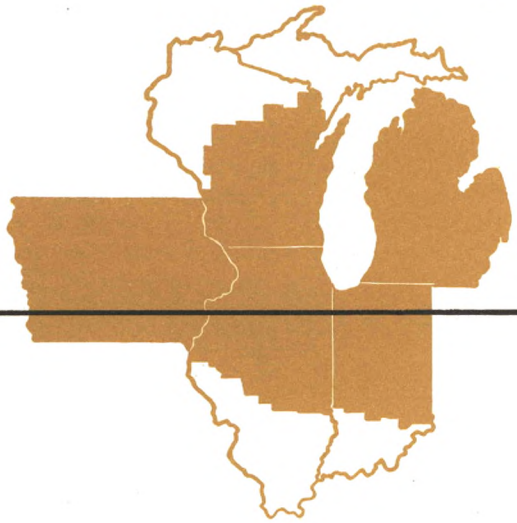
A review by the **Federal Reserve Bank of Chicago**

Business Conditions



1955 September

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THE Trend OF BUSINESS

It is readily apparent that the business pace has continued to accelerate during the summer. Retail sales, for example, advanced 2 per cent between June and July to a new high, after allowing for seasonal changes. General merchandise lines, moreover, are now sharing more fully in the heavier buying, as is indicated by a hefty 10 per cent year-to-year gain in department store volume for the four weeks ended August 6. Despite temporary work stoppages and unusually hot weather, industrial production also rose somewhat further in June and July to a point 14 per cent above the year-earlier rate.

Total national output of goods and services in the second quarter is now estimated to have been at a 385 billion dollar annual rate, 8 per cent above last year's low and 15 billion dollars higher than the previous peak set in mid-1953. This spectacular gain has been accomplished without appreciably higher prices to date, but upward price pressures appear to have been gaining strength recently. Selective increases posted in a number of lines, including steel, aluminum, copper, tires, television sets and farm machinery, have boosted the index of wholesale prices for industrial materials and products by about 1 per cent since mid-June. Wholesale quotations over-all declined slightly in the same period, however, due to lower prices for farm products and processed foods, especially meats.

Widespread optimism prevails for at least the remainder of this year, as manufacturers' new orders have jumped 27 per cent from year-ago levels and order backlogs are again on the upswing. Capital outlays for new plant and equipment are rising impressively, and many businesses appear to be contemplating further additions to inventory. Consumers have been spending freely, and the most recent survey of buying intentions indicates that they are in a broadly optimistic frame of mind. In these circumstances, scheduled production cutbacks for automobile model change-overs and inventory cleanup do not loom as a major brake on over-all activity. Housing starts also have tended downward in recent months, after seasonal adjustment, but total construction contract awards continue well ahead of the year-ago volume.

Boom prospects have begun to feel the bite of tightening money in recent weeks. Demands for borrowed funds have been very strong, with mortgage lending in record volume and consumer and business loans expanding much more than seasonally through July. As a result of these requirements and a somewhat more restrictive monetary policy, interest rates have firmed, especially for shorter-term credit. Rates on commercial paper and Treasury bills have advanced by more than ½ per cent since late winter, while banks boosted rates charged prime borrowers by ¼ per cent at the end of July. Some new offerings of corporate and municipal securities have met with relatively poor receptions recently, and several issues have temporarily been withdrawn from the market.

Additional signs that credit may be less readily available in the months ahead stem from the increase in rediscount rates posted by Federal Reserve Banks and the tighter reserve positions of commercial banks in the face of seasonal loan expansion. The moderate tightening in FHA and VA minimum requirements for future mortgage loan applications will not be felt for several months, but many lenders

already appear to have become more restrictive on such loans. Growing concern also is being expressed concerning the liberal terms on which instalment credit has been extended—particularly for new cars.

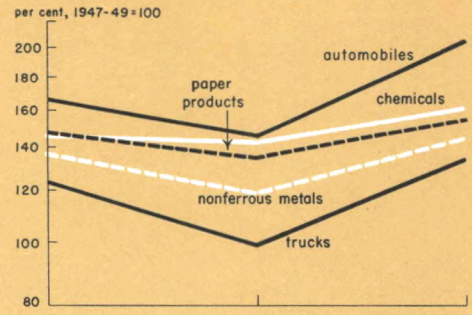
Some major industrial lines are still below previous highs, despite substantial recovery in the past year and record levels of output generally. Spring production of farm machinery, for example, fell about 10 per cent short of the 1953 volume and further behind the peak rate set in 1951. Output of industrial machinery, electrical apparatus and furniture are also somewhat below their earlier highs, although a large volume of new orders in recent months presages a further rise in activity in these industries. Production of railroad equipment is sharply below earlier postwar highs, while output of aircraft has tended downward for the past year and a half, reflecting reduced military buying.

Employment in manufacturing and mining also falls short of the 1953 peak by a substantial margin. According to Bureau of Labor Statistics estimates, jobs in industry are still 900,000 or 5 per cent below the mid-1953 high. At the same time, the total number of people at work, including self-employed, reached an estimated 65 million in July—more than a million higher than in any earlier month.

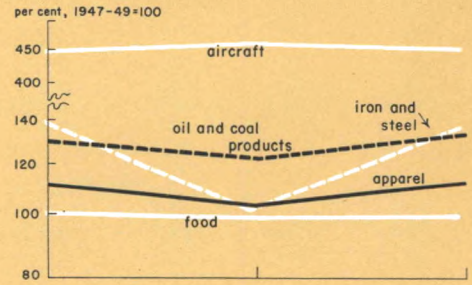
Reflecting the lag in manufacturing employment and growth in the labor force during the past two years, labor market conditions are not nearly so tight as during the 1952-53 boom. In July, most of the nation's 149 major labor markets were reported as having moderate labor surpluses, and none reported a serious shortage of workers. In fact, pockets of substantial unemployment persist, with 31 areas classified as having a substantial labor surplus (6 per cent or more unemployment). Only two Midwest centers—South Bend and Terre Haute—are included in this group.

The farm operator, with his wagon mired deeply in surplus supplies, enviously watches the business boom roll by. Not long ago—in 1953—essentially the same situation occurred; but this time the contrast is widened by the

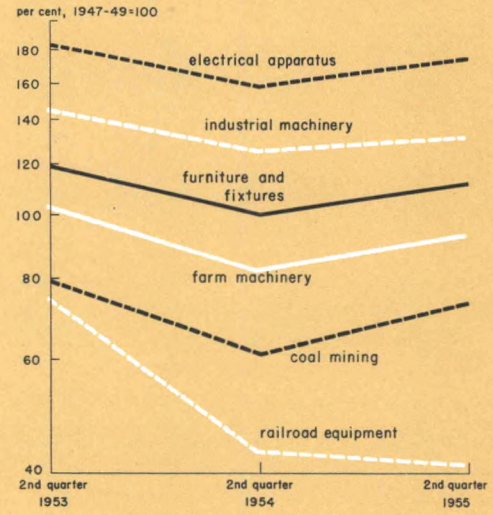
Production in many industries has reached new highs . . .



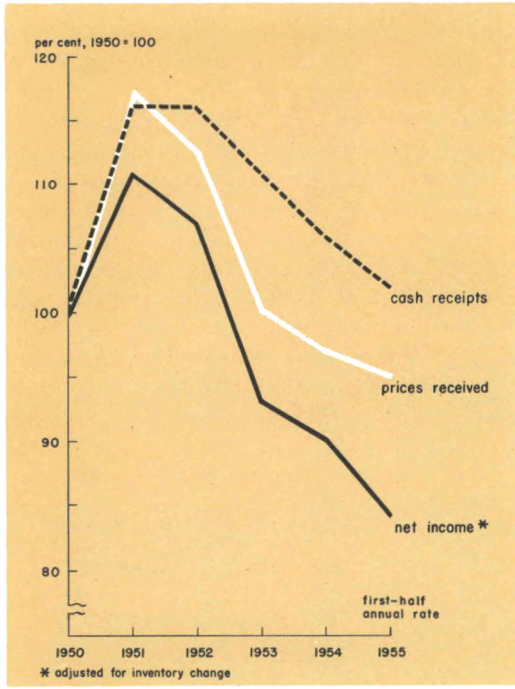
while output in others is about at the previous peaks . . .



but some lines have not yet recovered to 1953 spring rates



Farm operators' income and prices show steady decline from 1951 peak



new records being set in general business activity and the further erosion of farm prices and incomes. After four years of continuous decline, farm operators' net income is now running 27 per cent below its 1951 peak. Since the number of farms decreased only slightly during that period, the net income per farm also dropped about one-fourth.

And apparently the adjustment is continuing. In the second quarter of this year, farm proprietors' income posted a seasonally adjusted annual rate of 11.0 billion dollars, down 4 per cent from the first quarter. In the month ending July 15, prices received by farmers dropped 2 per cent to a level equivalent to 84 per cent of parity, lowest since December 1940.

Recently the U. S. Department of Agriculture announced that, as of August 1, crop conditions pointed to production 6 per cent above a year ago and equal to the all-time record set in 1948. The advance of technology and more intensive use of capital have raised yields per acre 8 per cent since the latter date, fully offsetting Governmental production controls of various kinds. In the wake of the crop announcement, grain futures declined sharply on the commodity exchanges.

Business gets a boost from inventory upswing

Spurred on by record output and sales, business inventories rose by 1.3 billion dollars in the second quarter on a seasonally adjusted basis. Even so, stocks at least at the manufacturing level are generally considered inadequate to support comfortably the prospective volume of business. Quite probably, the recent rate of inventory rise will be equaled or bettered throughout the second half of the year.

Although additional investment in inventories can be counted upon as a strong plus factor in the business picture for some time to come, forecasters commonly look to the movement in this sector as a likely source of trouble in the longer run. This view receives ample support from recent experience. The downturns of 1948 and 1953 were earmarked by a shift from over-all inventory growth to liquida-

tion, which intensified subsequent adjustments.

Inventory changes by their very nature provide a potential source of instability. When stocks are building, final demand is supplemented by additional goods placed on the shelves or in the pipelines. An inventory decline means that demand for finished goods is satisfied, in part, from existing supplies rather than new production.

Of course, some inventory rise is necessary over a period of years in a growing economy. But the process does not proceed smoothly. Even without a burst of unbridled optimism, a movement to increase stocks usually ends with some overbuilding.

Continued growth ahead

In June, total business sales were at a record 52.3 billion dollars, up 12 per cent from the previous year. Inventories stood at 78.8 billion, barely above the level of 1954 and almost 2½ billion dollars below the all-time peak set in the fall of 1953. Comparisons of stock-sales ratios (the number of months' supply) at midyear with the monthly average in the past two years provide some indication of the amount of build-up in prospect.

	Total business	Manufacturing	Retail
Ave. 1953	1.65	1.84	1.60
Ave. 1954	1.65	1.85	1.57
June 1955	1.51	1.61	1.51

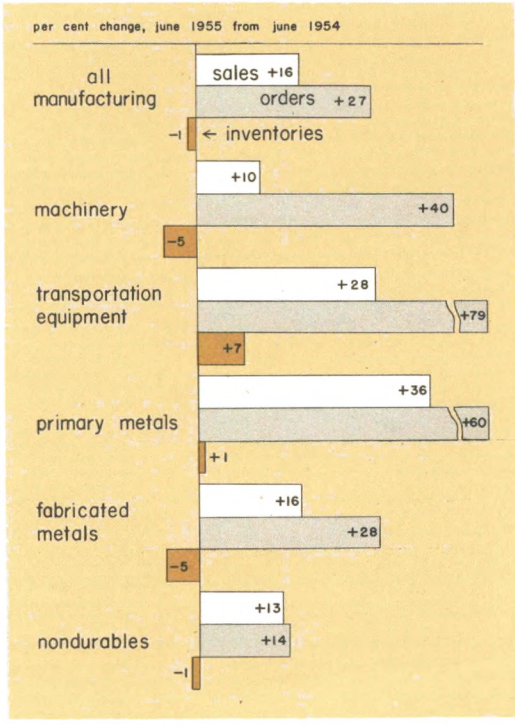
In order to be equal to the average over-all ratio for the previous two years, total stocks would have to have been 9 per cent or 7 billion dollars higher than they were at midyear. Increases doubtless occurred in July and August, but sales also have risen so it is unlikely that substantial progress has been made in achieving a more "normal" ratio.

Any stock-sales comparison with the past is certain to meet with the objection that the reference period was not normal. The years 1953 and 1954 covered a low amplitude "business cycle," and military production which often entails a long processing time was relatively more important in the past two years than it is now. Nevertheless, the relationships that prevailed in those years were more normal in many respects than any similar time span in the postwar period. Virtually all raw materials were readily available, allocations were unimportant and the period was characterized by general price stability. Some support for this point of view can be gained from the fact that averages over each of the years 1953 and 1954 were virtually identical.

Stock-sales ratios by themselves do not provide a satisfactory guide to inventory trends. They must be considered along with sales prospects. However, if general expectations of a rising level of total sales are realized, stocks will have to increase just to keep abreast.

The Midwest has a special stake in an inventory move because of the great importance of capital goods and other metal-fabricating industries in this area. The shift from build-up to decresence is almost always concentrated in these lines because the time spent in process is

Sales and orders zoom — stocks lag



generally longer and a larger inventory relative to production and sales is required. As a rule, stocks of hard goods manufacturers average about one-third higher relative to sales than do those of soft goods lines such as textiles and chemicals.

Among the major retail lines, inventories of automobile dealers show by far the largest fluctuations. Holdings of hard goods manufacturers plus those of auto dealers have amounted to about one-third of the total for all business firms in recent years, but they have accounted for two-thirds or more of the changes.

Producers' stocks low

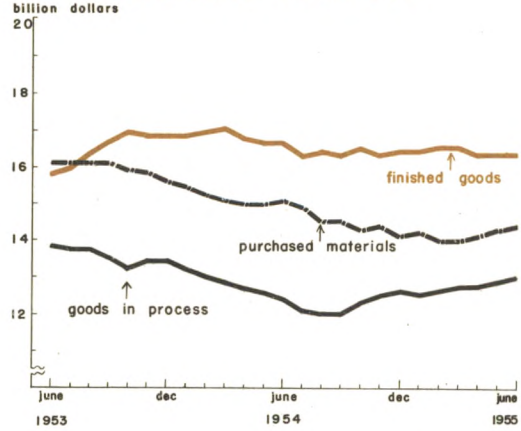
An impressive inventory deficit is apparent in most metal-using industries. It is the latter group of producers who have been pressing most closely upon capacity ceilings. Recent substantial price increases for steel and copper indicate the strength of demand for these basic materials and the inadequacy of supplies.

Part of the stringency in hard goods has resulted from a surge in orders for machinery and transportation equipment. Some types of production, freight cars, for example, have been restricted by shortages of steel products. Steel inventories have been building since the start of the year, but holdings are still well below peak levels. The tremendous volume of construction also has helped use up hard goods as fast as they were made available. In many areas shortages of steel, cement, gypsum board and other items have set the ceiling for total construction activity.

Order backlogs of manufacturers have been rising rapidly. Their June sales topped last year by 16 per cent and new orders were up 27 per cent. Inventories at the same point were *down* 1 per cent. For hard goods producers these relationships were even more spectacular (see chart on page 5).

When retail buying rises sufficiently to require an increase in ordering, merchants are able to get early delivery on those items held in stock by manufacturers. As a result, finished goods in the hands of manufacturers are usually the last segment of total inventories to

Finished goods stable
as total producers' stocks rise



register increases during a period of over-all inventory rise. The dollar value of finished goods in the hands of manufacturers at the end of June was still near the low point for the 1953-55 period. In fact, finished goods declined slightly during the second quarter; meanwhile, inventories in the form of purchased supplies and goods in process rose by about 3 per cent.

Merchants' holdings in line

Retail inventories are likely to continue to increase at least seasonally in the months ahead, but this sector probably will not see spectacular gains. In fact, the important automotive dealer group will begin to report sizable declines as 1955 models are run off. At the end of June the dollar rise over the previous year in inventories of automotive dealers accounted for almost two-thirds of the total rise in retail stocks. According to Ward's, 670,000 new cars were on hand at that time, a number well above last year but equal to only one month's sales. However, new car stocks rose again in early August to a record 730,000 units.

Department stores had sufficient goods on hand or on the way to meet the excellent sales levels of June and July without depleting inventories generally. Stocks were actually some-

what higher on July 1 relative to sales than a year earlier. This was especially noticeable in the important apparel lines. However, order information indicated that these stores were planning to increase total holdings further in preparation for the usual fall upturn. Among the other retail lines, furniture and appliance stores appeared to be building inventories to handle excellent sales levels.

Stocking in a boom

Dangers are inherent in an inventory boom regardless of "adequacy" of supplies at a given time. In fact, the greater the need for inventory building and the more strenuous the attempts to fill the gaps, the greater the eventual adjustment, unless final demand rises swiftly enough to take up the slack in buying for stock. Moreover, the dulling influence of a stock-buying cutback does not await a shift from build-up to liquidation. It is present as soon as the *rate* of accumulation slows.

Another difficulty is that adjustments in inventory investment almost always lag behind changes in sales volume. At first, production rises more gradually than sales. Later the pace of accumulation quickens and output flows more and more into inventory growth. On the other hand, when sales decline, the flow of goods previously set in motion retains considerable momentum.

For example, total business sales, seasonally adjusted, took a pronounced turn for the better in November and December of last year, but inventories did not show an appreciable rise until February. When sales began to slip after July of 1953, inventories continued to rise through September.

Despite the apparent inherent instability in the inventory investment sector, more careful business planning can serve to moderate its effects. Up to the present time a necessary inventory build-up has been proceeding in an orderly fashion. Even in the hard-pressed steel markets, there has been little indication of a return to gray markets and conversion processing. Buying stretched out to 60 and 90 days in many cases last spring, but there has been little evidence in recent weeks of a further trend in that direction, and goods have been moving to their destinations ahead of schedule in some lines. Nevertheless, in August, the possibility of a speculative inventory bulge brought a warning against overconfidence from the Secretary of Commerce.

For the first time in years, widespread price increases for processed goods loom as a possible motive for inventory buying in excess of actual needs. Purchasing agents have already noted many markups, often arising from the direct or secondary effects of the jump in steel products. Inventory growth resulting from anticipatory buying could intensify the destabilizing effects inherent in any inventory bulge.

Swelling business loan demand

The customary autumn influx of business borrowers into the nation's commercial banks is in full swing. Leading banks throughout the country report that their loans to commerce, industry and agriculture climbed to 23,940 million, a gain of 825 million in the four weeks ending in mid-August.[1]

The present increase in loans to business comes on the heels of a striking 1.6 billion dollar bulge during the first half of the year.

[1]This rise was partially obscured by the concurrent disposal of 300 million certificates of interest in Commodity Credit Corporation crop support loans, holdings of which are included in published weekly reports of business loans totals. To gain a better focus on business borrowing trends, such certificates are excluded in all the business loan figures used in this article.

That contraseasonal upsurge compared with first-half declines of 600 million in 1952 and 1953 and a drop of 1.7 billion in 1954. In fact, this year is only the second time since 1947 that outstandings have risen in the January-June period. The last previous occasion was in the first half of 1951, when the rapidly expanding defense effort pushed business borrowing up by slightly more than a billion dollars.

More than seasonal rise

Generally speaking, the total of business loans outstanding at the nation's leading banks dips in the first half of the year and then rises in the final five months. This pattern is shaped by the heavy credit requirements of "seasonal" borrowers — mainly food and farm product processors, commodity dealers and, to a lesser extent, wholesalers and retailers.

In contrast to these primarily "seasonal" borrowers are a host of other businesses—ranging from small apparel manufacturers to giant public utilities—which borrow with less regularity as fund needs develop because of cyclical sales swings, long-term capital programs and the like. The precise direction of over-all business loan movements is thus an amalgam of random, seasonal and longer-run influences.

This year, a "normal" fall increase in loans to the seasonal borrowers would in itself be enough to raise outstandings close to 25 billion dollars by the end of the year, an increase of some 6 or 7 per cent over the end-of-July figures. But a number of other forces will be at work in the final months of 1955 that will tend to give business loans an additional upward shove. The expected high level of over-all economic activity, along with rising trade receivables and inventories, will stimulate the demand for working capital and short-term credit. Increasing inventories, while responsible for little of the first-half rise in business borrowing, should be an important factor in the near future loan picture. This will prove particularly true if many businesses undertake inventory accumulation in anticipation of price increases.

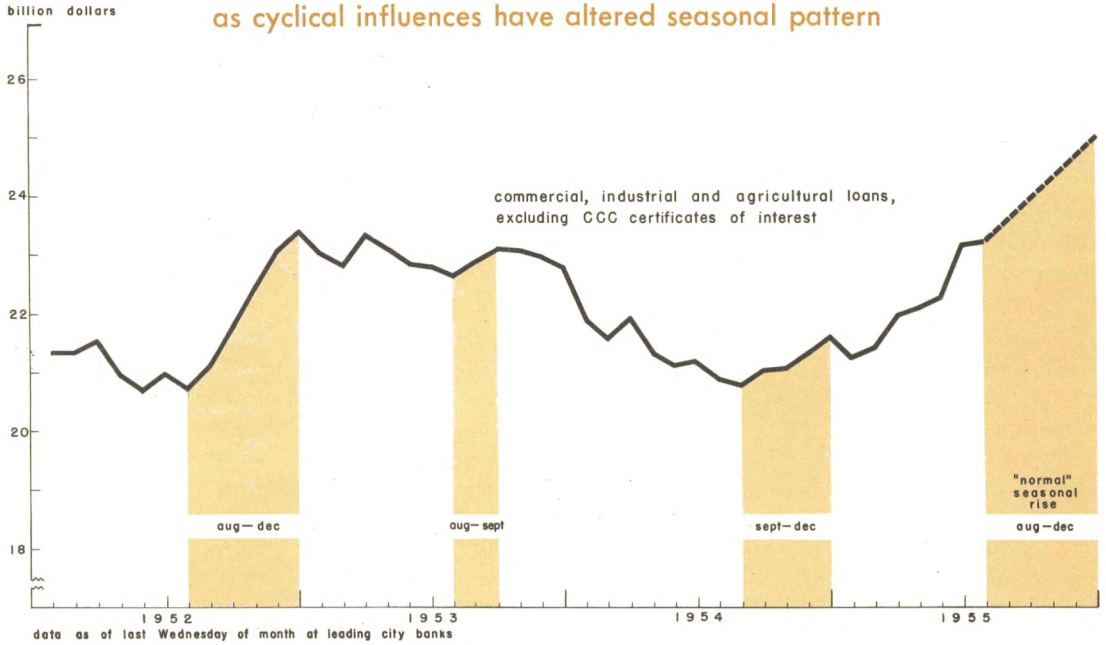
The increase in spending for plant and equipment contemplated during the second half will also help boost loan totals. In addition to the portion of the capital expenditures regularly financed solely with bank loans, some industries frequently rely on short-term credit in the initial stages of their expansion projects, subsequently raising the necessary longer-term funds. This year, with interest rates rising and capital markets tightening, an increasing number of firms may seek construction loans from their bank in order to postpone raising the permanent capital until investment funds are more readily available.

Furthermore, the program being inaugurated this fall for moving forward collection of a portion of corporate taxes into the year incurred will further encourage business borrowing in the remainder of 1955. The Mills plan has concentrated payments on a corporation's annual profits into two equal instalments due in each of the first two quarters of the following year. Now the pattern is again being altered. Under the new plan, 5 per cent of the tax on the current year's profits will have to be paid this month and 5 per cent in December. By 1960, one-fourth of the corporate levy will be paid in each of the final two quarters of the year incurred, the remainder being due the following March and June. Inasmuch as many companies borrow heavily to meet their tax payments, these shifts in procedures will accentuate the seasonal pattern of recent years.

There are, nevertheless, some factors that will offset the influences stimulating business loans in the closing months of this year. Funds from internal sources, for example, are rising. After-tax corporate profits during the second quarter are estimated at 800 million above the annual rate for the first quarter and 4.5 billion, or 27 per cent, above the rate for the second quarter of last year. Since dividends are likely to rise more moderately, retained earnings will probably show a sizable gain. In addition, continued increases in the level of depreciation allowances, as a result in part of the acceleration in book rates of depreciations, will provide business with an expanding pool of funds on which to draw.

Many businesses can also convert a portion

The autumn rise in business loans has varied from year to year as cyclical influences have altered seasonal pattern



of their liquid asset holdings into cash to meet their need for funds. Corporate portfolios of Governments at the end of June totaled 18.5 billion, the highest midyear level since 1952. Added to this is 30 billion in cash on hand that may also be used as a substitute or supplement for bank borrowing.

The degree to which businesses draw upon their liquid assets will depend in part both on money market conditions and on the availability and terms of bank credit. Certainly many borrowers will find that the doors to banks' lending facilities are not open as wide as they have been in the last couple of years. Last month the prime rate was raised by one-quarter of a point to 3¼ per cent. In addition, some businesses that had been borrowing at the prime rate in recent years may find that they no longer can obtain funds at this preferential rate.

Furthermore, should the rising demand for funds exceed the amount available, banks will be faced with the alternative of making additional reductions in their security portfolios or turning away potential customers. During the first seven months of the year, leading city banks drew down their investments by 5 billion dollars in order to meet deposit withdrawals and to add to their outstanding loans. Holdings of Governments and other securities at present represent less than 48 per cent of total loans and investments, the lowest figure in the postwar period. The more their portfolios are reduced, the more reluctant will banks be to undertake further security sales.

Key borrowers

All these factors promise to have a varying impact upon the different lines of business which come to the banks for funds. The two heaviest groups of borrowers — metals and metal product manufacturers and sales finance companies—have also been the most volatile of the nonseasonal users of bank credit. Outstanding loans to metal firms at large city banks have risen by 130 million during the first seven months of 1955. This follows a 1.4 billion dollar drop in borrowing by this group over the

year and a half period from mid-1953 through the end of 1954. This year, fall and winter borrowing by the metals industry will depend in large part on the level of stocks in coming months. Should the rate of inventory accumulation pick up, loans to metals and metal product manufacturers will probably show a sizable spurt.

Loans to sales finance companies by larger banks also decreased substantially during the recent recession. The decline in instalment credit in 1954 and the funding of finance companies' short-term debt resulted in a decline in their outstanding bank loans. In the final quarter of last year, however, as the booming sales of the 1955 autos boosted consumer borrowing, sales finance companies began to increase their bank indebtedness. Borrowing by these companies has been a major force in the business loan rise this year. From January through July, sales finance firms accounted for 40 per cent of the net increase in reporting banks' commercial and industrial loans.

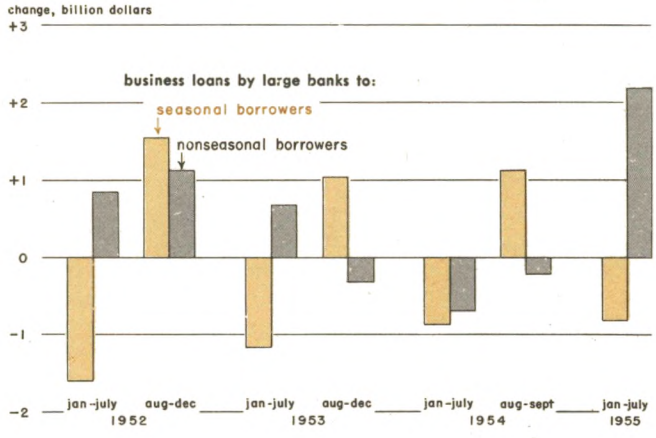
With consumer credit continuing to rise, the outlook is for further increases in finance companies' credit needs. The type of funds that they raise, however, will be influenced by the degree of tightness in the capital markets in the next several months. Further stringency in the availability of long-term funds and rising interest rates will put finance companies under pressure to postpone funding a part of their short-term debt into debentures or bonds. This would mean increased reliance on bank credit during the remainder of 1955.

These demands for funds will be superimposed on the regular credit needs of the seasonal borrowers. The food, liquor and tobacco processors and farm commodity dealers increase their indebtedness substantially as inventories of agricultural raw materials are built up during the period from the first harvests until the end of the year. Likewise, as stocks start to drop in winter and spring, borrowing to carry the inventories is reduced. At large city Seventh District banks, outstanding loans to food, liquor and tobacco firms dropped by 35 per cent in the first seven months of this year, with loans to commodity dealers registering a 41 per cent decline over the same period. Although commodity prices this fall are below those of last year, bumper crops are expected to swell processors' and dealers' inventories and, with it, their borrowings.

The volume of crops that move into CCC bins and warehouses rather than into commodity dealers' inventories, however, will affect the seasonal loan movements at leading banks. While bank credit is still required for crops stored under CCC loan arrangements, a large part of the funds is typically provided not by the city banks serving the dealers but by small rural banks, whose loan figures do not enter into the weekly series of large reporting member banks. The picture is further distorted if reported loan figures are not adjusted to exclude the certificates of interest in CCC-held crop loans which are occasionally sold to the commercial banks.

Wholesale and retail trade firms, too, generally contribute to the seasonal bulge in loans, although shifts in their borrowing are much less violent. In anticipation of the fall

This year paydowns by seasonal borrowers dwarfed by rising loans to other firms



and Christmas buying splurges, most retail stores and their suppliers begin to increase their inventories toward the end of the summer, and thus often find it necessary to engage in temporary bank borrowing during the last four or five months of the year.

This fall, rising incomes should encourage wholesalers and retailers to build up their inventories in preparation for a heavy fall and winter consumer demand. The effect of this on loans will be somewhat offset, however, if auto dealers can substantially draw down their stock of cars before the new model introductions. Nevertheless, with the boom continuing, the outlook is for a more than average seasonal increase in loans to trade concerns.

Money for crowded colleges

The growth of America's institutions of higher learning in the last fifty years is a measure of the character of the American economy. Only a wealthy country could afford to have two and a half million young men and women in college, and only a complicated economy would need so many highly educated people. Consider that:

—In 1900, only one in every 25 young men and women of college age actually went to college, while today the ratio is better than one in four.

—Thus, the colleges and universities have ten times as many students as in 1900, though the college-age group is only about a third larger.

—Students and their families and the public and private benefactors who support the colleges meet costs which total well over 4 billion dollars a year, over sixty times as much as was spent in 1900.

Cost, fees and taxes

The rapid growth and changes in the economy over the years have made the financing of higher education increasingly difficult, for all our prosperity. What is worse, college enrollments are headed up once again after a temporary respite, because the high birth rates of the Forties are beginning to tell in a swelling population in the college-age group.

Higher education is a far higher cost industry today than it was fifty, or even twenty, years ago. This is not just because of the rise in the costs of everything students and colleges buy. Mostly, it is because the colleges now have to cover fields of specialized knowledge where training time is longer and teaching aids are costly. In particular, the number of students in graduate and professional schools—whose education is exceptionally costly—has doubled every ten years since 1900.

Furthermore, outlays for organized research have increased from less than 10 million dollars in 1900 (and less than 20 million in 1930) to about a quarter of a billion dollars a year now. Extension, evening and summer schools and classes, rare at the beginning of the century, flourish in all parts of the country today.

The publicly supported colleges and universities spend close to 2 billion dollars annually in all. State taxpayers (and city and county taxpayers in a few places) are meeting about half the over-all budget. Student fees, which come to about 150 dollars per resident student at the large state universities, provide less than a tenth of the total funds, even though tuition now averages almost three times as high as in 1920 or 1930 and about twice as high as 1940 in the publicly supported colleges. Actually, the proportion of their costs met from student

fees is less today than it was twenty or thirty years ago.

During World War II, the demands of war converted the physical science departments of many universities into outposts of the defense establishment. This has continued through the cold war. Hence, Federal funds, in large part for contract research, are considerably more important on the average than they were years ago. The contracts are very unevenly distributed, with a few large state universities receiving the lion's share, however.

Endowment earnings and private gifts and grants have never been important for most public colleges, though private gifts and grants have increased quite a bit in recent years.

By and large, the public colleges' financial problems have not been severe recently, since the buoyancy of state government revenues during the last ten years has made most legislatures reasonably generous with appropriations, including provision for new facilities. Moreover, right after 1945, veterans flooded the schools. The Veterans' Administration was paying the public colleges the higher nonresident tuition fees on behalf of the veterans. Both public and private colleges were forced to use existing staff and facilities more intensively. While this no doubt impaired the quality of the instruction in some cases, it also kept costs down.

The privately supported colleges and universities, in contrast, have been unable to fall back on generous appropriations from well-heeled state treasuries to meet their greatly increased needs. In fact, some of the private colleges—perhaps as many as 200—have been at or near the borderline of solvency recently. This is despite the fact that student fees, which are now often over 800 dollars per resident student per year at the larger schools, have increased as fast as for the public colleges. Even so, they account for only a fourth of total costs, as against more than a third twenty years ago and about 30 per cent thirty years ago.

The real financial problem for private schools is the decline in the yields of their endowment funds. In 1930, endowment earnings amounted to nearly 25 per cent of current operating costs, but today they are frequently no more than a tenth of the total. Endowment earnings are only about 60 per cent higher than in 1930, while enrollments have doubled and costs more than tripled. This is because endowments have increased relatively slowly, while interest rates are far below the predepression levels. For instance, the average rate of return on one large university's expertly managed endowment funds was well over 4 per cent around 1929. Last year, it was only about 3.3 per cent, although a much larger portion of the funds today is invested in traditionally higher yielding stocks than was the case years ago.

In part, the gap has been made up by much greater reliance on private gifts and grants for current expenses, particularly grants from businesses and foundations for research projects and annual alumni contributions, and by greater Federal grants, also for contract research. But, here too, it is only the larger institutions which have benefited from these sources of funds, and it is not always entirely certain that grants for contract research fully cover the added costs the research projects cause. All too many of the smaller colleges have had to go into debt to keep going. According to one source, more than 400 of them operate in the red, with operating deficits totaling over 30 million dollars a year.

Problems for the future: finance

Within twenty years, the children now born will at least double college enrollments once again. If a larger proportion of this new generation goes to college—much more than one out of four—enrollments will far more than double. This poses two major problems for higher education: how to finance the greater burden and in what form to expand to handle it.

The public institutions are unlikely to be as well off as in recent years. There is serious competition for state tax funds from the elementary and high schools and the mental hospitals, which in most states appear to be less adequate for the needs they serve than the colleges are. Veterans will not provide another windfall of nonresident tuition, since the

An income statement for the nation's colleges in 1954

Publicly supported institutions—over 600 schools, with half the total enrollments. Thirty per cent of their students are in junior and teachers' colleges, a tenth in graduate schools and the rest in regular undergraduate colleges.

INCOME	(millions)	EXPENDITURES	
Student fees	$130	General operation	$1,210
Private gifts and endowment earnings	55	Capital outlay	310
Federal funds	260	Commercial activities	280
State and local funds	920		
Earnings from commercial activities	365		
Other, including borrowing	70		
	$1,800		$1,800

Privately supported institutions—over 1,200 schools, with half the total enrollments. Ninety per cent of their students are in regular undergraduate colleges and a tenth in graduate schools.

INCOME	(millions)	EXPENDITURES	
Student fees	$385	General operation	$990
Private gifts and endowment earnings	335	Capital outlay	175
Federal funds	270	Commercial activities	335
State and local funds	45		
Earnings from commercial activities	375		
Other, including borrowing and deficits	90		
	$1,500		$1,500

Korean GI Bill provides for payments of tuition by the students themselves out of their inclusive monthly allowances, instead of direct payments by the VA to the colleges. The colleges themselves will try to avoid the overcrowded classes and buildings which characterized the 1946-50 period, and this means higher costs for both instruction and new plant. Many private colleges now have substantial unused capacity, and more complete use of this existing capacity may help them financially. However, their prospects for being able to finance plant expansion when and where it becomes necessary appear poor.

How to close the financial gap depends in part on the distribution of the benefits from higher education. First of all, the man or woman who is trained by a college and armed with its seal of approval—a college degree—benefits. He benefits generally, by exposure to the wisdom of the ages. Of more concern for financial policy, he benefits by substantially enhancing his future earning power. This income benefit is of course very uneven. Four years of medical school or three years of law school are far more valuable income-wise than the same time spent acquiring a Ph.D. in English, for example. But regardless of these differences, over his lifetime a college graduate is apt to earn far more than a man who has never been to college—one-fourth or more above his less-educated counterpart. The lifetime value of a B.A. degree, less the costs of four years of college, has been estimated to be over 20

Going to college — the money involved

Annually it costs a typical large state university . . . (with 20,000 students)		and a typical large private university . . . (with 8,000 students)
$46 million	for instruction, plant operation, student aids and research	$27 million
	of which . . .	
39 per cent	is for faculty salaries	40 per cent
20	summer schools, adult education and other instruction costs	12
13	plant operation and maintenance	15
2	student aids	7
26	contract research	26
100 per cent		100 per cent
	In addition, these typical institutions spend for partly self-supporting activities like:	
$ 3 million	dormitories	$ 4 million
3	athletics and other commercial operations	2
$ 6 million		$ 6 million

It costs the undergraduate at a typical large state university . . .		and at a typical large private university . . .
$ 150 (resident)		
400 (nonresident)	for tuition	$ 750
50	books and supplies	50
850	housing and maintenance	1,000
$1,050-$1,300	total	$1,800
$3,000-$4,000	plus the income he or she might otherwise have earned	$3,000-$4,000
$4,050-$5,300	or in all	$4,800-$5,800

Financing the subsidy to students—since the large schools spend considerably more than they receive from tuition fees or charges for dormitories and commercial activities, there is a subsidy to be financed. This is how it is done in the typical large institutions:

	State university	Private college
Total costs of instruction, plant operation, student aids and research	$46 million	$27 million
Less tuition income	4	6
THE SUBSIDY	$42	$21
Financed from:		
State taxes	22	—
Federal aid (mostly for contract research)	9	7
Gifts for current use, private research grants and receipts to be used for scholarships	6	7
Endowment earnings	1	5
Income from hospitals, experimental farms and similar activities connected with instruction	4	2

thousand dollars at present income levels.

Since the whole community gains, in a variety of ways, from higher education, it would hardly be fair, even if at all practicable, to charge all the costs to students and their parents. The community benefits from and needs a more knowledgeable and technically trained citizenry: the great demand for scientific and technical man power in modern industry is evidence of this. University research bureaus help business, farmers, local governments and housewives. Employers have found that the college-educated man often makes superior executive material. All these and many more benefits provide the rationale for tax support of and gifts to the colleges to defray costs over those which student fees meet, though not a specific formula for allocating these costs.

Despite all the general community benefits, the student's income benefits are so great that many feel that student fees ought to carry a larger share of the costs. The trouble is that the higher the fees, the greater the chances that young people most suited for higher education may be excluded from the colleges. It is estimated that even now about 100,000 superior high school graduates each year do not go on to college for financial reasons. The financial burden on the student and his family consists not only of tuition but also of the 800 to 1,000 dollars per year for room and board and the 3,000-4,000 dollars of income he might otherwise have earned. Large-scale scholarship funds help the students' finances, but not the finances of the colleges, since higher average tuition offset by more and larger scholarships would not necessarily increase the total revenues from student fees.

To the student, the problem is like that of financing any capital expenditure. That is, although the expense is large and the need for funds immediate, the outlay itself will enhance the capacity to pay for it, but in future years. A suggestion which has been advanced in *Fortune* and elsewhere would have more of the costs of higher education met by the student, but out of his higher future income rather than his family's current income and savings, via much larger loans to students. It is true that most of the larger private schools have substantial student loan funds which are not fully utilized. However, many of these funds are available only in special situations and often hedged with restrictions which discourage resort to them. Increased borrowing to meet higher tuition fees seems especially well-suited to costly professional training, the income benefits of which are so great.

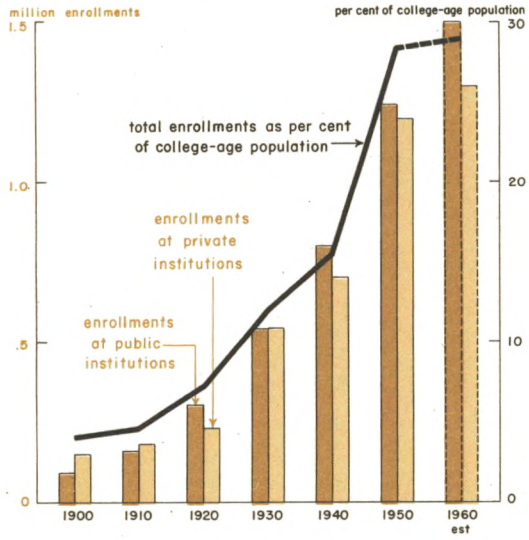
Corporation contributions, particularly to the private colleges (aside from contract research), are a recent and growing trend. These take many forms. General Electric matches the contributions its employees make to their old schools. Other firms provide scholarship funds at a number of colleges, either for their employees' children or for students in general. Still others make unrestricted gifts without employee matching. Corporate executives and directors have been encouraged in this practice by the increasing awareness of the value of a liberal education to their future executives and by the deduction the Federal tax laws permit for this.

40,000 students on one campus?

If the colleges expand to handle the large increases in enrollments expected in coming years in the same way they have in the past, campuses with 20,000 to 30,000 students may become the rule rather than the exception. In part, the trend exists because of the differences in the admission policies of public and private institutions. Moreover, high tuition costs tend to divert students to the public institutions. Traditionally, the public colleges have placed no upper limit on the enrollment at each campus, and so some of the state universities are growing to mammoth proportions.

Actually, continuation of this trend neither minimizes costs—to students and to taxpayers—nor enables the colleges to be of maximum service to the communities in which they are located. Up to a point, any enterprise or institution can reduce its unit costs by increasing its scale of operations. For instance, any liberal

Many more college-age people go to college today



arts college must have a fairly substantial library, and a library adequate for 500 students may well be adequate for 3,000. But beyond a certain point, economies of scale disappear. It is likely that undergraduate colleges reach this point when their enrollments are substantially below 10,000. Above the optimum size, purchase of the real estate needed for expansion becomes almost prohibitively expensive, since a large campus is surrounded by highly developed facilities serving the college. Moreover, housing the students becomes quite a problem and ultimately involves heavy construction subsidies.

An alternative to this, for the state universities, that is receiving increased attention, is expansion by setting up new moderate-sized undergraduate colleges in the states' urban centers, limiting each campus to what seems to be the best size for both good instruction and low costs. Thus a city like Chicago might have several new undergraduate colleges serving different sections of the metropolitan area. Unlike the huge single campus located in a medium-sized or small city and thus necessarily distant from both the students' homes and the states' population generally, the smaller campuses would be commuter schools and part of the community at work, serving as community centers. A commuter school permits students to go to school at drastically lower total costs, for their room and board expenses when living at home are a fraction of their dormitory fees. Moreover, part-time employment opportunities are far more plentiful and remunerative in the large metropolis than in the small college town. Thus, if tuition fees have to be raised, they are not added to an already staggering burden of maintenance expenses.

This suggestion applies to undergraduate liberal arts education, which most educators hope to diffuse as widely as possible. The lower costs of decentralization make the diffusion possible. However, specialized university training, in professional and graduate schools, must be centralized to keep costs down and to keep the quality of instruction up. Since specialized training is so expensive and since our economy needs it so badly, no doubt it will continue to entail heavy subsidies from taxpayers and private philanthropy.

Another alternative suggested for the states is to grant large numbers of scholarships to superior high school graduates, which are good at any private college, instead of spending the same money in further expanding the state university. If the student used the scholarship at a private college near his home, his total costs might be lower than at the distant state university. This would benefit the private colleges as well since it would tend to raise the quality of their student bodies.

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