

9-1937

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Recommended Citation

Taylor, Harry E. (1937) "Audit Reports and the Banks," *Journal of Accountancy*. Vol. 64: Iss. 3, Article 4.
Available at: <https://egrove.olemiss.edu/jofa/vol64/iss3/4>

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Audit Reports and the Banks

BY HARRY E. TAYLOR

IN AN effort to get the benefit of the most recent ideas as to what banks expect to get from audit reports, credit officers of a number of Chicago's largest banks were recently asked for their opinions on the subject; and this article represents an effort to report those opinions in a more or less journalistic fashion.

Banks want better and better audit reports from day to day, and—this being the point at which the fly enters the ointment—their standards call for a higher type of work than the average client cares to pay for. In respect of inventories, for example, the banker would be glad to have the accountant take complete and unqualified responsibility for the values, but he realizes that this point involves some still unsolved problems and is charitable toward the accountant's refusal to attempt the impossible. There are various ways, however, in which the accountant can, with his client's permission, be of more service to the banker. The accountant may, let us say, present a complete audit report, instead of expecting the bank to be satisfied with a certified, but unsupported, balance-sheet.

Accountants need not continue to keep the banks in a fog as to what type of service is represented by any given audit report. The banker wants to know just where in the scale of accounting service each report stands. Is it merely a rehash of figures faithfully copied from the bookkeeper's trial balance, or does it represent the result of a thorough and painstaking investigation of the client's affairs? Accountants as a whole would confer a favor on the banks if they would adopt a uniform standard classification of accounting services, such as a few firms have already adopted, and label their reports accordingly, so that the banker may know at a glance whether he is dealing with verified or unverified values.

If the object of window-dressing transactions is to mislead or conceal; if offensive assets or liabilities are written off the books just before a balance-sheet is taken, with an intention to restore them immediately afterwards; or if attractive assets are inserted in a balance-sheet for balance-sheet purposes only; then the

accountant may be obeying the letter of the law when he states the balance-sheet as the books show it, but he is not observing the spirit of the law if his report fails to tell the story of the window-dressing.

Consolidated statements are sometimes akin to window-dressing in that they present a more attractive picture than the parts of which they are composed justify. The whole may be endowed with qualities that are not present in the separate parts; an automobile can perform more functions than its unassembled units. But the banker wants to look under the hood and examine the transmission; he wants, to get back to the point, to have his consolidated statements supported by the individual statements of each corporation involved, in order that he may form an opinion of each unit as well as of the entire group.

The information which a report gives regarding receivables is often insufficient for the banker's purposes, and he usually gets more satisfaction on this point from the reports of his own investigators. Is this item, he asks, composed of one account or a hundred accounts, and what is the average size of the accounts and the age of them, and where is the list, please, of the more important ones? If this borrower sells only to one customer, we should like to know a lot about that customer.

Banks are interested in the details of insurance carried on the lives of officers of corporations. There is always a jump for the files, as one of them expressed it, when the bank gets word that an officer of one of their corporate borrowers has passed away.

Some banks want a separation of the profit-and-loss accounts by departments or products and between manufacturing and jobbing where the borrower undertakes both functions; but it must be admitted that this information would not be available without a drastic revision of bookkeeping systems in the majority of cases. Nor could it be done without many arbitrary prorations of expenses.

The accountant is inclined to regard the operations of a year or other fiscal period as a whole, but the banker is interested in the peaks and valleys. There is a time for borrowing and time for paying debts; and information given month by month as to sales, receivables and payables helps the bank to determine when those times should be.

So does the use of the correct fiscal year. This is one point on which accountant and banker find themselves heartily in agreement. Would that they could extend their enthusiasm to the lukewarm client! The use of proper fiscal years helps the bank's analysis department, just as it helps the accountant, to spread the work over twelve months; but it has an additional point of advantage to the banker in that it serves as an automatic indication of when the time should be for the borrower to approach the pay-off window and offer good money in settlement of his debt to the bank.

Banks likewise favor the use of budgets because budgets help borrowers to provide funds for the repayment of loans. Some banks will aid the borrower in installing and maintaining a budget, and they are always interested in checking the actual results against the budget figures.

One Chicago bank employs investigators whose duty is to go out and get all information needed for passing on loans, the average time taken being one half-day. The investigators employed by the other Chicago banks are usually concerned only with information supplementary to that contained in audit reports prepared by independent accountants. Touching on the subject of what the banks expect from their investigators and what the investigator learns that the accountant doesn't, we come to a difference in methods. The investigator may freely express his opinions and suspicions, unhampered by any requirement for cold mathematical proof. He may comment on the personal habits of borrowers and on other matters which would be quite outside the conventional scope of an audit report. "The bank," said one official, "can, without definite reason, occasionally 'smell' something wrong about a borrower's business. In such cases we send an investigator, and sometimes he comes back with more or less startling information." At least one of the large Chicago banks has an elaborate and detailed manual of instructions for its investigators, and the contents of this manual would make good reading for public accountants; but the bank is not yet convinced that it would be desirable to have the contents made public.

Financial Ratios Become of Age

BY ROY A. FOULKE

WHAT maximum proportion of the tangible net worth of a department store should not be exceeded by its investments in fixed assets—of the tangible net worth of a manufacturer of men's clothing, a canner of fruits and vegetables, a tanner of leather, a converter of silk piece goods, a wholesaler of automobile parts and accessories, an instalment furniture dealer?

What should be the minimum relationship between the yearly net sales and the statement inventory of a manufacturer of chemicals, a converter of cotton goods, a manufacturer of furniture, a paper mill, a wholesaler of drugs and drug sundries, a retailer of men's clothing?

These definitive questions and several others of similar collateral importance are pondered most carefully and then answered to his own complete and logical satisfaction by the modern business executive. In the case of the larger, successful, business units, very definite answers in the form of exact percentages and ratios have generally been determined by the responsible operating officials and then have been conscientiously used as fundamental guides to the maintenance of consistently healthy financial policies over the years. In the operations of these businesses there is a happy absence of wishful thinking in deciding upon basic policies to guide the daily flow of merchandise, receivables and liabilities.

These questions have fairly well defined, empirical answers today in many lines of business activity as the results of the extensive analyses of balance-sheets and profit-and-loss accounts which have been made during recent years. The accountant who knows the answers is in a position to be of untold service to his business and banking clients and, incidentally, to himself.

Should an Addition Be Made to the Plant?

Let us look at the divergent forces at play behind the scenes of a successful business enterprise, and then analyze, if we can, the possible effects of either one of two radically different operating decisions. Then let us go back over the ground and study

the processes of reasoning, step by step, which would have resulted in either one of these two particular decisions being made from a financial management viewpoint. In this process we shall then see the simple but effective part played by the intimate knowledge and the intelligent use of simple financial ratios.

Here is a particular corporation which has been engaged in the manufacture of automatic machinery for twenty-six consecutive years. After floating along gently in the equatorial doldrums as our planet completed several annual circuits around the solar system, the concern again is going places. Losses were taken on operations—and substantial losses at that—from 1930 through 1933, but present operations show quite another story.

In 1934 the apparent need for automatic machinery picked up, orders began to flow in at a more reasonable rate, and with all waste motion eliminated and overhead expenses cut to the minimum during the years which spread the trough of the depression, a moderate final profit was recorded. An encouraging increase in volume and in profits was then obtained in 1935. The operating results for 1936, however, indicated that a bonanza had been struck. Profits were the largest in the twenty-six years of its history, notwithstanding what appeared to be millions of permanent idle, the strain of increasing taxation, and socially desirable but unsettling national and local economic legislation.

Many business enterprises showed the greatest profits in their history last year. The recovery was especially noticeable in those lines which had to do with the mining and refining of metals, the manufacture of metal products, lumber and lumber products, and those extensive lines of merchandise, even including packages of sheets and pillow cases, and clothing, which were and now are being sold with increasing effectiveness on the deferred-payment plan. Of the many lines of business activity included in these broad classifications, few had been hit with such a succession of knockout blows during the low point of business activity as the manufacturers of machinery and of tools, architects and building contractors.

The result, however, at least as far as the manufacturers of machinery, tools and hardware were concerned, was a heightened degree of prosperity in 1936, a level of sustained profitability which has continued during the current year. Such a level of sustained activity can only be temporary. The demand for new ma-

chines, as well as for replacements, is heavy because there is in steady use more than a normal amount of old equipment, because only a small portion of the normal replacements was made from 1930 through 1935, because competition and strikes continue to call for the latest and most efficient automatic machines and tempered tools.

The particular manufacturer I have so briefly described is on the top of the world today. Operations have been on a capacity basis for eight months and unfilled orders which are on the books and are not even in process amount to \$486,000. No wonder the operating management is happy and the stockholders expectant with the undistributed-surplus tax a current determining factor in financial-management policies.

This concern has a combined capital and surplus—that is, a tangible net worth—of \$342,000. The real estate, buildings, machinery, tools and equipment are carried on the books at a depreciated value of \$212,000. These assets are unencumbered. That sum represents 62 per cent. of the tangible net worth of the corporation.

With this broad picture of the ups and downs of this enterprise in mind, and particularly its present happy condition, let us consider whether it would or would not be quite a normal decision for the management, with such a substantial amount of unfilled orders on the books and with the distinct probability that more profitable business could also be obtained, to spend a hundred thousand dollars in erecting an addition to its plant.

Yes, Let's Make the Addition

According to the reasoning of the typical business man whose business policies invariably are predicated upon what will "give the maximum of immediate profits," a decision to carry out such a program would be a very natural one.

The deliberation involved in arriving at this decision would not have been particularly long nor laborious. "Here are orders which should be handled but which cannot be handled with the existing capacity. Enlarging the facilities would give that much needed additional capacity. And moreover, the costs could be paid for out of additional profits within four or five years." You, as an accountant, have heard that assertion time and time again as though it were a fundamental law of nature. So have I.

If that decision were made, then the typical management would next cast around for some method to finance the construction. If bank lines were available and the commercial banker could be persuaded to give a capital loan which might run only for six months but which would of necessity be renewed and renewed, the funds would be easily obtained. If the funds could not be secured in this way and the existing plant were unencumbered, then probably a hundred thousand dollars could be obtained on a first mortgage covering the plant and the addition to be erected.

Let us call this decision number one.

No, Let's Not Make the Addition, Unless . . . !

After a great deal of very meticulous comparative study over a period of years the executive head of this business had definitely laid down the maxim that no manufacturer of machinery should have more than 65 per cent. of its tangible net worth tied up in fixed assets, and the less the better. If this percentage were exceeded, the offending concern would be at a distinct competitive disadvantage to the extent that depreciation charges would tend to be top-heavy and to the extent that short term borrowings would be continuously needed to furnish adequate working capital during any period of sustained business activity. That was sound reasoning.

Moreover, this manufacturer had decided for the same simple reason that he would never operate a plant with a funded debt, as the interest charges for his line of activity would represent unwise fixed overhead and also would place his business at a competitive disadvantage. That also was sound reasoning.

This executive had given careful consideration to the fact that orders for new machinery were going out of the window as the facilities of his plant were not large enough to handle all reasonably available business. An addition to his plant would be normal and advantageous. But he was not kidding himself with the irresponsibility of the Chinese coolie that any addition could be paid for out of increased earnings in four or five years, as he had learned from bitter personal experience that business is never sustained at a high peak; in four years, in three, in two years the available business would not be as great as it is today. Available business, like retail and wholesale prices, elevators and balloons, goes up and comes down, and when the trend is downward, un-

foreseen difficulties arise which must always be anticipated. The really successful business executive always expects the unexpected.

If he spent \$100,000 on an addition to his plant, that would bring the depreciated value of the fixed assets to \$312,000, to 91 per cent. of the tangible net worth. It would be the acme of poor operating management to finance any such addition by a bank loan or by a mortgage loan even if the funds were available on a silver platter with all possible garnishes. Both of those two methods of financing would have the same effects, both would bring about the same excessive relationship between the depreciated book value of the fixed assets and the tangible net worth.

In both cases, the relationship of the fixed assets to the tangible net worth would be well in excess of the 65 per cent. which this official had carefully decided should not be exceeded under any consideration. To the man who was thinking only of the "maximum of immediate profits," such a guide was meaningless; here it had almost taken on the force of the categorical imperative.

There remained one additional method of financing—to sell a reasonable amount of additional stock to an investor or to a group of investors if they could be found. If \$138,000 could be raised by selling stock and \$100,000 of that sum put into the addition, the corporation would then have a tangible net worth of \$480,000 and the fixed assets at \$312,000 would represent 65 per cent. relationship. If \$158,000 could be raised and \$100,000 put into the addition, the relationship between the tangible net worth and the fixed assets would remain at the existing 62 per cent.

That was the final decision which this financial executive made a few days ago. If sufficient funds could not be raised by the sale of stock in the approximate proportions outlined, no addition would be made to the existing manufacturing facilities. He would definitely and positively prefer to turn away orders and profits today so that his corporation and his profits would be less vulnerable tomorrow. Here was an extremely capable executive who was thinking less of the "maximum profits of today" and more of the stability of his business in the future. Under such leadership a corporation will always be ready for the unexpected. And the future always comes. Let us call this decision number two.

That fundamental decision was based upon an understanding of one simple but invaluable balance-sheet ratio, the realiza-

tion that an excessive investment in fixed assets is a weakening feature in a capitalistic world based on free competition, that excessive investments in fixed assets invariably are made by managements during good times, that the relationships between fixed assets and tangible net worth vary in different lines of business, and that fixed assets should not exceed 65 per cent. of the tangible net worth of a manufacturer of heavy machinery under any consideration.

No one could intelligently have made such a decision unless he had realized the fundamental effect in our competitive economy of varying proportions of fixed assets to tangible net worth. Relatively few business men know their way around; most of them wander through the intricacies of a competitive world, hold tight to their hat, trust to Dame Fortune, and then wonder with childlike astonishment what has happened when they must liquidate to pay their just debt, or become bankrupt.

Method of Determining Typical Ratios

In his first volume on the *History of Civilization in England*, published in 1857, Henry Thomas Buckle went into an exceedingly erudite discussion of the inductive and the deductive methods of attempting to determine natural laws; phenomena must be studied, he thoughtfully wrote, "not simply as they appear in the mind of the individual observer, but as they appear in the actions of mankind at large."

In further elaboration of what was then a fairly radical theory, Buckle proceeded to discuss specifically, as an example, how exact knowledge could only be obtained regarding "the proportion kept up in the births of the sexes; a proportion which if it were to be greatly disturbed in any country, even for a single generation, would throw society into the most serious confusion, and would infallibly cause a great increase in the vices of people."

Now, it has always been suspected, he continued, that, on an average, the male and female births are tolerably equal, but, until very recently (1857) no one could tell whether or not they were precisely equal, or, if unequal, on which side there was an excess. "The births being the physical result of physical antecedents, it was clearly seen that the laws of the births must be in those antecedents; that is to say, that the causes of the pro-

portions of the sexes must reside in the parents themselves. Under these circumstances, the question arose if it was not possible to elucidate this difficulty by our knowledge of animal physiology."

This was the expectation which was confidently held out by the early physiologists. Towards its fulfillment, however, the physiologists have made absolutely no contribution. They have not become possessed of one single fact which throws even one single ray of light upon this problem.

"These are questions," then explained Buckle, "to which all the resources of physiologists, from Aristotle down to our own time, have offered no means of reply. And yet at the present day [1857] we, by the employment of what now seems a very natural method, are possessed of a truth which the united abilities of a long series of eminent men failed to discover. By the simple expedient of registering the number of births and their sexes, by extending this registration over several years, in different countries—we have been able to eliminate all casual disturbances and ascertain the existence of a law which, expressed in round numbers, is that for every twenty girls there are born twenty-one boys; and we may confidently say that, although the operations of this law are of course liable to constant aberrations, the law itself is so powerful, that we know of no country in which during a single year the male births have not been greater than the female ones." *

The study of the financial conditions of business enterprises only in recent years has reached the same relative position in the application of the exact methods of empirical science as those methods had reached in Buckle's prime when he described the only reliable means of determining the law of the sexes. Instead of attempting to reason in some theoretical manner what maximum proportion of the tangible net worth of a particular business enterprise should not be exceeded by its investment in fixed assets, it is possible and now quite customary to take the pro-

* Accurate statistics of the births and deaths in the United States have been kept by the division of vital statistics of the bureau of foreign and domestic commerce only as far back as 1915. Available figures covering the years from 1915 through 1934 give ample support to this empirical conclusion which Buckle emphasized so many years ago. For each one of these years the male births exceeded the female births in the United States and for this entire period covering two decades, 21.1 boys were born to every 20 girls.

portions of twenty, fifty, a hundred, two hundred, or even two thousand concerns in the same identical line of business activity and ascertain the average ratio or the median or the modal figure, and then to study the failures or the liquidations in that line over a period of years to ascertain what might have been a vulnerable proportion as a supplementary guide to the average, the median or the mode. By this method a single guiding fact is finally obtained which is of infinite basic value to the intelligent progressive business executive.

During the past five years the writer has studied fourteen important ratios determined on 47,980 sets of annual figures in this very manner. The results have amply demonstrated the truth of the maxim that, when a commercial or industrial business enterprise has a tangible net worth between \$50,000 and \$250,000, its operations should be carefully analyzed if the depreciated value of its fixed assets are greater than two-thirds of the tangible net worth; and when the tangible net worth exceeds \$250,000, its affairs should be followed closely if the depreciated value of its fixed assets totals more than three-quarters of the tangible net worth. These are liberal outside limits.

This maxim is a broad general rule. It does not mean that a converter of silk piece goods would not be out-of-line if its fixed assets were twenty-five per cent. of its tangible net worth, for the typical converter of silk piece goods, as can be seen from the following table, has a very nominal investment in furniture and fixtures. Likewise with the manufacturers of dresses. With twenty-five per cent. of its tangible net worth in fixed assets, concerns in these two lines could operate in a satisfactory manner, but operations would be materially more efficient if this ratio approached the typical figure in those lines as given in the following table. Should the outside proportions of two-thirds or three-quarters of the tangible net worth be exceeded by any individual enterprise in these two or any other lines of endeavor, it would be operating at a distinct handicap, and probably other unsound conditions would readily be noticeable.

Typical Ratios

With this background, now let us see what are some of the typical proportions of the depreciated values of fixed assets to

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tangible net worth for different lines of commercial and industrial activity determined in recent years:

AVERAGE PROPORTIONS OF DEPRECIATED VALUE OF FIXED ASSETS TO TANGIBLE NET WORTH		
No. of Cases Studied *		Average Per Cent.
1931-1935	<i>Retail</i>	
246	Instalment clothing	17.4
246	Men's and boys' clothing	26.5
578	Women's specialty shops	33.6
261	Lumber	38.2
847	Department stores	50.4
	<i>Wholesale</i>	
148	Furs and skins	2.3
173	Men's and women's shoes	8.9
304	Paper	14.3
555	Groceries	22.0
206	Plumbing and heating supplies	36.3
	<i>Manufacture</i>	
256	Converters silk piece goods	1.8
891	Dresses	9.4
134	Leather luggage	14.2
460	Knitted outerwear	23.6
494	Women's and children's shoes	30.1
432	Paints and varnishes	40.8
162	Electrical parts and supplies	49.2
169	Hardware and tools	58.5
171	Foundries	67.3
175	Paper	79.5

The figures quoted in this table are based upon a five-year running study of sixty different divisions of industry and commerce (only twenty are quoted here) and show a spread in the average ratio of fixed assets to tangible net worth from 17.4 per cent. to 50.4 per cent. among different classes of retailers; from 2.3 to 36.3 per cent. among different lines of wholesalers, and from 1.8 to 79.5 per cent. among different types of manufacturers. These are average percentages in which extremes have been eliminated. When we find a proportion exceeding the 66⅔ per cent. or the 75 per cent. as outlined in a preceding paragraph,

* In some cases figures of the same concerns are used in successive years.

then we generally have a business enterprise with a sad case of heart trouble.

I have discussed this one proportion as it is of outstanding importance and significance in the operations of every business enterprise. Decision number one, which called for the erection of the addition to the plant of the manufacturer of automatic machinery which we discussed early in this article, was based upon factors which failed to include a sound knowledge of the full significance of this one balance-sheet ratio in an ever-changing business world where commodity prices, annual sales, and margins of profit are constantly fluctuating. Decision number two was based upon a sincere desire to increase the immediate profits, but not at the expense of the fundamental soundness of the business as reflected by the size of this one ratio. A topheavy proportion of fixed assets is no more dangerous to the business enterprise than carrying around loose gun-powder in a steel mill is to an individual.

In all, however, there are fourteen balance-sheet and profit-and-loss ratios which are of varying degrees of importance to operating managements, commercial bankers, investment bankers, and mercantile credit men. They should be of equal importance to the accountant. Here they are, separated into five family groups:

- A. Three important capital ratios:
 - 1. Fixed assets to tangible net worth
 - 2. Current debt to tangible net worth
 - 3. Net working capital represented by funded debt
- B. Three important inventory ratios:
 - 4. Net sales to inventory
 - 5. Net working capital represented by inventory
 - 6. Inventory covered by current debt
- C. Three important sales ratios:
 - 7. Average collection period
 - 8. Turnover of tangible net worth
 - 9. Turnover of net working capital
- D. Three important net profit ratios:
 - 10. Net profits on net sales
 - 11. Net profits on tangible net worth
 - 12. Net profits on net working capital

E. Two important supplemental ratios:

13. Current assets to current debt
14. Total debt to tangible net worth

A careful study of each one of these ratios would deserve fully as much space as has been devoted here to the consideration of the single relationship between fixed assets and tangible net investment. The size of each ratio comes about in every business enterprise as a result of some management policy or, in some cases, as the result of drifting where there had been no intelligently planned management policy. So, after all, the concentrated interpretation of figures through the medium of ratios or proportions is merely another way of interpreting the knowledge and ability of the operating staff in doing its job judiciously as well as efficiently.

Ratios in which liabilities are one part of the proportion will generally be out-of-line in those situations where a management overtrades or possibly has assumed substantial losses; ratios in which the inventory is one part of the proportion will be unbalanced in those cases where the management believes in speculating in merchandise, in buying heavily in anticipation of a further rise, or in overtrading; receivables will show extended collection periods where credits have been poorly administered and collections haphazardly followed up.

Financial ratios are not lifeless units of data. They are mathematical representations, they are measuring units, they are the concomitant results of operating decisions. What the kilowatt is to electricity, the inch is to linear measurement, the molecule is to physics—that is what financial ratios are to the pecuniary condition of a business enterprise. Every policy of an executive staff has its reflection in the balance-sheet or in the profit-and-loss account and, consequently, is disclosed by the healthy or unhealthy proportion of some one or several of the fourteen important ratios.