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Name:

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Semester: Autumn 2026

ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD

Course: Introduction to Business Finance (1415) • Level: BS/ADC

Semester: Autumn 2026

Assignment No. 1 (Units: 1–4)

Total Marks: 100 • Pass Marks: 50

SOLVED ASSIGNMENT GUIDE

(For Study & Reference)

Note: This guide is prepared for study and reference purposes. Students are advised to read the relevant units of the course book, understand the concepts, and then write the assignment in their own words.

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Question 1: Structure and Key Elements of the Income Statement and Balance Sheet (20 Marks)

Q.1 Discuss the structure and key elements of the Income Statement and Balance Sheet. How does each component help stakeholders analyze the financial health of a business? (20)

Introduction

Financial statements are the final product of the accounting process and the main language through which a business communicates its performance and position to the outside world. Of these statements, two are fundamental: the income statement, which reports how profitably

the business performed over a period, and the balance sheet, which reports what the business owns and owes at a particular date. Together they answer the two questions every stakeholder asks: is this business earning well, and is it financially sound? This answer discusses the structure and key elements of both statements and then shows, component by component, how shareholders, lenders, managers, suppliers, government and other stakeholders use them to analyse the financial health of a business.

The Income Statement: Meaning and Structure

The income statement, also called the profit and loss account or statement of profit or loss, summarises the revenues earned and the expenses incurred during an accounting period, usually a year, and shows the resulting net profit or loss. Its basic logic is a flow: it begins with the money that came in from trading, deducts layer by layer the costs of generating that income, and arrives at the profit that belongs to the owners. Because it covers a period of time, it is a dynamic statement; it explains how the owners' wealth changed as a result of trading during that period.

Table 1: Structure of an Income Statement (illustrative headings)

Section	Main items	What it shows
Sales revenue	Gross sales less returns, allowances and discounts	Net revenue from trading
Cost of goods sold	Opening stock + purchases + direct costs − closing stock	Direct cost of what was sold

Gross profit	Sales revenue − cost of goods sold	Profitability of core trading before overheads
Operating expenses	Selling, distribution, administrative and depreciation expenses	Cost of running the business
Operating profit (EBIT)	Gross profit − operating expenses	Profit from normal operations before finance costs
Finance costs	Interest on loans and debentures	Cost of borrowed funds
Profit before tax	EBIT − finance costs, plus other income	Taxable result of the period
Taxation and profit after tax	Less income tax; result is net profit	Earnings available to shareholders

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Key Elements of the Income Statement

- Revenue: the value of goods sold and services rendered. It is the starting point of analysis because growth or decline in revenue signals the direction of the whole business.
- Cost of goods sold: the direct cost of the goods actually sold, matched against revenue under the matching concept, so that gross profit is meaningful.
- Gross profit: revenue minus cost of goods sold. The gross profit margin (gross profit ÷ sales) reveals pricing power, production efficiency and control over purchase prices.

- Operating expenses: the indirect costs of administration, selling, distribution and depreciation. Comparing them with sales shows whether management controls its overheads.
- Operating profit or EBIT: earnings before interest and tax. It measures the performance of operations themselves, free of the effects of how the firm is financed and taxed, and is the base for interest-cover calculations.
- Finance costs and taxation: interest shows the burden of debt, and tax is the government's share. Deducting both gives profit after tax, from which earnings per share and dividends are derived.

The Balance Sheet: Meaning and Structure

The balance sheet, or statement of financial position, is a snapshot at a single date, normally the last day of the accounting period. It is built on the accounting equation: Assets = Liabilities + Capital (owners' equity). The left or top part lists the resources the business controls; the other part lists the claims on those resources, first the claims of outsiders (liabilities) and then the claim of the owners. Because every asset is financed from some source, the two sides always balance. Unlike the income statement, the balance sheet is a static statement of position, not a flow over time.

Table 2: Structure of a Balance Sheet (illustrative headings)

Section	Main items	What it shows
Non-current assets	Land and buildings, plant and	Long-term resources used to

	machinery, vehicles, long-term investments, intangibles	run the business
Current assets	Stock, receivables (debtors), cash and bank, short-term investments, prepayments	Resources expected to become cash within a year
Share capital and reserves	Issued share capital, retained earnings, other reserves	Owners' claim and accumulated profits
Non-current liabilities	Long-term loans, debentures, lease obligations over one year	Long-term borrowed finance
Current liabilities	Payables (creditors), overdraft, short-term loans, accrued expenses, tax payable	Obligations due within a year

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Key Elements of the Balance Sheet

- Non-current assets: long-lived resources such as plant and premises. Their size and age indicate the productive capacity of the firm and its investment in the future.
- Current assets: stock, receivables and cash. They show how much of the firm's money is tied up in trading and how liquid the business is.
- Capital and reserves: the owners' funds. Retained earnings are especially important because steady growth in reserves shows that the firm finances itself partly from its own profits.

- Non-current liabilities: long-term debt. Compared with capital, they reveal gearing, that is, how heavily the firm depends on borrowed money.
- Current liabilities: amounts due within a year. Set against current assets, they determine working capital and therefore short-term survival.

How Stakeholders Use Each Component

Shareholders and potential investors read the two statements together. From the income statement they take profit after tax, earnings per share and dividend cover to judge the return on their investment; from the balance sheet they take net assets and gearing to judge the safety of that investment. A firm can show rising profits yet be dangerously geared, and only the balance sheet reveals this. Return on capital employed, which divides operating profit by the capital shown in the balance sheet, is a classic combined measure that neither statement can produce alone.

Lenders and bankers are concerned mainly with repayment capacity and security. They examine operating profit against finance costs (interest cover) in the income statement, and in the balance sheet they examine the current ratio (current assets ÷ current liabilities), the quick ratio, the value of assets available as security, and the proportion of debt to equity. A profitable firm with weak liquidity may still default, so lenders weight the balance sheet heavily. Suppliers and trade creditors use the same liquidity information, together with receivables and payables balances, to decide credit terms: slow-paying customers and stretched creditors are visible in the working-capital figures.

Managers use the components internally. Gross margin trends point to purchasing or production problems; expense ratios point to departments that need control; stock, receivable and payable levels guide working-capital management; and the balance-sheet structure guides decisions about raising further capital. Government and tax authorities use the income statement to assess tax and the balance sheet to verify the assets behind reported profits, while employees and their unions use profitability and reserves as evidence in wage negotiations. In short, the income statement measures performance and earning power, while the balance sheet measures strength, liquidity and risk; financial health exists only when both are satisfactory.

Limitations and Conclusion

Both statements have limitations that a careful analyst keeps in mind. They are prepared on historical cost, so asset values may be far below current market values; they omit valuable intangibles such as a trained workforce and reputation; they reflect one date or one period and can be affected by window dressing and by choices between acceptable accounting policies. They should therefore be read over several years, compared with competitors, and supplemented by the cash flow statement. To conclude, the income statement is structured as a stepped calculation from revenue down to net profit, and the balance sheet as a balanced statement of assets against liabilities and capital. Each component carries distinct information, and it is the combination of earning performance from the first and financial position from the second that allows stakeholders to analyse the financial health of a business completely and reliably.

Question 2: Financial Instruments — Bonds, Shares, Treasury Bills, Bill of Exchange and Letter of Acceptance (20 Marks)

Q.2 Explain the following financial instruments: (a) Bonds (b) Shares (c) Treasury Bills (d) Bill of Exchange (e) Letter of Acceptance. (20)

Introduction

A financial instrument is a contract or document that creates a financial asset for one party and a financial liability or equity claim for another. Instruments are the vehicles through which savings move from surplus units, such as households, to deficit units, such as companies and governments, that need funds. They differ in who issues them, how long they run, what return they promise, and how much risk the holder bears. This answer explains the five instruments named in the question, and a comparison table at the end summarises their differences.

(a) Bonds

A bond is a long-term debt instrument through which a company or government borrows a large sum from many lenders at once. The issuer promises to pay a fixed rate of interest, called the coupon, at regular intervals, usually every six months or year, and to repay the face (par) value on a stated maturity date, commonly five to thirty years later. Bonds are issued under a formal contract (an indenture), are freely transferable through stock exchanges and over-the-counter markets, and may be secured on assets or unsecured. In Pakistan, examples include Pakistan Investment Bonds issued by the government and term finance certificates and sukuks issued by companies.

For the investor, a bond offers a predictable income stream and a claim that ranks before shareholders in a winding up, so it is safer than shares, though its market price falls when general interest rates rise. For the issuer, bonds provide large, long-term funds without diluting ownership, and the interest is normally a tax-deductible expense against this, interest and repayment are legal obligations that must be met even in a bad year. Credit rating agencies grade bonds, and the lower the rating, the higher the coupon the issuer must offer.

(b) Shares

A share is a unit of ownership in a company. By buying ordinary (equity) shares, the investor becomes a part-owner, entitled to a share of the profits in the form of dividends when declared, to vote at general meetings, and to a share of the remaining assets after all creditors are paid if the company is wound up. Because dividends are not guaranteed and shareholders rank last in a winding up, ordinary shares are the riskiest of the instruments discussed here, but historically they offer the highest long-term returns through dividends plus capital growth. Shares have no maturity date; the investor exits by selling them to another investor, normally through a stock exchange such as the Pakistan Stock Exchange.

Preference shares stand between bonds and ordinary shares: they usually carry a fixed dividend that must be paid before any ordinary dividend, but normally no voting rights. For the issuing company, share capital is permanent finance that never has to be repaid and creates no compulsory payment obligation, which makes it the safest source from the company's point of view, although issuing new shares dilutes the control and earnings of existing owners, and dividends are paid out of after-tax profits.

(c) Treasury Bills

A treasury bill (T-bill) is a short-term debt instrument issued by the government, through its central bank, to finance short-term budget needs. In Pakistan, Market Treasury Bills are auctioned by the State Bank of Pakistan in maturities of three, six and twelve months. T-bills are issued at a discount to their face value and redeemed at face value; they pay no periodic interest, so the investor's return is simply the difference between the purchase price and the redemption value. Because they are backed by the government, they are regarded as practically risk-free, and their auction yield is used as the benchmark risk-free rate against which all other returns are judged.

T-bills are a money-market instrument, which distinguishes them from the capital-market instruments above. They are highly liquid, can be sold before maturity, carry a low return reflecting their low risk, and are used heavily by banks and companies to park surplus cash for short periods and by central banks as a tool of monetary policy through open market operations.

(d) Bill of Exchange

A bill of exchange is a written, unconditional order by one party (the drawer), usually a seller of goods, directing another party (the drawee), usually the buyer, to pay a stated sum to a named person or bearer on a fixed future date or on demand. When the drawee signs the bill across its face, he accepts it and becomes primarily liable for payment; the document is then called an acceptance. Bills of exchange arise from trade credit: a seller who ships goods today but agrees

to be paid in, say, ninety days draws a bill for the invoice amount, and the buyer's acceptance converts a book debt into a negotiable instrument.

The great advantage of a bill is negotiability and discountability. The holder may keep it until maturity, endorse it to his own creditor in payment, or discount it with a bank, receiving cash immediately less a discount charge. In this way the bill lubricates trade, especially international trade, and gives the banking system a sound, self-liquidating asset. If the bill is dishonoured at maturity, the holder has a clear legal remedy against the acceptor and endorsers.

(e) Letter of Acceptance

A letter of acceptance, in the financial and trade sense, is the written acceptance by a bank or a buyer of an obligation to pay a bill of exchange, draft or trade document at a future date. When a bank accepts a trade draft on behalf of its customer, the resulting instrument, commonly known as a banker's acceptance, carries the credit of the bank rather than merely that of the trader. Because a reputable bank stands behind the payment, the accepted draft becomes a high-quality, marketable money-market instrument: the exporter or seller can discount it immediately at a fine rate, and investors will buy it readily because the risk is that of the accepting bank.

Letters of acceptance are therefore central to the financing of imports and exports, where buyer and seller in different countries do not know each other well enough to trade on open credit. The mechanism protects both sides: the seller is assured of payment by a bank on the due date, and the buyer receives the shipping documents and time to sell the goods before payment falls due. The accepting bank earns a commission for lending its credit standing, and it

will normally take security or a margin from its customer. The same phrase is also used in business correspondence for a letter formally accepting an offer, a quotation or an appointment, which then evidences a concluded contract; in financial markets, however, the bank-acceptance meaning explained above is the relevant one.

Table 1: Comparison of the Five Instruments

Instrument	Issuer	Nature	Maturity	Return	Risk
Bond	Company / Government	Long-term debt	Long (5–30 years)	Fixed coupon interest	Moderate; price varies with interest rates
Share	Company	Ownership (equity)	Permanent; no maturity	Variable dividend + capital gain	Highest; paid last in winding up
Treasury Bill	Government	Short-term debt	3, 6 or 12 months	Discount to face value	Lowest; government backed
Bill of Exchange	Trader (drawer)	Trade credit document	Usually up to 90–180 days	Discount if sold early	Depends on acceptor's credit
Letter of Acceptance	Bank accepting a	Bank-guaranteed	Short term	Discount to face value	Low; bank stands behind

(banker's acceptance)	draft	trade obligation			payment

Conclusion

To conclude, the five instruments serve different corners of the financial system. Shares provide permanent ownership capital with the highest risk and return; bonds provide long-term loan capital with fixed interest; treasury bills provide the government with short-term funds and investors with a nearly risk-free parking place; the bill of exchange turns trade credit into a negotiable and discountable document; and the letter of acceptance strengthens such trade paper with the credit of a bank. A well-developed financial system needs all of them, because savers and borrowers differ in the maturities, risks and returns they want.

Question 3: Cash Management and the Factors That Make It Effective (20 Marks)

Q.3 Explain the concept of cash management and discuss the key factors that make a cash management system effective in an organisation. Provide a detailed explanation. (20)

Introduction

Cash is the most liquid asset of a business and also its least productive one: cash lying idle in a current account earns nothing, yet a business that runs out of cash cannot pay wages, suppliers or taxes and may fail even while it is profitable on paper. Cash management is the discipline

that resolves this tension. This answer explains the concept, its objectives and the motives for holding cash, and then discusses in detail the factors that make a cash management system effective in an organisation.

The Concept of Cash Management

Cash management means planning, organising and controlling the cash inflows and outflows of an organisation so that the right amount of cash is available at the right time and place, surpluses are invested profitably, and shortages are avoided or financed at the lowest cost. In a wider sense, 'cash' here includes bank balances and near-cash assets such as treasury bills and money-market deposits that can be turned into cash immediately. Cash management is one part of working-capital management, and it works hand in hand with the management of receivables, payables and inventory, because those three items determine when money actually moves.

A business holds cash for three classic motives identified by Keynes. The transaction motive is the need to meet everyday payments, wages, purchases, rent and taxes, which do not arrive in step with receipts. The precautionary motive is the need for a safety buffer against unexpected events, a delayed customer payment, a sudden repair or a fall in sales. The speculative motive is the desire to keep funds ready to exploit a sudden opportunity, such as a bulk purchase at a discount. A good cash manager balances these motives against the opportunity cost of idle balances.

Objectives of Cash Management

- Liquidity: ensure that every obligation can be paid on its due date, protecting the firm's credit standing and avoiding penalties and distress borrowing.
- Profitability: minimise idle balances and invest genuine surpluses in safe, short-term, interest-earning assets, so cash contributes to profit.
- Cost control: reduce bank charges, borrowing costs and the administrative cost of handling cash.
- Certainty and control: know the cash position at all times, prevent fraud and error, and forecast shortages early enough to arrange finance calmly rather than in a crisis.

Factors That Make a Cash Management System Effective

1. Accurate Cash Forecasting and Budgeting

The foundation of effective cash management is a reliable cash budget, prepared monthly and reviewed weekly or even daily in a large firm, forecasting receipts and payments and showing expected surpluses and deficits period by period. Forecasting forces the firm to collect information from sales, production and purchasing departments, and it converts surprises into planned events: a deficit foreseen three months ahead can be met with an arranged overdraft at normal rates, while the same deficit discovered on the day of payment may force expensive emergency borrowing or default. Rolling forecasts, updated as actual figures arrive, keep the system realistic.

2. Speeding Up Collections

Cash locked in the collection pipeline earns nothing, so effective systems shorten the time between a customer's payment decision and usable funds in the firm's account. Techniques include prompt invoicing, offering discounts for early payment where the cost is justified, electronic and online payment channels, direct debit arrangements, lock-box and concentration banking in firms with many locations, and firm but fair credit control that chases overdue accounts systematically. Every day saved in collections releases working capital permanently and reduces borrowing.

3. Controlling and Scheduling Disbursements

The mirror image is to pay no earlier than necessary without damaging goodwill or losing valuable discounts. Effective systems centralise payments, schedule them on due dates rather than on receipt of invoices, use the full agreed credit period from suppliers, and pay electronically on the value date. This is not dishonesty: it is honouring agreed terms exactly, neither early nor late. Centralised disbursement also strengthens internal control, because all payments pass through one authorised channel.

4. Investing Surplus Cash Wisely

A surplus that lasts a few days still deserves attention in a large organisation. Effective cash management lays down an investment policy in advance, ranking safety first, liquidity second and yield third, and places surpluses in instruments such as treasury bills, money-market funds, term deposits matched to the date the cash will be needed, or overnight placements.

Speculative investment of operating cash is prohibited, because the money is held for payments, not for trading profit.

5. Maintaining Optimum Cash Balances

Scientific models support judgement about how much cash to hold. The Baumol model treats cash like inventory and balances the fixed cost of selling securities or borrowing against the interest forgone on cash balances, giving an optimal transaction size. The Miller-Orr model suits firms whose flows fluctuate randomly: it sets upper and lower control limits and a return point, so management acts only when the balance breaches a limit, converting cash to securities at the top and back at the bottom. Even firms that do not use the models formally benefit from their logic: hold neither so much that profit leaks away, nor so little that safety is threatened.

6. Sound Banking Relationships and Arrangements

An effective system maintains well-negotiated arrangements with one or more banks: agreed overdraft limits before they are needed, competitive charges, sweep arrangements that automatically move balances between accounts, and up-to-date information services. A banker who knows the firm's seasonal pattern and forecast is far more willing to support it through a temporary squeeze than one approached for the first time in a crisis.

7. Internal Control, Technology and Organisation

Cash is the asset most exposed to fraud, so segregation of duties, dual authorisation of payments, daily bank reconciliations, surprise cash counts and audit trails are essential parts of the system, not optional extras. Modern treasury software, enterprise systems and real-time

bank feeds make the position visible daily and automate routine transfers, while clear assignment of responsibility, usually to a treasurer or finance manager, ensures somebody owns the cash position and reports exceptions promptly. Finally, the system must be judged by measures such as the cash conversion cycle, forecast accuracy and the average idle balance, and improved continuously.

Conclusion

To conclude, cash management is the planned control of inflows, outflows and balances so that the organisation is always liquid but never wastefully cash-rich. The factors that make it effective reinforce one another: accurate forecasting identifies future surpluses and deficits; faster collections and disciplined disbursements improve the flows themselves; a clear investment policy puts surpluses to work; optimum-balance models and good banking arrangements provide the safety structure; and strong internal control with modern technology keeps the whole system honest and visible. Organisations that manage cash in this integrated way rarely face a liquidity crisis, borrow less, earn more on their balances, and command the confidence of banks and suppliers.

Question 4: Effective Annual Rate — Alpha Bank vs Beta Bank (20 Marks)

Q.4 You are planning to invest a significant amount of money and have two options: Alpha Bank Ltd.'s Deposit Account, offering 9% interest compounded annually, and Beta Bank Ltd.'s Savings Account, offering 8.5% interest compounded monthly. Calculate the effective annual rate (EAR)

for both investment options, compare them, and determine which is more advantageous. Provide detailed calculations and a clear justification for your choice. (20)

Introduction

Banks quote interest rates in many different ways, and the quoted, or nominal, rate is not by itself a fair basis for comparing two accounts, because the frequency of compounding changes what the depositor actually earns in a year. A lower nominal rate compounded frequently can beat a higher nominal rate compounded once a year, or, as this question shows, it may still fall short. The standard tool for a fair comparison is the effective annual rate (EAR): the rate actually earned over one year after taking compounding into account. This answer explains the concept, calculates the EAR of both accounts step by step, compares them on a concrete sum of money, and justifies the final choice.

The Concept and Formula of the Effective Annual Rate

When interest is compounded more than once a year, each interest credit itself earns interest for the rest of the year, a process called interest on interest. The EAR converts any quoted rate into its true annual equivalent. If the nominal annual rate is i and interest is compounded m times per year, the rate for each compounding period is i ÷ m, and there are m such periods in the year, so: EAR = (1 + i/m)^m − 1. When compounding is annual, m = 1 and the EAR simply equals the nominal rate. As m rises, the EAR rises above the nominal rate, though by smaller and smaller amounts as compounding becomes more frequent.

Step 1: EAR of Alpha Bank Ltd. — 9% Compounded Annually

For Alpha Bank, the nominal rate is 9% and interest is compounded once a year, so m = 1. Applying the formula: EAR = (1 + 0.09/1)^1 − 1 = (1.09)^1 − 1 = 1.09 − 1 = 0.09, that is, 9.00%. There is no intra-year compounding, so the quoted rate and the effective rate are identical. A deposit of Rs 100,000 therefore grows to Rs 100,000 × 1.09 = Rs 109,000 at the end of one year, having earned exactly Rs 9,000 of interest.

Step 2: EAR of Beta Bank Ltd. — 8.5% Compounded Monthly

For Beta Bank, the nominal rate is 8.5% but interest is compounded monthly, so m = 12. The interest rate for each month is 0.085 ÷ 12 = 0.0070833, that is, 0.70833% per month. Applying the formula: EAR = (1 + 0.085/12)^12 − 1 = (1.0070833)^12 − 1. The factor (1.0070833)^12 = 1.088391 (approximately), so EAR = 1.088391 − 1 = 0.088391, that is, approximately 8.84%. Monthly compounding lifts Beta's return from the quoted 8.5% to an effective 8.84% per year, a gain of about 0.34 percentage points, but it does not lift it to 9%.

The working can be checked directly on Rs 100,000. Under monthly compounding the balance after one year is Rs 100,000 × (1.0070833)^12 = Rs 100,000 × 1.088391 = Rs 108,839.09, so the interest earned is Rs 8,839.09, which is 8.84% of the amount invested, confirming the EAR calculation.

Table 1: Comparison of the Two Accounts

Item	Alpha Bank Deposit Account	Beta Bank Savings Account

Quoted (nominal) rate	9.00%	8.50%
Compounding frequency	Annually (m = 1)	Monthly (m = 12)
Rate per period	9.00% per year	0.70833% per month
EAR = (1 + i/m)^m − 1	(1.09)^1 − 1 = 9.00%	(1.0070833)^12 − 1 = 8.84%
Value of Rs 100,000 after 1 year	Rs 109,000.00	Rs 108,839.09
Interest earned in 1 year	Rs 9,000.00	Rs 8,839.09
Value of Rs 1,000,000 after 1 year	Rs 1,090,000.00	Rs 1,088,390.91

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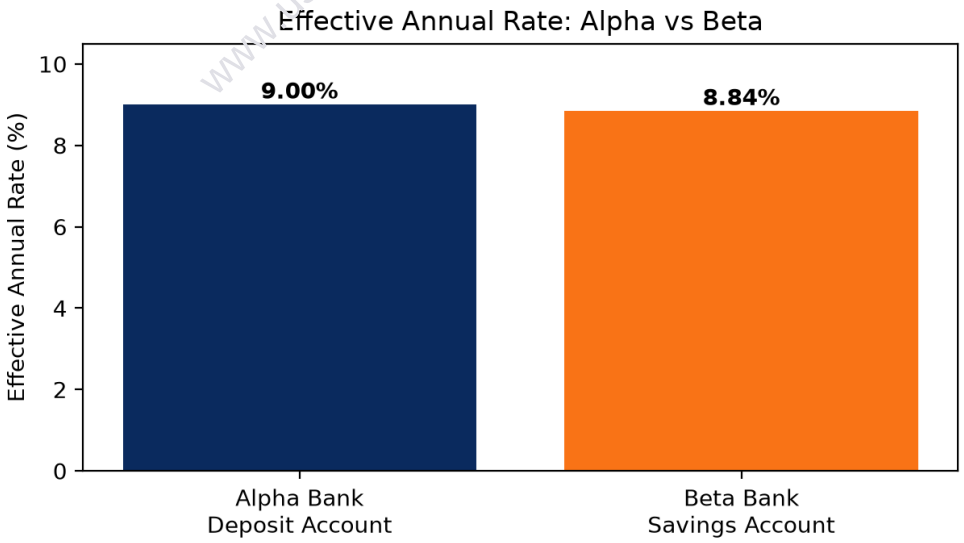


Figure 1: The effective annual rate of Alpha Bank (9.00%) exceeds that of Beta Bank (8.84%).

Comparison and Justification of the Choice

On the only fair basis of comparison, the effective annual rate, Alpha Bank is the more advantageous option: 9.00% beats 8.84%, a difference of about 0.16 percentage points per year. The advantage is worth Rs 160.91 per year on every Rs 100,000 invested, and Rs 1,609.09 per year on Rs 1,000,000. Because the question concerns a significant amount of money, and because the gap compounds year after year if the deposit is renewed, the real benefit over a multi-year horizon is larger still: the higher EAR applies to a growing balance each year, so the rupee difference widens over time.

The result also teaches the general lesson behind the question. Monthly compounding genuinely helped Beta Bank: it raised the true return from 8.5% to 8.84%. But compounding frequency can only add a limited amount; for a nominal rate of 8.5%, even continuous compounding would give an EAR of only about 8.87%, still below 9%. A depositor who compared only the style of compounding, 'monthly sounds better than annual', and ignored the arithmetic, would have chosen the worse account. The correct procedure is always to convert every quoted rate to its EAR and compare like with like.

The multi-year effect deserves a separate illustration, because a significant sum is rarely invested for one year only. If Rs 100,000 is left invested for five years and each account's effective rate is maintained, the Alpha deposit grows at 9% a year to Rs 100,000 × (1.09)^5 = Rs 153,862.40, while the Beta account grows at its effective rate of 8.8391% a year to Rs 100,000 × (1.088391)^5 = Rs 152,730.06. The gap, only Rs 160.91 after one year, has widened to Rs 1,132.34 after five years, and on an investment of Rs 1,000,000 it would be Rs 11,323.36 over

the same period. This widening happens because in each successive year Alpha's higher rate is applied to a balance that is already larger, so the small annual difference itself earns interest. It confirms that choosing by effective annual rate is not a pedantic refinement but a decision with real and growing money value.

For completeness, a real-world investor would also check non-rate features before finally deciding: whether either account charges fees or requires a minimum balance, whether the 9% deposit locks the money in for a fixed term with penalties for early withdrawal while the savings account allows free access, the safety and reputation of each bank, and the effect of tax and zakat deductions on the profit paid. If, for example, immediate access to the money were essential, Beta's savings account might still be preferred despite its lower EAR, because liquidity has value. On the facts given in the question, however, where the objective is the return on a significant sum placed for a year, none of those qualifications is stated, and the rate comparison is decisive.

Conclusion

To conclude, the effective annual rate of Alpha Bank's deposit account is 9.00%, while the effective annual rate of Beta Bank's savings account, after allowing for monthly compounding, is approximately 8.84%. Alpha Bank is therefore the more advantageous option, earning about Rs 161 more per year on each Rs 100,000 invested. The deposit should be placed with Alpha Bank Ltd., subject only to confirming that its terms on access and charges do not offset the rate advantage.

Question 5: Book Value per Share vs Market Price (20 Marks)

Q.5 A company's total share capital is Rs 8,400 million, and it has issued 400 million ordinary shares. (a) Calculate the book value per share of the company. (b) The company's shares are currently trading at Rs 24 per share on the stock exchange. Discuss the significance of the difference between the book value and the market price, and explain which value is more relevant for investors when making investment decisions. (20)

Introduction

A single share carries several different 'values', and confusing them leads to poor investment decisions. Two of the most important are the book value per share, which comes from the company's own accounts, and the market price, which is set by buyers and sellers on the stock exchange. This answer first calculates the book value per share from the figures given, and then discusses what the gap between the book value of Rs 21 and the market price of Rs 24 signifies, and which of the two values should matter more to an investor.

Part (a): Calculation of Book Value per Share

Book value per share is the net asset value attributable to each ordinary share. It is calculated by dividing the total equity belonging to ordinary shareholders (share capital plus reserves and retained earnings, as given here in total as Rs 8,400 million) by the number of ordinary shares issued. Book value per share = Total share capital (shareholders' funds) ÷ Number of ordinary shares issued = Rs 8,400 million ÷ 400 million shares = Rs 21 per share. The millions cancel out,

so the answer is exactly Rs 21. Each ordinary share therefore represents Rs 21 of net assets, as recorded in the balance sheet, standing behind it.

Table 1: Book Value Calculation

Item	Amount
Total share capital / shareholders' funds	Rs 8,400 million
Ordinary shares issued	400 million shares
Book value per share = 8,400 ÷ 400	Rs 21 per share
Market price per share (given)	Rs 24 per share
Premium of market price over book value	Rs 3 per share (about 14.3%)
Price-to-book ratio = 24 ÷ 21	1.14 times

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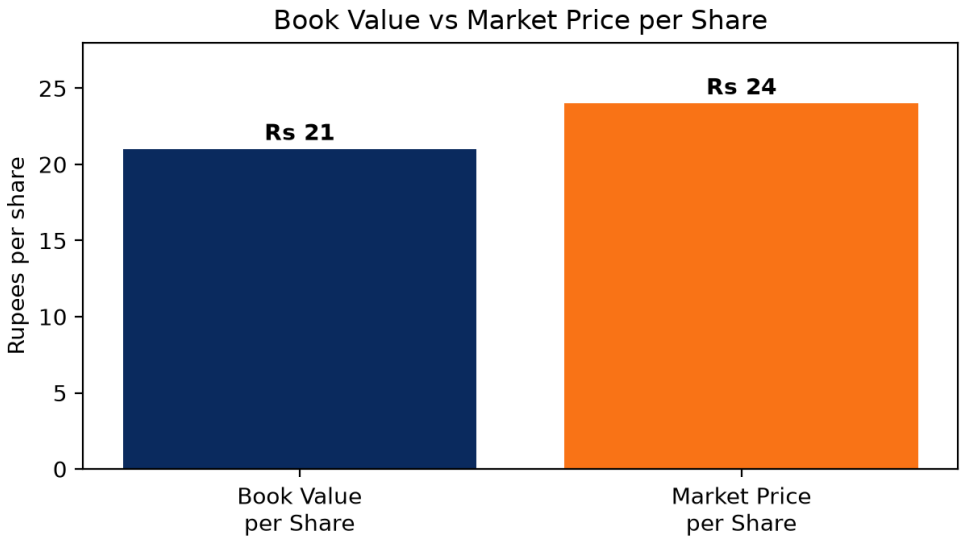


Figure 1: The market price of Rs 24 stands Rs 3 above the book value of Rs 21 per share.

Part (b): Significance of the Difference

The market price of Rs 24 is Rs 3, or about 14.3%, higher than the book value of Rs 21, giving a price-to-book ratio of 1.14. The first thing this signifies is that investors, collectively, value the company at more than the net value of its recorded assets. That is normal for a healthy, going-concern business, because the balance sheet is a historical record: assets are generally shown at cost less depreciation, not at current market value, and several of the most valuable things a company owns never appear in its balance sheet at all, notably its reputation and brand, its customer relationships, its distribution network, its technology and know-how, and the skill of its workforce. The Rs 3 gap is, in large part, the market's valuation of those unrecorded assets and of the company's ability to earn profits in the future.

Second, the gap reflects expectations. Market price is forward-looking: it is the present value investors place on expected future dividends and earnings. A price above book value normally signals that investors expect the company to earn a return on its equity higher than the return they require, so they willingly pay more than net asset value. If a company persistently earned poor returns, its price would fall below book value, a price-to-book ratio below 1, which can signal either an undervalued bargain or a business in decline whose recorded assets are worth less than the books claim, for example obsolete plant or doubtful receivables. The size of the gap therefore summarises market confidence: a modest premium of 14.3%, as here, suggests a sound company with steady prospects rather than either a speculative favourite, which might trade at several times book value, or a distressed one trading at a discount.

Third, the difference matters differently in different situations. In a liquidation, book value is the starting point for what shareholders might recover, although actual recovery depends on what the assets fetch when sold. For a takeover bidder, the premium over book value indicates how much extra must be paid beyond net assets to win control. For management, a market price persistently below book value is a warning that the market doubts its stewardship and may invite a hostile bid.

Which Value Is More Relevant for Investors?

For most investment decisions, the market price is the more relevant figure, for a simple practical reason: it is the price at which the investor can actually buy or sell. Returns are earned on the price paid, not on book value. An investor who buys at Rs 24 earns the dividend yield and any capital gain measured from Rs 24, and judges the share against alternative investments also priced in the market. Market price also aggregates the information and expectations of thousands of participants, whereas book value rests on accounting policies, depreciation choices and historical costs that may be years out of date. Decisions about timing, about portfolio allocation, and about comparing this share with others must therefore be anchored on market price and on ratios derived from it, such as the price/earnings ratio and dividend yield.

That said, book value is far from useless, and the wisest investors use it as a check on market price rather than ignoring it. Value investors in the tradition of Benjamin Graham compare price with book value to find a margin of safety: buying near or below net asset value limits the downside if expectations disappoint. Book value per share and its growth over time also measure how management has compounded the owners' capital, and the price-to-book ratio is

a standard screening tool, particularly for banks and asset-heavy companies where balance-sheet values are close to reality. The proper approach is therefore combined: use market price as the operative figure for buying and selling, and use book value, together with earnings and cash flow, to judge whether that market price is justified. In the present case, a premium of only 1.14 times book value, for a company whose shares the market willingly holds at Rs 24, is moderate and does not by itself suggest overvaluation; the investor should next test the price against earnings per share and expected growth before committing funds.

Conclusion

To conclude, the book value per share is Rs 8,400 million divided by 400 million shares, which equals Rs 21 per share. The market price of Rs 24 stands at a premium of Rs 3, or about 14.3%, over book value, signifying that investors value the company's future earnings power and unrecorded intangible strengths above the historical net asset figure in its balance sheet. Market price is the more relevant value for day-to-day investment decisions because it is the actual dealing price and embodies current expectations, but book value remains an essential anchor for judging safety and whether the market price is reasonable.