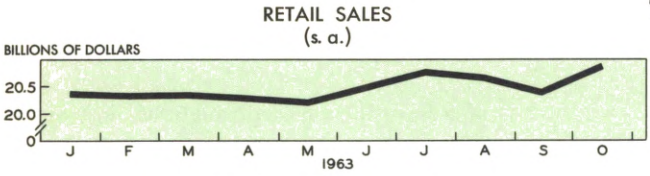
because of increasing productivity,

and declining labor costs.

Lower labor costs have helped producers keep prices down.

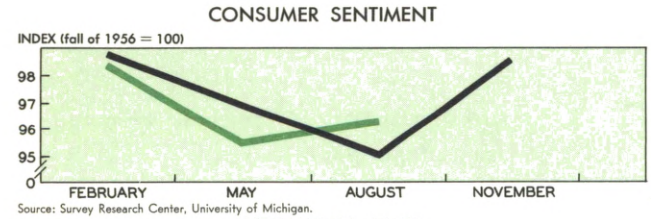
At the same time, corporations have been generating a large volume of internal funds,

enabling them to expand capital outlays.



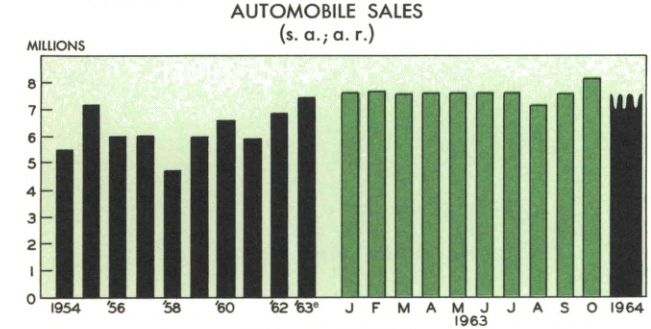
The *consumer* sector has shown more vigor recently—

Retail sales have been a strong spot.

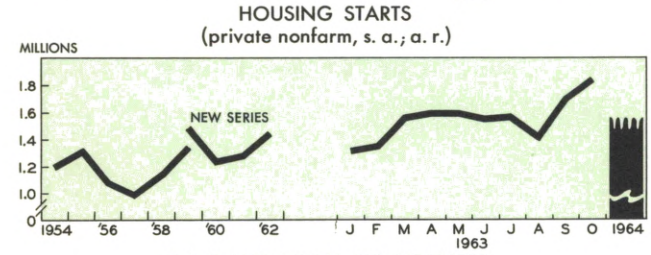


Source: Survey Research Center, University of Michigan.

Buyer confidence in the future has picked up.

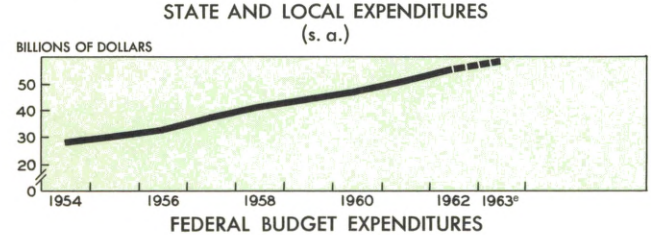


The strongest point has been automobile sales which will set a record this year and are expected to stay high in 1964.

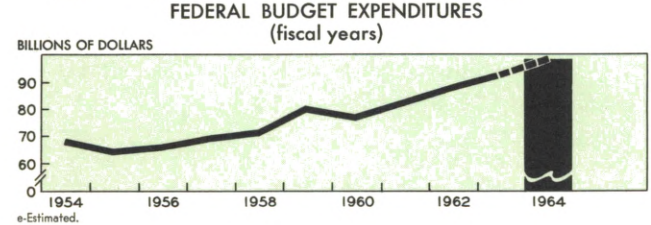


Housing starts have been rising recently. Most forecasts for 1964, however, indicate little or no change from 1963.

Less strength than in recent years can be expected to come from the *Government* sector—

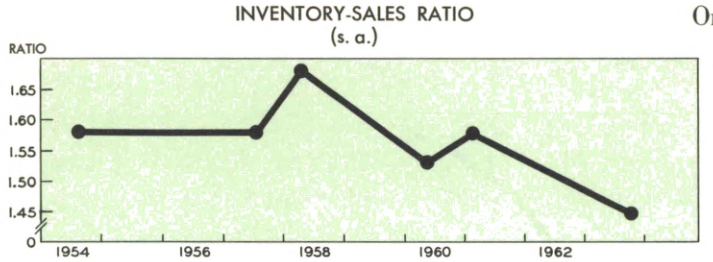


Large state and local outlays continue to lend support to the economy.



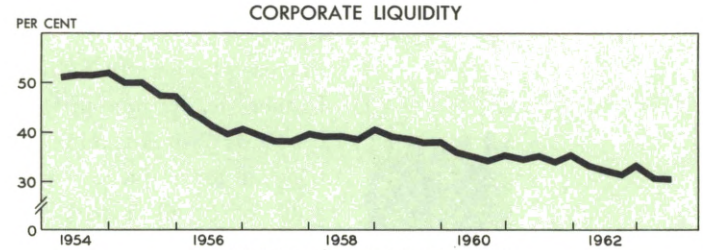
e-Estimated.

Budget estimates for fiscal '64 appear to indicate a high level of spending into next year, but a big question is whether spending will be held down if and when taxes are cut.

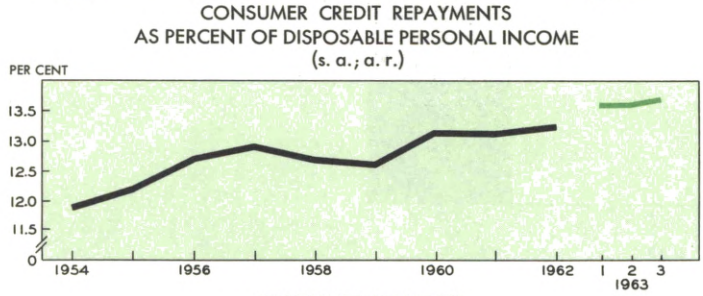


One reason some believe there will be no recession next year is that there have been few *excesses* produced by this expansion. This seems generally true, but there are some spots to watch—

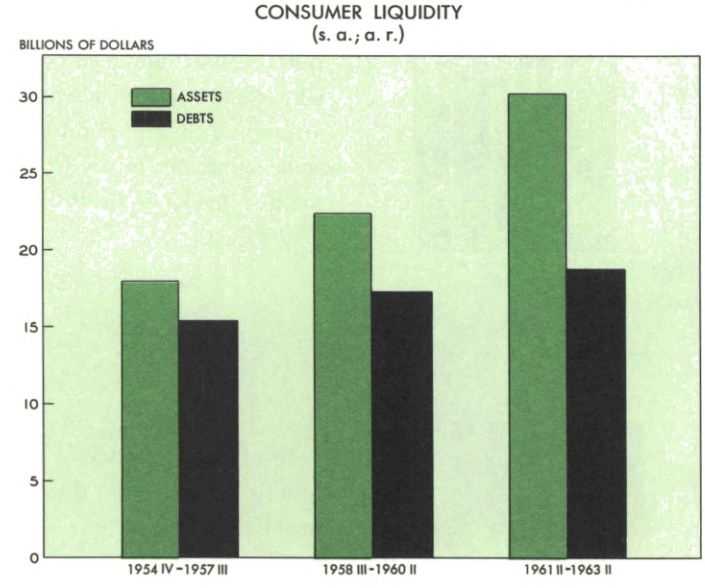
The inventory-sales ratio is now at an extremely low level,



but at the same time, corporate liquidity has declined considerably.

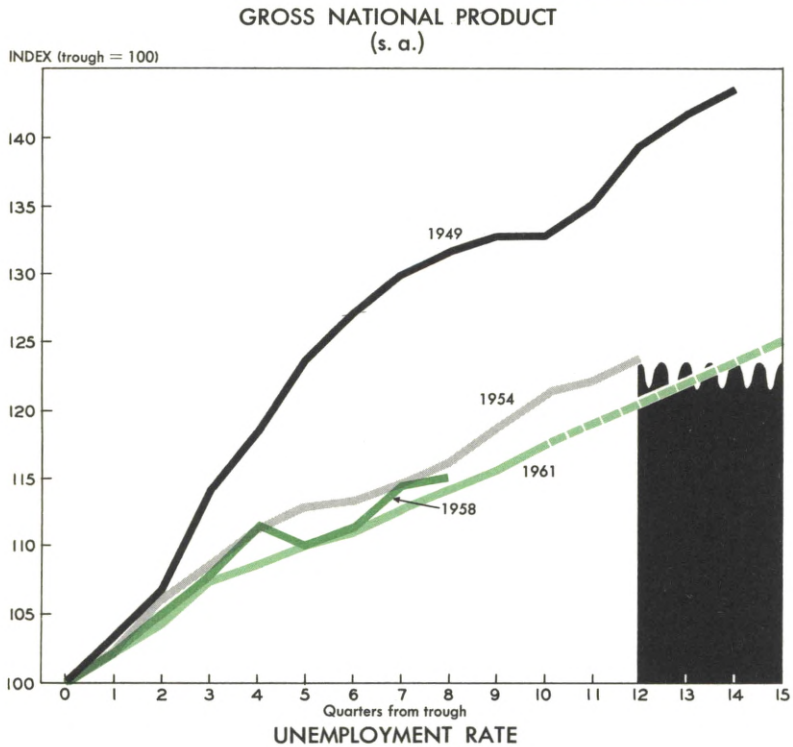


Consumer credit repayments are now consuming a higher percentage of disposable income,



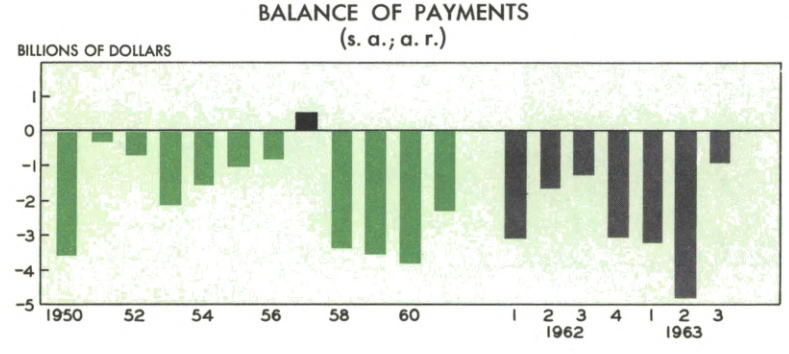
yet compared with earlier periods of recovery, consumer assets (most of which are liquid) are up more than debt in the latest expansion.

THE "ANSWER"



Forecasts generally indicate further steady gain in GNP for 1964. Assuming a tax cut, they call for an increase over 1963 of about 5 per cent.

But the unemployment rate, which has been hovering around a high point for some time, promises to remain a problem in 1964.



And the deficit in our balance of payments seems certain to continue a difficult problem.

business review

FEDERAL RESERVE BANK OF PHILADELPHIA

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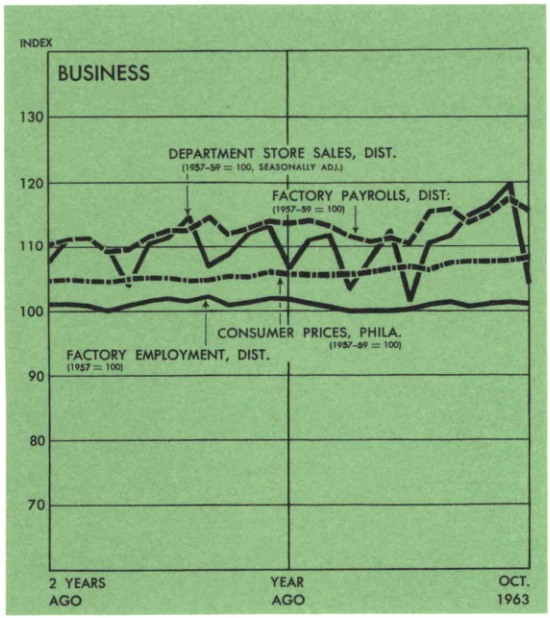
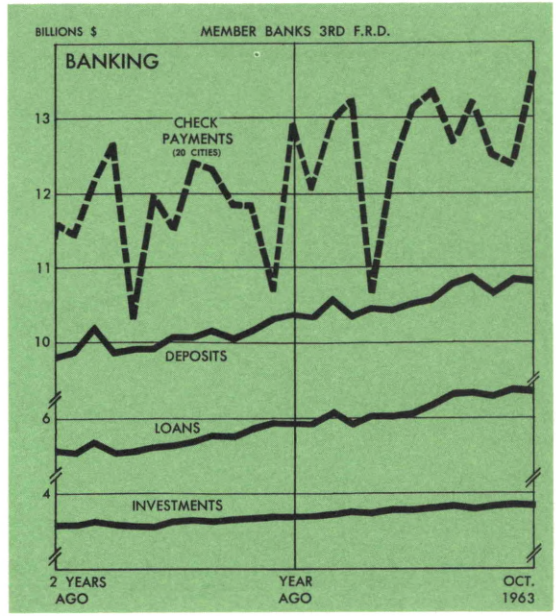
FOR THE RECORD...





SUMMARY

	Third Federal Reserve District			United States		
	Per cent change			Per cent change		
	Oct. 1963 from		10 mos. 1963 from year ago	Oct. 1963 from		10 mos. 1963 from year ago
	mo. ago	year ago		mo. ago	year ago	
MANUFACTURING						
Production	....	....	....	+ 1	+ 6	+ 5
Electric power consumed	+ 2	+ 6	+ 5	....	....	....
Man-hours, total*	− 1	− 2	− 2	....	....	....
Employment, total	0	− 1	− 1	0	+ 1	+ 1
Wage income*	− 1	+ 1	+ 1	....	....	....
CONSTRUCTION**	− 9	− 8	− 6	+16	+26	+10
COAL PRODUCTION	+ 4	+21	+11	+ 2	+11	+ 8
TRADE***						
Department store sales	−13	− 4	0	− 7	+ 3	
Department store stocks	+ 1	+ 2	....	....	....	....
BANKING						
(All member banks)						
Deposits	0	+ 4	+ 5	0	+ 5	+ 7
Loans	0	+ 7	+ 8	0	+11	+11
Investments	− 1	+ 4	+ 4	0	+ 2	+ 4
U.S. Govt. securities	− 1	− 4	− 2	0	− 7	− 4
Other	0	+22	+20	+ 1	+22	+23
Check payments	+10†	+ 5†	+ 7†	+ 9	+10	+10
PRICES						
Wholesale	....	....	....	0	0	0
Consumer	+ 1‡	+ 2‡	+ 2‡	0	+ 1	+ 1

*Production workers only.
**Value of contracts.
***Adjusted for seasonal variation.

†20 Cities
‡Philadelphia

LOCAL CHANGES

	Factory*				Department Store†				
	Employment		Payrolls		Sales		Stocks		Check Payments
	Per cent change Oct. 1963 from								
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	
Lehigh Valley	0	− 1	− 2	+ 2	....	....	....	....	+ 6	+ 8
Harrisburg	0	0	− 4	0	....	....	....	....	+14	+20
Lancaster	− 1	− 2	0	− 2	− 4	+ 3	+ 2	0	+11	+ 8
Philadelphia	0	− 2	− 1	+ 1	−17	− 9	+ 1	0	+12	+ 6
Reading	+ 1	0	+ 1	+ 8	− 2	+ 6	+ 3	0	+14	+15
Scranton	+ 1	− 1	+ 2	+ 4	− 6	+ 3	+ 2	+ 8	+ 6	− 3
Trenton	0	+ 4	+ 1	+10	−10	+ 2	− 2	+13	+23	+ 7
Wilkes-Barre	− 1	0	− 2	+ 5	− 5	+ 2	− 1	+ 8	+ 9	+11
Wilmington	− 1	+ 4	− 1	+ 6	− 9	+ 8	− 1	+13	− 6	− 3
York	0	− 2	0	+ 1	− 2	− 1	0	− 3	+ 5	+ 6

*Not restricted to corporate limits of cities but covers areas of one or more counties.
†Adjusted for seasonal variation.