

Accounting Units 1 & 2

Chapter 4 Sources of finance

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

Attribution: Classbasics Pty Ltd, vwx.au

Aboriginal and Torres Strait Islander content has been excluded as accuracy cannot be guaranteed, and it is better to be respectful than cover the entire curriculum inaccurately.

Significant effort has been made to ensure this content is legal. Please send any areas of concern to admin@vwx.au with appropriate document/legal references so errors can be verified and changes be made.

Contents

Section	Page
4A Sources of finance and applying for a loan	2
4B The Debt Ratio, risk and return	13

Chapter 4 Sources of finance — 4A Sources of finance and applying for a loan

Theory

Every business needs **finance** — money to acquire the assets it uses to earn revenue and to meet its day-to-day costs. A **source of finance** is where that money comes from. When an owner is establishing a business, and again whenever the business grows or replaces its assets, one of the most important decisions is **which source (or mix of sources) to use**. Choosing well keeps the cost of finance low, matches repayments to the business's ability to pay, and keeps the business's level of debt at a manageable, low-risk level. This section explains the main sources available, how they are classified, the guidelines a business follows when it seeks finance from outside, and what a lender assesses when a business applies for a loan.

Sources of finance are grouped in two ways at once: by **where the money comes from** (internal vs external) and by **how long the finance is available for** (short-term vs long-term). A single source has both a “where” and a “how long” label — for example, a bank overdraft is *external* and *short-term*.

Internal sources of finance

An **internal source of finance** is finance generated from **within the business itself**, without involving an outside party. There are two:

- **Owner's capital.** **Owner's capital** is cash (or other assets) that the owner contributes to the business from their own personal resources. It is recorded in the **Capital** account as part of owner's equity. Capital is *permanent* finance: there is **no obligation to repay it** on any fixed date and **no interest** is charged, because the money belongs to the owner, not to a lender. Its limits are that it depends on how much the owner personally has (or can raise privately), and every dollar the owner ties up in the business is a dollar they cannot use elsewhere.
- **Retained profits.** **Retained profits** are profits the business has earned and **kept in the business** — reinvested — rather than withdrawn by the owner as **Drawings**. Like capital, retained profit carries **no interest and no repayment date**. Its limit is obvious: a business can only retain profit it has actually earned, so a new or unprofitable business has little or none, and profit retained in the business is profit the owner has chosen **not** to take for themselves.

Because internal sources involve no lender, they add **no interest cost** and **no repayment pressure**, and they do not increase the business's debt. Their weakness is **capacity**: internal funds are limited to what the owner has and what the business has earned, which is rarely enough to fund a large asset on its own.

External sources of finance

An **external source of finance** is finance provided by a **party outside the business** — a bank, a finance company or a supplier. External finance lets a business raise more than the owner could alone, but it almost always brings a **cost** (interest and fees) and an **obligation to repay**, which increases the business's debt and its risk. The five external sources you must know are:

- **Loan.** A **loan** (a *term loan*) is a fixed sum borrowed from a bank or other lender and repaid over an agreed period, usually in regular instalments, **with interest**. It is recorded as a liability named after the lender — for example, **Loan – Fairview Bank**. Loans are typically used to fund **non-current assets** (vehicles, equipment, premises) and are usually **long-term**.
- **Bank overdraft.** A **bank overdraft** is an arrangement that lets a business withdraw **more from its bank account than the balance in it**, up to an agreed limit. It is a **short-term**, flexible source used to cover temporary cash shortfalls; interest is charged only on the amount actually overdrawn, and the bank can require it to be repaid **on demand**.
- **Trade credit.** **Trade credit** is finance provided by a **supplier** who allows the business to buy goods or services now and **pay later** (commonly within 30 days). It is **short-term** and usually **interest-free** within the credit term, which makes it a convenient way to fund inventory and supplies; its cost appears only if the business pays late (losing the supplier's goodwill or a discount).

- **Leasing.** Leasing is an arrangement in which the business pays a **periodic fee to use an asset owned by another party** (the lessor) **without ever owning it**. The business gets the *use* of the asset while the lease payments are recorded as an expense; it avoids a large up-front outlay but never builds ownership.
- **Hire purchase.** Hire purchase lets a business take **possession and use of an asset immediately** and pay for it in **instalments that include interest**, with **ownership passing to the business once the final instalment is paid**. It is a way to fund a non-current asset over time, and unlike a lease it ends in ownership.

Short-term versus long-term finance

Finance is also classified by the length of time it is available before it must be repaid:

- **Short-term finance** must be repaid **within 12 months** and is reported as a **current liability**. It is used to fund **current assets and day-to-day operations** — inventory, supplies, or a temporary gap between paying costs and receiving cash. Typical short-term sources: **bank overdraft** and **trade credit**.
- **Long-term finance** is available for **longer than 12 months** and is reported as a **non-current liability** (or, for the owner's own funds, as owner's equity). It is used to fund **non-current assets and long-term growth**. Typical long-term sources: a **term loan**, **hire purchase**, **leasing**, and the owner's own **capital** and **retained profits** (which have no repayment date at all).

A guiding rule is **matching the term of the finance to the life of the asset it funds**: fund a long-life (non-current) asset with **long-term** finance, and fund a short-term need with **short-term** finance. Using a short-term source such as an overdraft — which the bank can call in on demand — to buy a non-current asset that will take years to pay for is risky, because the business could be forced to repay before the asset has earned enough to cover it. Equally, tying up long-term finance in a fleeting need wastes the business's borrowing capacity.

Guidelines for seeking external finance

Before approaching a lender or supplier, a business weighs a set of **guidelines for seeking external finance** so that the finance chosen fits its needs and its capacity to repay:

- **Purpose.** *What is the finance for?* The purpose (a non-current asset, extra inventory, a temporary cash gap) determines the appropriate **term** and source.
- **Cost.** The **interest rate and fees** — the total cost of borrowing. Lower is better, but cost is weighed against the other factors.
- **Term.** How long the business has to repay, matched to the life of the asset or the length of the need.
- **Flexibility.** Whether the business can repay early, redraw, or vary repayments without penalty.
- **Security required.** The assets the lender will require as **security (collateral)**, which the lender can claim if the business fails to repay.
- **Effect on cash flow.** Whether the business can **afford the repayments** out of its expected cash inflows without straining day-to-day operations.
- **Effect on the level of debt and control.** How the finance affects the business's **debt (gearing)** and therefore its **risk** (examined further in section 4B), and whether it affects the owner's **control** of the business — a loan leaves control untouched, whereas taking on a co-owner would not.

Applying for a loan: what a lender assesses

When a business applies for a loan, the lender must decide whether it is likely to be **repaid in full and on time**. To do this the lender asks the business for evidence — typically a **business plan**, recent **financial reports** (the Balance Sheet and Income Statement), **budgeted (projected) cash flows**, the **amount and term** requested, the **purpose** of the loan, the **security** offered, and the owner's **credit history**. The lender then assesses the application against five factors:

- **Character.** The borrower's **track record and reliability** — credit history, reputation and honesty. Has the owner repaid past debts on time and dealt honestly with lenders?
- **Capacity.** The business's **ability to repay** — its serviceability. The lender checks that expected **cash inflows and profits** are enough to cover the repayments and interest as they fall due.

- **Capital.** The **owner's own stake** in the business — how much of their own **capital** the owner has contributed. A larger owner contribution means the owner shares the risk and is less likely to walk away, which reassures the lender.
- **Collateral.** The **security** offered — assets (such as premises, vehicles or equipment) the lender can take and sell if the business defaults. Good collateral reduces the lender's risk.
- **Conditions.** The **purpose, amount and term** of the loan and the wider **economic conditions**. A clear, sensible purpose and a realistic amount and term make approval more likely.

Ethical considerations. A loan application must be **honest**. A business has an ethical — and legal — obligation to present its financial position and prospects **truthfully**: the reports and projections it gives a lender should be **complete** and **neutral**, faithfully representing the business as it really is. Deliberately **overstating projected revenue**, **understating or concealing existing debts**, or hiding a poor repayment history to secure finance is **dishonest and may be fraudulent**. It also harms the business itself, which may end up committed to repayments it cannot afford. Because a lender can verify claims against **source documents** and audited reports, and can check credit history independently, dishonesty is likely to be **detected** — exposing the owner to refusal, recovery action and loss of reputation. Acting with **integrity** means giving the lender a clear, complete and neutral picture and borrowing only what the business can realistically service.

Worked model. Kavia is establishing *Brookfield Mobile Grooming*, a service business, and needs **\$50 000** to start. She contributes **\$30 000** of her own savings as **owner's capital** (an *internal*, long-term source), and borrows the remaining **\$20 000** as a four-year bank **loan** (an *external*, long-term source) at 9% p.a. The annual interest is $\$20\,000 \times 9\% = \$1\,800$, so over four years the interest totals **\$7 200** and she will repay **\$27 200** in all. To fund day-to-day supplies she also arranges **trade credit** with a wholesaler (external, short-term) and a small **bank overdraft** (external, short-term) for weeks when cash runs low. The long-term start-up asset is funded with long-term finance, and the short-term operating needs with short-term finance — the finance is **matched** to the need.

Worked examples (scaffolded)

Example 1 — classify a business's sources of finance

Tidewell Physiotherapy (a service business) is financed as follows: the owner has contributed \$45 000 of her own savings; \$12 000 of past profit has been kept in the business; there is a \$30 000 bank loan repayable over five years; the business has drawn \$6 000 of an \$8 000 bank overdraft; and it owes a supplier \$3 500 on 30-day trade credit. Classify each source as internal or external and as short- or long-term, and total the internal and external finance.

Working	Comment
Build a classification table, labelling every source on both axes (where it comes from, and how long it lasts).	Each source has an internal/external label <i>and</i> a short/long label.
Owner's savings \$45 000 → internal, long-term (permanent capital).	Owner's capital comes from within and has no repayment date.
Past profit kept in \$12 000 → internal, long-term (retained profits).	Retained profit is internal finance with no repayment date.
Bank loan \$30 000 (5 years) → external, long-term .	Repaid beyond 12 months → non-current liability.
Overdraft drawn \$6 000 → external, short-term .	Repayable on demand / within 12 months → current liability.
Trade credit \$3 500 (30 days) → external, short-term .	Supplier finance due within 12 months.
Internal total = \$45 000 + \$12 000 = \$57 000 .	Totals foot to \$96 500 of finance in all.
External total = \$30 000 + \$6 000 + \$3 500 = \$39 500 .	

Source	Amount \$	Internal / External	Short- / Long-term
Owner's capital	45 000	Internal	Long-term
Retained profits	12 000	Internal	Long-term
Bank loan (5-year)	30 000	External	Long-term

Source	Amount \$	Internal / External	Short- / Long-term
Bank overdraft (drawn)	6 000	External	Short-term
Trade credit (30-day)	3 500	External	Short-term
Internal total	57 000		
External total	39 500		

∴ internal finance totals **\$57 000** and external finance **\$39 500**.

Example 2 — match a source to a need and cost the loan

Cedarpoint Physiotherapy needs to buy a \$36 000 delivery vehicle — a **non-current asset** it will use for about six years. The owner is considering (i) using the business bank overdraft, or (ii) a six-year bank loan at 7% p.a. Recommend an appropriate source, explain why, and calculate the total interest and the total amount repaid on the loan.

Working	Comment
The vehicle is a long-life, non-current asset , so it should be funded with long-term finance — match the term of the finance to the life of the asset.	The matching guideline drives the choice.
Reject the overdraft : it is short-term and repayable on demand , so using it for a six-year asset risks being forced to repay before the vehicle has paid for itself.	A short-term source is the wrong tool for a long-term asset.
Recommend the six-year loan (external, long-term).	Term matched to the asset's life.
Annual interest = $\$36\,000 \times 7\% = \$2\,520$.	Interest = principal $\times$ rate.
Total interest over six years = $\$2\,520 \times 6 = \$15\,120$.	Flat illustration across the term.
Total repaid = $\$36\,000 + \$15\,120 = \$51\,120$.	Principal plus total interest.

∴ the vehicle should be funded with the **six-year loan**; total interest is **\$15 120** and the total amount repaid is **\$51 120**.

Worked examples (unscaffolded)

Example 3 — hire purchase of a non-current asset

Marlow Mowing acquires a ride-on mower with a cash price of \$18 000 by **hire purchase**. It pays a \$3 000 deposit and the \$15 000 balance, plus \$3 600 of interest, in 24 equal monthly instalments. Calculate the monthly instalment, the total cost of the mower, and state when ownership passes to the business.

The balance financed is $\$18\,000 - \$3\,000 = \$15\,000$. The instalments must cover this balance plus the \$3 600 interest, so the amount paid by instalments is $\$15\,000 + \$3\,600 = \$18\,600$. The monthly instalment is $\$18\,600 \div 24 = \775 . The total cost is the deposit plus the instalments, $\$3\,000 + \$18\,600 = \$21\,600$ — that is, \$3 600 more than the cash price, which is the cost of financing the purchase over time. Under hire purchase the business has **use** of the mower from day one, but **ownership passes only when the final (24th) instalment is paid**. ∴ the monthly instalment is **\$775**, the total cost is **\$21 600**, and the business owns the mower after the last instalment.

Example 4 — applying for a loan: what the lender assesses

Coastvale Consulting (a service business trading for three years) applies to its bank for a \$36 000 loan to fit out a new office. The owner has already contributed \$24 000 of her own capital, so total funding for the fit-out would be \$60 000; she offers the business's equipment as security and provides three years of financial reports and a budgeted cash flow. Explain the factors the lender will assess.

The lender assesses the application against five factors. **Character**: the owner's three-year track record and credit history show whether she has dealt honestly and repaid past debts on time. **Capacity**: the budgeted cash flow and past Income Statements show whether the business earns enough to **service** the repayments and interest as they fall due. **Capital**: the owner has put in \$24 000 of the \$60 000 total, a **40% stake** ($\$24\,000 \div \$60\,000$), so she carries a

substantial share of the risk herself — reassuring the lender she will not simply walk away. **Collateral:** the equipment offered as security is an asset the bank could sell if the loan were not repaid, reducing the bank's risk. **Conditions:** the purpose (an office fit-out) is clear and productive, and the \$36 000 amount and term look realistic against the business's size. ∴ the lender weighs character, capacity, capital, collateral and conditions together to decide whether the loan is likely to be repaid.

Practice questions — scaffolded

Question 1

Verano Fitness Studio is financed by: \$50 000 the owner contributed from personal savings; \$8 000 of profit kept in the business; a \$25 000 three-year bank loan; \$4 000 owed to a supplier on trade credit; and \$5 000 drawn on a bank overdraft.

- Identify the two **internal** sources and state their total.
- Identify the three **external** sources and state their total.
- Explain, in one sentence, the difference between an internal and an external source of finance.

Question 2

Harbourlight Dental uses these sources: a bank overdraft of \$7 000; \$2 800 of 30-day trade credit; a \$40 000 six-year equipment loan; \$60 000 of owner's capital; and an \$18 000 hire-purchase agreement repaid over three years.

- Classify each source as **short-term** or **long-term**.
- State the total short-term finance and the total long-term finance.
- Explain the guideline of **matching** the term of finance to the need it funds.

Question 3

For each need below, recommend a suitable source of finance and justify the choice.

- The business must buy \$2 500 of cleaning supplies that will be used up within the month.
- The business wants to buy its own premises for \$220 000.
- Explain why matching the **term** of the finance to the **purpose** matters.

Question 4

Elmgrove Tutoring borrows \$28 000 over four years at 6% p.a.

- Calculate the annual interest.
- Calculate the total interest over the four years.
- Calculate the total amount that will be repaid.

Question 5

Ridgeway Cabinets acquires machinery with a cash price of \$22 000 by hire purchase: a \$4 000 deposit, then the \$18 000 balance plus \$2 700 interest in 36 equal monthly instalments.

- Calculate the total amount to be paid by instalments.
- Calculate the monthly instalment.
- Calculate the total cost of the machinery, including the deposit.

Question 6

Seabreeze Cafe applies for a \$50 000 bank loan. The owner has contributed \$30 000 of capital, offers the cafe's equipment as security, and has traded for three years.

- State **two** things the lender will assess in deciding whether to approve the loan.

- b. Calculate the owner's stake as a percentage of the total funding (capital plus loan).
- c. Explain why the size of the owner's own contribution matters to the lender.

Practice questions — unscaffolded

Question 7

Northpoint Removals is financed by: \$55 000 owner's capital; \$15 000 retained profits; a \$45 000 five-year vehicle loan; \$6 000 drawn on a bank overdraft; and \$3 200 of 30-day trade credit. State the total internal finance, the total external finance, the total short-term external finance, and the total long-term external finance.

Question 8

For each of the following needs, recommend the most suitable source of finance and justify your choice in one sentence: (i) \$1 200 of stationery bought each month and used up quickly; (ii) a \$150 000 warehouse the business will use for many years; (iii) a temporary two-week cash shortfall of about \$4 000 while the business waits for customers to pay.

Question 9

Fairwind Physio needs to borrow \$24 000. Option A is a five-year loan at 8% p.a.; Option B is a four-year loan at 9% p.a. Calculate the total interest under each option, state which option costs less in total interest, and discuss one reason the business might still prefer the other option.

Question 10

Grandview Print wants a \$30 000 printer. Under **hire purchase** it would pay a \$6 000 deposit, then the \$24 000 balance plus \$4 800 interest in 48 monthly instalments, and own the printer at the end. Under a **lease** it would instead pay \$650 per month for 48 months and never own the printer. Calculate the monthly instalment and total cost under hire purchase, the total cost under the lease, and explain the key difference between the two arrangements.

Question 11

Explain why **owner's capital** and **retained profits** are classified as *internal* sources of finance, and state one advantage they share over an external loan.

Question 12

A business is applying for a bank loan. Explain what a lender is assessing under each of **character**, **capacity**, **capital**, **collateral** and **conditions**, using an original business example.

Question 13

Explain why using a **bank overdraft** to fund a non-current asset (such as a delivery van) is risky, with reference to the guideline of matching the term of finance to the need.

Question 14

Highvale Gardening earns a profit of \$40 000 for the year, and the owner withdraws \$28 000 as drawings. Calculate the retained profit, and explain one advantage and one limitation of relying on retained profits to finance the business's growth.

Question 15

Identify and explain **four** guidelines a business should consider when seeking external finance.

Question 16

Explain what **trade credit** is, why it is described as a short-term, usually interest-free source of finance, and one risk a business faces if it relies on it too heavily or pays late.

Question 17 (ethics — discuss)

The owner of *Brightlands Nursery* is preparing a loan application. To improve the chance of approval, she is tempted to overstate the nursery's projected revenue and to leave an existing \$15 000 loan off the application. Discuss the owner's ethical obligations when applying for finance, with reference to at least one relevant qualitative characteristic, and explain the possible consequences of submitting a misleading application.

Question 18

Priya is establishing a business and needs \$80 000. She has \$35 000 of her own savings available. Recommend a mix of sources to raise the \$80 000, calculate the owner's stake as a percentage of the total, and justify your recommendation with reference to matching, cost and the business's level of debt.

Answers

1.
 - a. owner's capital \$50 000 + retained profits \$8 000 = **\$58 000** b. loan \$25 000 + trade credit \$4 000 + overdraft \$5 000 = **\$34 000** c. internal = from within the business; external = from an outside party
2.
 - a. short-term: overdraft, trade credit; long-term: equipment loan, owner's capital, hire purchase
 - b. short-term \$9 800; long-term \$118 000 c. match short-term finance to short-term needs and long-term finance to long-term (non-current) assets
3.
 - a. trade credit (or overdraft) — short-term b. a long-term loan c. see solutions
4.
 - a. \$1 680 b. \$6 720 c. \$34 720
5.
 - a. \$20 700 b. \$575 c. \$24 700
6.
 - a. e.g. capacity to repay and security offered (any two of character/capacity/capital/collateral/conditions) b. **37.5%** c. see solutions
7. internal \$70 000; external \$54 200; short-term external \$9 200; long-term external \$45 000
8.
 - (i) trade credit (ii) long-term loan (iii) bank overdraft
9. Option A interest \$9 600; Option B interest \$8 640; Option B costs \$960 less in total interest
10. hire purchase: instalment \$600, total cost \$34 800; lease total \$31 200; HP ends in ownership, lease does not
11. generated from within the business; no interest / no repayment date (any one)
12. see solutions
13. see solutions — an overdraft is short-term and repayable on demand, so it mismatches a long-term asset
14. retained profit \$12 000; advantage no interest/no repayment; limitation limited to profit earned
15. any four of: purpose, cost, term, flexibility, security, effect on cash flow, effect on debt/control
16. see solutions
17. see solutions (record honestly; breaches faithful representation; risks refusal/recovery/reputation)
18. e.g. \$35 000 capital + \$45 000 long-term loan; owner's stake **43.75%**; see solutions

Fully-worked solutions

Question 1

- a. The **internal** sources are the owner's own savings contributed as **owner's capital** (\$50 000) and the profit kept in the business as **retained profits** (\$8 000); together \$50 000 + \$8 000 = **\$58 000**.
- b. The **external** sources are the \$25 000 bank **loan**, the \$4 000 **trade credit** and the \$5 000 **bank overdraft**; together \$25 000 + \$4 000 + \$5 000 = **\$34 000**.
- c. An **internal** source is finance generated from **within the business** (the owner's own funds or profit kept in the business), whereas an **external** source is finance provided by a **party outside the business** (a lender or supplier), usually carrying interest and an obligation to repay.

Question 2

- a. **Short-term** (repayable within 12 months): the **bank overdraft** and the **30-day trade credit**. **Long-term** (available beyond 12 months): the **six-year equipment loan**, the **owner's capital** (no repayment date) and the **three-year hire-purchase** agreement.
- b. Short-term total = \$7 000 + \$2 800 = **\$9 800**. Long-term total = \$40 000 (loan) + \$60 000 (capital) + \$18 000 (hire purchase) = **\$118 000**.
- c. **Matching** means funding a need with finance whose term suits it: **short-term** finance (overdraft, trade credit) is used for **short-term needs** such as day-to-day supplies and temporary cash gaps, while **long-term** finance

(loans, hire purchase, capital) is used for **long-term, non-current assets**. Matching avoids being forced to repay finance before the asset it funded has earned enough to cover it.

Question 3

- a. \$2 500 of cleaning supplies used within a month is a **short-term** need, so a **short-term** source — **trade credit** from the supplier (or the bank overdraft) — is suitable; it is quickly repaid and usually interest-free within the credit term.
- b. \$220 000 of premises is a **long-life, non-current asset**, so a **long-term** source — a **long-term bank loan** (or hire purchase) — is appropriate, spreading the large cost over many years of use.
- c. Matching the **term** of finance to the **purpose** ensures repayments fall due only as the asset earns its keep. A short-term source used for a long-term asset could be recalled before the asset has paid for itself, while long-term finance tied up in a fleeting need would waste the business's borrowing capacity and pay interest longer than necessary.

Question 4

- a. Annual interest = $\$28\,000 \times 6\% = \$1\,680$.
- b. Total interest over four years = $\$1\,680 \times 4 = \$6\,720$.
- c. Total repaid = principal + total interest = $\$28\,000 + \$6\,720 = \$34\,720$.

Question 5

- a. The instalments must cover the \$18 000 balance plus \$2 700 interest, so the total paid by instalments is $\$18\,000 + \$2\,700 = \$20\,700$.
- b. Monthly instalment = $\$20\,700 \div 36 = \575 .
- c. Total cost = deposit + instalments = $\$4\,000 + \$20\,700 = \$24\,700$ (that is \$2 700 more than the \$22 000 cash price — the cost of financing the purchase over time).

Question 6

- a. The lender will assess factors such as the business's **capacity** to repay (whether its cash flows and profits can service the repayments) and the **collateral** (the equipment offered as security) — as well as the owner's **character**, her **capital** contribution and the **conditions** of the loan.
- b. Owner's stake = $\$30\,000 \div (\$30\,000 + \$50\,000) = \$30\,000 \div \$80\,000 = 37.5\%$.
- c. The larger the owner's own contribution, the more of the risk the owner personally carries, so she has a strong incentive to make the business succeed and is less likely to abandon it. A substantial owner stake also means the lender is financing a smaller share of the total, reducing the lender's exposure if things go wrong — both of which make approval more likely.

Question 7

Internal finance = owner's capital \$55 000 + retained profits \$15 000 = **\$70 000**. External finance = vehicle loan \$45 000 + overdraft \$6 000 + trade credit \$3 200 = **\$54 200**. Of the external finance, the **short-term** portion is the overdraft \$6 000 + trade credit \$3 200 = **\$9 200**, and the **long-term** portion is the five-year vehicle loan = **\$45 000**.

Question 8

- (i) \$1 200 of stationery used up quickly is a short-term operating cost, so **trade credit** (short-term, usually interest-free) suits it best. (ii) A \$150 000 warehouse is a long-life non-current asset, so a **long-term loan** (or hire purchase) is appropriate, spreading the cost over the years the warehouse is used. (iii) A temporary two-week \$4 000 cash shortfall is exactly what a **bank overdraft** is for — flexible, short-term finance charged only on the amount and time actually used.

Question 9

Option A: annual interest = $\$24\,000 \times 8\% = \$1\,920$; over five years = $\$1\,920 \times 5 = \$9\,600$. Option B: annual interest = $\$24\,000 \times 9\% = \$2\,160$; over four years = $\$2\,160 \times 4 = \$8\,640$. Option B has the **lower total interest** (\$8 640 vs \$9 600 — \$960 less), because although its rate is higher, it is borrowed for one fewer year. The business might still prefer **Option A**, however, because spreading the same \$24 000 over five years rather than four means **lower repayments each period**, which is easier on cash flow — a business short of cash may accept paying more interest overall in exchange for smaller, more affordable instalments.

Question 10

Under hire purchase the instalments cover the \$24 000 balance plus \$4 800 interest = \$28 800, so the monthly instalment is $\$28\,800 \div 48 = \600 , and the total cost is the \$6 000 deposit + \$28 800 = **\$34 800**. Under the lease the total paid is $\$650 \times 48 = \$31\,200$. The **key difference** is **ownership**: hire purchase ends with the business **owning** the printer (ownership passes with the final instalment), whereas a lease only gives the **use** of the printer — the business never owns it, and must return it or re-lease at the end. The lease costs \$3 600 less here but leaves the business with no asset to show for the payments.

Question 11

Owner's capital and **retained profits** are *internal* because the finance is generated **from within the business itself** — capital is the owner's own funds put into the business, and retained profits are earnings the business has made and kept rather than paid out as drawings. Neither involves an outside lender. One advantage they share over an external **loan** is that they carry **no interest cost and no obligation to repay** on a fixed date, so they place no repayment pressure on the business's cash flow and do not increase its debt.

Question 12

A lender assesses: **character** — the borrower's honesty, reputation and credit history (e.g. whether the owner of *Rosewood Cafe* has repaid past debts on time); **capacity** — the business's ability to repay from its cash flows and profits, checked against its reports and budgeted cash flow; **capital** — how much of the owner's own money is invested (a bigger stake means the owner shares the risk); **collateral** — the security offered, such as the cafe's equipment or premises, that the lender could sell on default; and **conditions** — the purpose, amount and term of the loan and the economic climate (a clear, realistic purpose such as buying a second coffee machine, borrowed over a sensible term, is more likely to be approved).

Question 13

Matching the term of finance to the need means a **non-current asset**, which is used and paid for over many years, should be funded with **long-term** finance. A **bank overdraft** is **short-term** and repayable **on demand**, so using it to buy a delivery van is risky: the bank could require repayment at any time — long before the van has earned enough to cover its cost — which could leave the business unable to pay and force it to sell the van or seek emergency finance. Overdraft interest also fluctuates and can be dearer over a long period. The van should instead be funded by a **long-term loan** or **hire purchase**, whose repayments are spread over the asset's life.

Question 14

Retained profit = profit – drawings = $\$40\,000 - \$28\,000 = \$12\,000$. One **advantage** of financing growth with retained profits is that it carries **no interest and no repayment obligation**, and does not increase the business's debt or require any outside approval. One **limitation** is that retained profit is **limited to what the business has actually earned** — here only \$12 000 — which is often far less than the cost of a major asset, and every dollar retained is a dollar the owner has chosen **not** to withdraw for their own use.

Question 15

Four guidelines a business should consider when seeking external finance (any four):

- **Purpose** — what the finance is for, which sets the appropriate term and source.
- **Cost** — the interest rate and fees; the total cost of borrowing.
- **Term** — how long the business has to repay, matched to the life of the asset or need.
- **Flexibility** — whether it can repay early, redraw or vary repayments without penalty.

- **Security required** — the assets the lender will take as collateral.
- **Effect on cash flow** — whether the repayments can be met comfortably from expected inflows.
- **Effect on the level of debt and control** — how the finance affects gearing and risk, and whether it affects the owner's control of the business.

Each factor is weighed together: the cheapest finance is not always best if, say, its repayments strain cash flow or its term does not match the need.

Question 16

Trade credit is finance provided by a **supplier** that lets the business **buy goods or services now and pay later**, commonly within 30 days. It is **short-term** because the amount owed must be paid within a matter of weeks (a current liability), and **usually interest-free** because no interest is charged so long as the business pays within the agreed credit term — making it a convenient, low-cost way to fund inventory and supplies. One **risk** is that relying on it too heavily builds up amounts that all fall due at once, straining cash flow; and paying **late** can mean losing any discount, being charged interest or penalties, or losing the supplier's goodwill and future credit — even having supply cut off.

Question 17

When applying for finance, the owner has an ethical **and** legal obligation to present the nursery's position **honestly**. Overstating projected revenue and omitting the existing \$15 000 loan would breach **faithful representation**: the information given to the lender would no longer be **complete** (a real liability has been hidden) or **neutral** (the figures have been deliberately biased to look stronger than they are). It would also mislead the lender about the business's true **capacity** to repay, since the concealed loan already consumes cash the nursery must service. The likely **consequences** are serious: the lender can **verify** claims against source documents, audited reports and independent credit records, so the concealed loan and inflated revenue are likely to be **detected**, leading to **refusal** of the application or, if the loan has already been advanced, **recall and recovery action**, plus lasting damage to the owner's **reputation and credit history**. Submitting false information may also be **fraud**. Beyond the legal risk, borrowing on a dishonest basis can saddle the nursery with repayments it genuinely cannot afford, threatening the very business the owner is trying to grow. Acting with **integrity**, the owner should disclose the existing loan, use realistic revenue projections, and borrow only what the nursery can truly service — giving the lender a complete and neutral picture on which to decide.

Question 18

Priya needs \$80 000 and has \$35 000 of her own savings. A sensible mix is to contribute the **\$35 000 as owner's capital** (internal, permanent, no interest) and raise the remaining **\$45 000 as a long-term bank loan** (external, long-term) — matched to the long-life start-up assets the business needs. Her own stake would be $\$35\,000 \div \$80\,000 = 43.75\%$ of the total funding. This mix is justified on three grounds. **Matching**: the long-term loan funds long-term assets, so repayments are spread over the years those assets earn revenue, rather than relying on short-term finance that could be recalled. **Cost**: using \$35 000 of interest-free internal capital keeps borrowing — and the interest bill — down, since only \$45 000 attracts interest. **Level of debt**: contributing a substantial 43.75% stake herself keeps the business's debt (and therefore its risk and gearing) at a moderate level, which also reassures the lender that Priya shares the risk. If Priya later needs short-term finance for day-to-day supplies, she should add **trade credit** or a small **overdraft** rather than extending the long-term loan.

Chapter 4 Sources of finance — 4B The Debt Ratio, risk and return

Theory

When a business acquires assets, it must find the money to pay for them, and that money comes from only two places: the **owner** (owner's equity — the capital the owner has contributed, plus any profit retained in the business) and **outside parties** (liabilities — loans, Accounts Payable and other amounts the business owes). The **accounting equation** locks these together: every dollar of assets is financed either by the owner or by an external party, so **Assets = Liabilities + Owner's Equity**. The mix a business chooses between these two sources — how much it relies on borrowing rather than the owner's own funds — is called its **gearing**, and it has a direct effect on both the **risk** the business carries and the **return** the owner can earn.

The Debt Ratio. The **Debt Ratio** measures the proportion of a business's assets that is financed by **external sources** (its liabilities) rather than by the owner. It is calculated from the two totals reported in the Balance Sheet — **Total Liabilities** and **Total Assets** — and expressed as a percentage:

$$\text{Debt Ratio} = (\text{total liabilities} \div \text{total assets}) \times 100$$

A Debt Ratio of 40% means that 40 cents in every dollar of assets has been financed by outside parties, and — because the owner funds whatever the liabilities do not — the remaining **60% has been financed by the owner**. The proportion financed by the owner is therefore simply **100% – Debt Ratio**; the two always add to 100%, because between them the owner and the external parties finance every asset the business holds.

Gearing: what the Debt Ratio tells a user. The Debt Ratio is the accounting measure of **gearing** — the extent to which a business relies on **external finance** (debt) to fund its assets:

- A **high** Debt Ratio means the business is **highly geared**: it relies heavily on borrowed funds, so a large share of its assets is financed by liabilities that must eventually be repaid, and on which interest is usually payable.
- A **low** Debt Ratio means the business is **lowly geared**: the owner has financed most of the assets, so the business owes relatively little to outside parties.

There is no single “correct” Debt Ratio — an acceptable level depends on the industry, the stability of the business's earnings and the purpose of the borrowing — so the ratio is most useful when it is **interpreted**: read against a **benchmark** (an industry average or a target the owner has set), tracked as a **trend** over several years, or **compared** with a similar business. What a user is looking for is the *direction* and *degree* of reliance on external finance, and what that reliance means for risk and return.

The Debt Ratio and risk. A higher Debt Ratio raises the business's **risk** for several linked reasons:

- **Interest is a fixed commitment.** Borrowed funds usually carry interest, which must be paid *whether or not the business is profitable*. The more a business borrows, the larger this fixed commitment, and the harder it is to meet in a poor trading period.
- **The debt must be repaid.** Liabilities are claims against the business that fall due; a highly geared business must find the cash to repay a larger amount of principal, sometimes at short notice.
- **Less capacity to borrow more.** A business that is already highly geared has less room to raise further finance, because lenders see it as riskier and may refuse a further loan or charge a higher interest rate (a point that matters directly when the business applies for finance).

A **lowly** geared business carries less of this risk: its fixed interest commitments are smaller, it owes less, and it retains the capacity to borrow if an opportunity or an emergency arises. This safety comes at a cost, however — as the next point explains, a business that borrows *too little* may forgo return.

The Debt Ratio and return: the risk–return trade-off. Gearing does not only add risk; used well, it can **raise the return the owner earns on the money they have invested**. The measure of that return is the **return on owner's investment** — the business's **net profit** expressed as a percentage of the **capital the owner has invested**:

$$\text{return on owner's investment} = (\text{net profit} \div \text{average capital}) \times 100$$

This is the same idea as the return on investment met in Chapter 3, applied to the owner's own stake. In every comparison in this section the owner's capital stays at the figure shown for the whole period, so the **average capital** is

simply that owner's equity figure; where the capital does change during the period it must be averaged — (opening capital + closing capital) ÷ 2 — as Chapter 18 sets out.

The reason gearing can lift this return is that a business can put **borrowed** funds to work in its assets. If those assets earn a **return greater than the interest rate** charged on the borrowing, the **surplus** over the interest cost belongs to the owner — even though the owner did not provide that money. Because the owner's own equity is a **smaller** base when more of the assets are debt-financed, that surplus is spread over a smaller investment, so the **percentage** return on the owner's investment **rises** as gearing rises. This is the reward side of the trade-off: **higher gearing raises the potential return to the owner**.

The catch is that the *same* mechanism works in reverse. If the assets earn a return **below** the interest rate — say in a downturn — the business still has to pay the full interest bill, and the shortfall falls on the owner's smaller equity base, so a highly geared business's return **collapses**, and can turn into a **loss**, far faster than a lowly geared one's. Gearing therefore **magnifies** the owner's return in both directions: it amplifies gains when trading is good and amplifies losses when trading is poor. That amplification *is* the risk. This is why the Debt Ratio sits at the centre of the **risk–return trade-off: a higher Debt Ratio offers the owner a higher potential return, but only by accepting higher risk**.

Calculating the Debt Ratio from a Balance Sheet. Because the Balance Sheet already reports **Total Liabilities** and **Total Assets** as sub-totals, the Debt Ratio can be read straight off the report. Consider *Marlow Mobile Mechanics*:

Balance Sheet of Marlow Mobile Mechanics as at 30 June 2025

	\$	\$
Current Assets		
Bank	4 000	
Accounts Receivable	6 000	10 000
Non-Current Assets		
Equipment	30 000	
Motor vehicle	40 000	70 000
Total Assets		80 000
Current Liabilities		
Accounts Payable		6 000
Non-Current Liabilities		
Loan – Trilby Bank		26 000
Total Liabilities		32 000
Owner's Equity		
Capital		48 000
Total Liabilities and Owner's Equity		80 000

Taking the two totals straight from the report, the Debt Ratio is $\$32\,000 \div \$80\,000 \times 100 = 40\%$. External parties finance 40% of the assets and the owner finances the other **60%**. At 40% the business is **lowly to moderately geared** — the owner has provided most of the finance, so the business carries a relatively modest interest commitment and retains the capacity to borrow further if it needs to.

Because the Debt Ratio is a **share of the assets**, it is best pictured as a division of one bar. The three financing options compared below each control the same \$200 000 of assets, so all three bars are the same length; only the split moves:

The Debt Ratio is a share of the assets

Three businesses with identical assets and three financing mixes

financed by **LIABILITIES**

financed by the **OWNER**

Low gearing (A)

\$40 000

\$160 000

Debt Ratio 20%

Moderate (B)

\$100 000

\$100 000

Debt Ratio 50%

High gearing (C)

\$150 000

\$50 000

Debt Ratio 75%

all three bars are the same length because all three businesses control the same \$200 000 of assets — only the split differs, and the owner's share is always 100% — the Debt Ratio

The Debt Ratio is a share of the assets — three businesses with identical assets and three financing mixes

Reading each bar left to right gives the Debt Ratio directly, and what remains is always the owner's share — which is why the proportion financed by the owner is simply **100% – Debt Ratio**.

Gearing, risk and return — a worked model. To see *why* a higher Debt Ratio raises both return and risk, compare three businesses that are **identical in every way except how they are financed**. Each controls **\$200 000 of assets**, and in a normal year those assets generate an **operating profit before interest of \$20 000** — a return of **10%** on the \$200 000 of assets before any interest is paid. Each has borrowed at an interest rate of **8%**. They differ only in their Debt Ratio:

Financing option	Debt Ratio	Liabilities \$	Owner's equity \$	Interest expense \$	Net profit \$	Return on owner's investment
Low gearing (A)	20%	40 000	160 000	3 200	16 800	10.5%
Moderate (B)	50%	100 000	100 000	8 000	12 000	12.0%
High gearing (C)	75%	150 000	50 000	12 000	8 000	16.0%

Every business earns the same \$20 000 operating profit on its assets; the only difference is the interest it pays and the size of the owner's stake. Because the assets earn **10%** but the debt costs only **8%**, each borrowed dollar earns a **2% surplus** that flows to the owner — so the **more** the business borrows, the **higher** the return on the owner's (shrinking) investment: it climbs from **10.5%** at a 20% Debt Ratio to **16.0%** at a 75% Debt Ratio. That is the reward for gearing up.

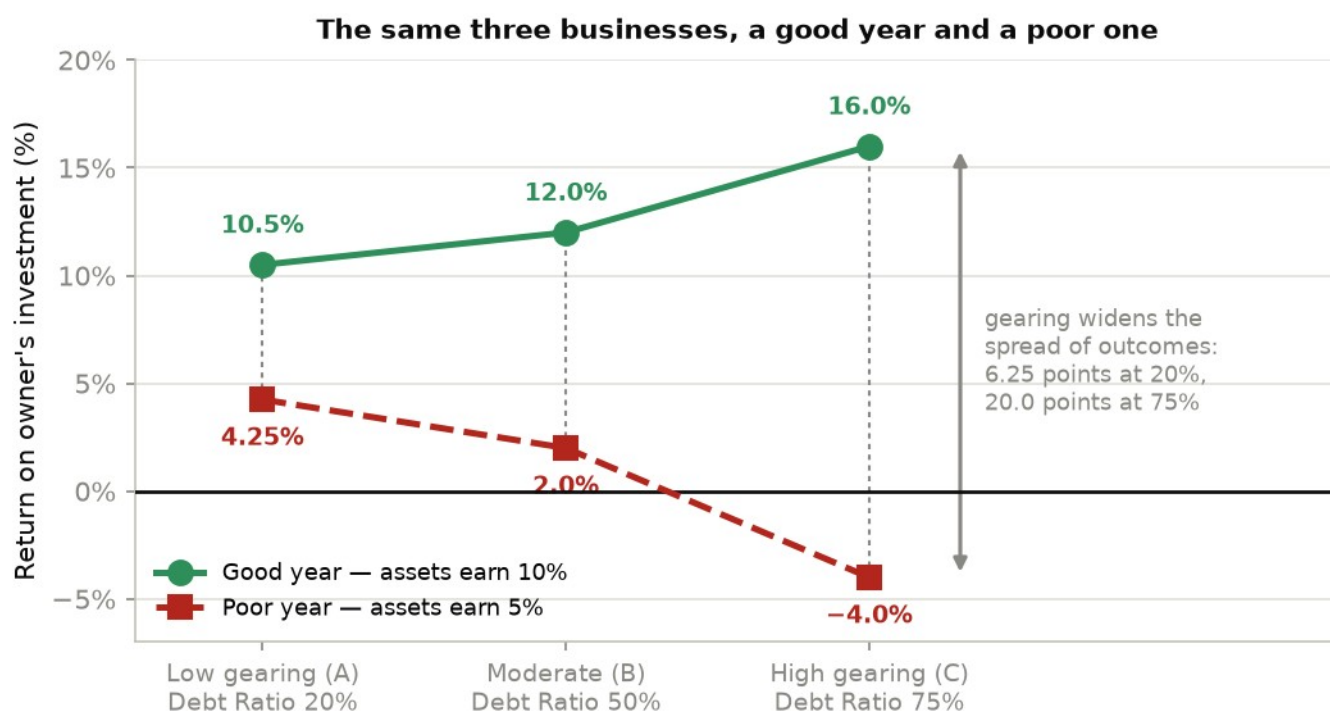
Now suppose trading weakens and the assets earn only **5%** — an operating profit before interest of **\$10 000** — while the interest bill (a fixed commitment) is unchanged:

Financing option	Debt Ratio	Interest expense \$	Net profit / (loss) \$	Return on owner's investment
Low gearing (A)	20%	3 200	6 800	4.25%
Moderate (B)	50%	8 000	2 000	2.0%
High gearing (C)	75%	12 000	(2 000)	(4.0%)

Now the assets earn **5%** but the debt still costs **8%**, so every borrowed dollar *loses* 3% — and the more the business has borrowed, the worse the owner fares. The low-gear business still returns **4.25%**, but the high-gear business's \$12 000 interest bill **exceeds** its \$10 000 operating profit, tipping it into a **loss** and a **negative** return of (4.0%). The high Debt Ratio that produced the best return in the good year produces the worst outcome in the bad year. This is the risk–return trade-off in a single picture: **gearing amplifies the owner's return in both directions, so the higher the Debt Ratio, the higher both the potential return and the risk.**

Plotting the two years together makes the amplification visible as a single shape:

The risk-return trade-off



The risk–return trade-off — the same three businesses, a good year and a poor one

The two lines **fan apart** as gearing rises. At a 20% Debt Ratio the good year and the poor year are only 6.25 percentage points apart (10.5% against 4.25%); at 75% they are 20.0 points apart (16.0% against -4.0%). The gap between the lines *is* the risk, and it widens for exactly the same reason the good-year line rises — a smaller owner's stake magnifies whatever the assets earn, in both directions. Note also where the poor-year line crosses **zero**: only the highly geared business turns a \$10 000 operating profit into a **loss**, because its \$12 000 interest bill is a fixed commitment that must be met whether or not the business trades well.

Ethical considerations. The Debt Ratio is one of the first figures a **lender** examines when a business applies for finance, and it is also watched by the owner, by suppliers who extend credit and by anyone deciding whether to deal with the business. That makes the **integrity of the Balance Sheet figures behind it** an ethical matter. Under **faithful representation**, the Total Liabilities and Total Assets used to calculate the ratio must be **complete, free from material error and neutral (without bias)**: it is dishonest to **omit a liability** (leaving a loan or a large amount owing to a supplier off the Balance Sheet) or to **overstate assets** simply to report a lower, healthier-looking Debt Ratio to a lender. The **entity assumption** matters too — including the owner's **personal** assets in the business's Balance Sheet to inflate Total Assets and depress the ratio misrepresents the business as less geared than it really is. Manipulating the ratio may win a loan the business could not honestly justify, but the underlying gearing is unchanged: the business still owes what it owes and must still service that debt, so a decision built on a distorted ratio exposes the lender to a risk it did not agree to bear and can push the business into debt it cannot repay. Honest, verifiable Balance Sheet figures are the foundation of a Debt Ratio that is genuinely useful for a financing decision.

Worked examples (scaffolded)

Example 1 — calculating and interpreting the Debt Ratio from a Balance Sheet

Coastline Couriers is a delivery service. Its classified Balance Sheet is shown below. The owner wants to know how reliant the business is on external finance.

Balance Sheet of Coastline Couriers as at 30 June 2025

	\$	\$
Current Assets		
Bank	3 500	
Accounts Receivable	8 500	12 000
Non-Current Assets		
Equipment	18 000	
Motor vehicle	45 000	63 000
Total Assets		75 000
Current Liabilities		
Accounts Payable		6 000
Non-Current Liabilities		
Loan – Harbour Bank		39 000
Total Liabilities		45 000
Owner's Equity		
Capital		30 000
Total Liabilities and Owner's Equity		75 000

Working	Comment
Total Liabilities = \$6 000 + \$39 000 = \$45 000 ; Total Assets = \$12 000 + \$63 000 = \$75 000 .	Both totals are already reported on the Balance Sheet — read them straight off the report.
Debt Ratio = $\$45\,000 \div \$75\,000 \times 100 = 60\%$.	Total liabilities ÷ total assets × 100. Sixty cents of every asset dollar is financed externally.
Proportion financed by the owner = $100\% - 60\% = 40\%$.	The owner funds whatever the liabilities do not; the two proportions add to 100%.
At 60% the business is highly geared — external parties finance the majority of its assets.	A high Debt Ratio signals heavy reliance on debt and therefore higher risk.

∴ *Coastline Couriers* finances 60% of its assets from external sources and only 40% from the owner. It is highly geared, so it carries a relatively large interest commitment and higher risk, and would have limited capacity to take on further debt.

Example 2 — interpreting a change in the Debt Ratio over time

Redgum Removals reported **Total Liabilities of \$24 000 and Total Assets of \$80 000** at 30 June 2024. During the following year the owner borrowed to buy a second truck, and at 30 June 2025 the business reported **Total Liabilities of \$52 000 and Total Assets of \$104 000**.

Working	Comment
2024 Debt Ratio = $\$24\,000 \div \$80\,000 \times 100 = 30\%$.	The starting point: 30% of assets financed externally, 70% by the owner.
2025 Debt Ratio = $\$52\,000 \div \$104\,000 \times 100 = 50\%$.	After the borrowing, half the assets are financed externally.
The Debt Ratio has risen by 20 percentage points (30% → 50%).	State both the direction (up) and the size of the change when interpreting a trend.

Working	Comment
The business is now more highly geared and relies more heavily on external finance.	A rising Debt Ratio means increasing reliance on debt.

∴ the increase from 30% to 50% shows *Redgum Removals* has taken on significantly more debt to expand. This raises its **risk** — a larger fixed interest commitment and more principal to repay — but it also raises the **potential return to the owner**: if the new truck earns a return above the interest rate on the loan, the surplus lifts the return on the owner's investment. Whether the higher gearing is worthwhile depends on whether the expanded business can earn more on its assets than the borrowing costs.

Worked examples (unscaffolded)

Example 3 — comparing the gearing of two businesses

Two cafés of a similar size are compared. *Bluestone Café* reports **Total Liabilities of \$21 000 and Total Assets of \$70 000**; *Brickworks Café* reports **Total Liabilities of \$66 000 and Total Assets of \$120 000**. Calculate each Debt Ratio and state which café relies more on external finance and which carries greater risk.

Bluestone Café: Debt Ratio = $\$21\,000 \div \$70\,000 \times 100 = 30\%$ — the owner finances 70% of the assets. *Brickworks Café*: Debt Ratio = $\$66\,000 \div \$120\,000 \times 100 = 55\%$ — external parties finance more than half of the assets.

Brickworks is therefore the **more highly geared** café: it relies more on external finance (55% against 30%) and carries **greater risk**, because it has a larger fixed interest commitment and more debt to repay, and less capacity to borrow further.

∴ *Brickworks Café* is the higher-risk business. That does not automatically make it the worse investment: if both cafés earn a return on their assets above the interest rate on their borrowings, *Brickworks*' higher gearing would deliver its owner a **higher return on their investment** — the reward it accepts in exchange for the higher risk.

Example 4 — the leverage effect: how gearing changes the return to the owner

Vantage Print controls **\$150 000 of assets**, which in a good year earn an **operating profit before interest of \$18 000** (a **12%** return on its assets before interest). The business can borrow at an interest rate of **9%**. Compare a **low-gearing** plan (Debt Ratio 20%) with a **high-gearing** plan (Debt Ratio 60%), first in the good year and then in a downturn in which the assets earn only 4% (an operating profit before interest of \$6 000).

Under low gearing the liabilities are $20\% \times \$150\,000 = \$30\,000$ and the owner's equity is \$120 000; under high gearing the liabilities are $60\% \times \$150\,000 = \$90\,000$ and the owner's equity is only \$60 000. Interest is 9% of the liabilities, and the return on owner's investment is $\text{net profit} \div \text{average capital} \times 100$ — the owner's capital is unchanged through the year, so the average capital is the owner's equity shown.

Good year (assets earn 12%)	Low gearing DR 20%	High gearing DR 60%
Operating profit before interest \$	18 000	18 000
Interest expense (9%) \$	2 700	8 100
Net profit \$	15 300	9 900
Owner's equity \$	120 000	60 000
Return on owner's investment	12.75%	16.5%

In the good year the assets earn 12% but the debt costs only 9%, so the 3% surplus on each borrowed dollar flows to the owner. The high-gearing plan therefore delivers the **higher** return — **16.5%** against 12.75% — even though its dollar net profit is lower, because that profit is earned on a much smaller equity base.

Downturn (assets earn 4%)	Low gearing DR 20%	High gearing DR 60%
Operating profit before interest \$	6 000	6 000
Interest expense (9%) \$	2 700	8 100
Net profit / (loss) \$	3 300	(2 100)

Downturn (assets earn 4%)	Low gearing DR 20%	High gearing DR 60%
Owner's equity \$	120 000	60 000
Return on owner's investment	2.75%	(3.5%)

In the downturn the assets earn only 4% while the debt still costs 9%, so every borrowed dollar now loses money. The high-gearing plan's \$8 100 interest bill exceeds its \$6 000 operating profit, producing a **loss** and a **negative** return of (3.5%), while the low-gearing plan still returns 2.75%.

∴ the higher Debt Ratio delivers the better return when the assets out-earn the interest rate (16.5% vs 12.75%) and the worse outcome when they do not (a loss of 3.5% vs a positive 2.75%). Higher gearing raises **both** the potential return to the owner **and** the risk — exactly the trade-off the Debt Ratio measures.

Practice questions — scaffolded

Question 1

Larkspur Landscaping reports the following classified Balance Sheet.

Balance Sheet of Larkspur Landscaping as at 30 June 2025

	\$	\$
Current Assets		
Bank	2 000	
Accounts Receivable	4 000	6 000
Non-Current Assets		
Equipment	14 000	
Motor vehicle	20 000	34 000
Total Assets		40 000
Current Liabilities		
Accounts Payable		4 000
Non-Current Liabilities		
Loan – Delmont Bank		12 000
Total Liabilities		16 000
Owner's Equity		
Capital		24 000
Total Liabilities and Owner's Equity		40 000

- State the Total Liabilities and the Total Assets from the report.
- Calculate the Debt Ratio.
- State the proportion of the assets financed by the owner.

Question 2

Fernbrook Physiotherapy reports Total Liabilities of \$63 000 and Total Assets of \$90 000.

- Calculate the Debt Ratio.
- State the proportion of the assets financed by external parties and the proportion financed by the owner.
- State whether the business is highly or lowly geared and give one reason.

Question 3

Ironbark Electrical reported Total Liabilities of \$15 000 and Total Assets of \$60 000 at 30 June 2024. One year later it reported Total Liabilities of \$28 000 and Total Assets of \$70 000.

- Calculate the Debt Ratio in each year.
- State the direction and size of the change in the Debt Ratio.
- Explain what the change indicates about the business's reliance on external finance and its risk.

Question 4

Two florists are compared. *Petal & Stem* reports Total Liabilities of \$20 000 and Total Assets of \$80 000; *Bloomfield* reports Total Liabilities of \$60 000 and Total Assets of \$100 000.

- Calculate the Debt Ratio of each business.
- State which business is more highly geared and relies more on external finance.
- State which business faces the greater risk and give one reason.

Question 5

Cascade Cabinets controls \$100 000 of assets, which earn an operating profit before interest of \$12 000 (a 12% return on assets before interest). The business can borrow at an interest rate of 8%. The owner is choosing between **Option 1** (Debt Ratio 20%) and **Option 2** (Debt Ratio 60%).

- For each option, calculate the liabilities, the interest expense and the net profit.
- For each option, calculate the return on owner's investment (net profit ÷ average capital × 100; the owner's capital is unchanged over the year, so use the owner's equity figure).
- State which option gives the owner the higher return, and explain, with reference to risk, why it is not automatically the better choice.

Question 6

Sandpiper Signs reports the following classified Balance Sheet.

Balance Sheet of Sandpiper Signs as at 30 June 2025

	\$	\$
Current Assets		
Bank	5 000	
Accounts Receivable	3 000	8 000
Non-Current Assets		
Equipment	22 000	
Motor vehicle	50 000	72 000
Total Assets		80 000
Current Liabilities		
Accounts Payable	7 000	
GST Clearing	3 000	10 000
Non-Current Liabilities		
Loan – Crestford Bank		42 000
Total Liabilities		52 000
Owner's Equity		
Capital		28 000
Total Liabilities and Owner's Equity		80 000

- Calculate the Debt Ratio.
- State the proportion of the assets financed by the owner.
- The business intends to apply for a further loan to expand. Explain how this Debt Ratio might affect the lender's decision.

Practice questions — unscaffolded

Question 7

Meridian Mobile Vet reports the following classified Balance Sheet. Calculate the Debt Ratio and state the proportion of the assets financed by the owner.

Balance Sheet of Meridian Mobile Vet as at 30 June 2025

	\$	\$
Current Assets		
Bank	4 000	
Accounts Receivable	6 000	10 000
Non-Current Assets		
Equipment	26 000	
Motor vehicle	44 000	70 000
Total Assets		80 000
Current Liabilities		
Accounts Payable		8 000
Non-Current Liabilities		
Loan – Ashfield Bank		20 000
Total Liabilities		28 000
Owner's Equity		
Capital		52 000
Total Liabilities and Owner's Equity		80 000

Question 8

Wattle Web Design reports Total Liabilities of \$34 000 and Total Assets of \$85 000. Calculate the Debt Ratio and explain what it tells a user about the business's reliance on external finance.

Question 9

Coral Coast Kayaking reported Total Liabilities of \$40 000 and Total Assets of \$100 000 at 30 June 2024, and Total Liabilities of \$39 000 and Total Assets of \$130 000 at 30 June 2025. Calculate the Debt Ratio in each year, state the change, and explain what the change indicates about the business's gearing and risk.

Question 10

Two gyms are compared. *Flexfit* reports Total Liabilities of \$84 000 and Total Assets of \$120 000; *Corefit* reports Total Liabilities of \$30 000 and Total Assets of \$75 000. Calculate each Debt Ratio, state which business is more highly geared, and state which faces the greater risk, with one reason.

Question 11

Brightpath Tutoring controls \$250 000 of assets, which earn an operating profit before interest of \$25 000 (a 10% return on assets before interest). The business can borrow at an interest rate of 7%. For **Option A** (Debt Ratio 20%) and **Option B** (Debt Ratio 60%), calculate the interest expense, the net profit and the return on owner's investment, then state which option gives the higher return and explain why.

Question 12

Kingfisher Joinery controls \$200 000 of assets and borrows at an interest rate of 9%. In a **good year** the assets earn an operating profit before interest of \$24 000 (a 12% return on assets before interest); in a **poor year** they earn only \$12 000 (a 6% return on assets before interest). Compare a **low-gearing** plan (Debt Ratio 25%) with a **high-gearing** plan (Debt Ratio 70%): calculate the return on owner's investment under each plan in each year, and explain how the results illustrate the relationship between the Debt Ratio, risk and return.

Question 13

Sable Studios has a Debt Ratio of 45% and Total Assets of \$120 000. Calculate its Total Liabilities and its Owner's Equity.

Question 14

Harlow Haulage has a Debt Ratio of 60% and Total Liabilities of \$72 000. Calculate its Total Assets and its Owner's Equity.

Question 15

Over three years *Tamarind Trading*'s Debt Ratio fell from 55% to 45% to 30%. Explain what this trend shows about the business's gearing and risk, and **discuss** one reason why a continually falling Debt Ratio is not automatically a sign of good management.

Question 16

Explain what the **Debt Ratio** measures, and explain why increasing a business's gearing raises **both** the potential return to the owner **and** the risk it faces.

Question 17

Alto Removals and *Basso Removals* each control \$300 000 of assets. *Alto* has a Debt Ratio of 20% and *Basso* a Debt Ratio of 65%. **Justify**, with reference to the risk–return trade-off, which owner would earn the higher return on their investment if the assets earn a return well above the interest rate, and which business would be worse off if trading conditions deteriorated sharply.

Question 18

Delta Freight is applying to *Crestford Bank* for a large loan to expand. Its true Debt Ratio is high, and the owner is worried the bank will see the business as too risky. To make the ratio look lower, the owner is considering two things: **omitting a \$30 000 amount owing to a supplier** from the Balance Sheet, and **including the owner's private holiday house** among the business's assets so that Total Assets appear larger. **Discuss** this proposal with reference to a relevant qualitative characteristic (and any relevant accounting assumption), and explain **one** consequence for the bank and **one** consequence for the business itself.

Answers

1.
 - a. Total Liabilities \$16 000; Total Assets \$40 000 b. 40% c. 60% financed by the owner
2.
 - a. 70% b. 70% external, 30% owner c. highly geared — external parties finance the majority (70%) of the assets
3.
 - a. 2024 25%; 2025 40% b. rose by 15 percentage points c. see solutions
4.
 - a. Petal & Stem 25%; Bloomfield 60% b. Bloomfield c. Bloomfield — see solutions
5.
 - a. Opt 1: liabilities \$20 000, interest \$1 600, net profit \$10 400; Opt 2: liabilities \$60 000, interest \$4 800, net profit \$7 200 b. Opt 1 13.0%; Opt 2 18.0% c. Option 2 (higher return, higher risk) — see solutions
6.
 - a. 65% b. 35% c. see solutions
7. Debt Ratio 35%; owner finances 65%
8. Debt Ratio 40%; owner finances 60% — see solutions
9. 2024 40%; 2025 30%; fell by 10 percentage points — see solutions
10. Flexfit 70%; Corefit 40%; Flexfit is more highly geared and higher risk
11. Opt A: interest \$3 500, net profit \$21 500, return 10.75%; Opt B: interest \$10 500, net profit \$14 500, return 14.5%; Option B gives the higher return
12. Good year: low 13.0%, high 19.0%; poor year: low 5.0%, high (1.0%) — see solutions
13. Total Liabilities \$54 000; Owner's Equity \$66 000
14. Total Assets \$120 000; Owner's Equity \$48 000
15. See solutions
16. See solutions
17. See solutions
18. See solutions

Fully-worked solutions

Question 1

- a. **Total Liabilities** = \$4 000 + \$12 000 = **\$16 000**; **Total Assets** = \$6 000 + \$34 000 = **\$40 000** (both read straight from the report).
- b. Debt Ratio = $\$16\,000 \div \$40\,000 \times 100 = \mathbf{40\%}$.
- c. Proportion financed by the owner = $100\% - 40\% = \mathbf{60\%}$.

Question 2

- a. Debt Ratio = $\$63\,000 \div \$90\,000 \times 100 = \mathbf{70\%}$.
- b. External parties finance **70%** of the assets; the owner finances $100\% - 70\% = \mathbf{30\%}$.
- c. The business is **highly geared**: at 70% the majority of its assets are financed by liabilities, so it relies heavily on external finance and carries a large fixed interest commitment and a large amount of debt to repay.

Question 3

- a. 2024 Debt Ratio = $\$15\,000 \div \$60\,000 \times 100 = \mathbf{25\%}$; 2025 Debt Ratio = $\$28\,000 \div \$70\,000 \times 100 = \mathbf{40\%}$.
- b. The Debt Ratio has **risen by 15 percentage points** (25% → 40%).
- c. The increase shows the business now relies **more heavily on external finance** — it has become more highly geared, with liabilities financing two-fifths of its assets rather than a quarter. This raises its **risk**: a larger fixed

interest commitment that must be met regardless of profit, more principal to repay, and less capacity to borrow further. (If the assets bought with the new debt earn more than the interest rate, the higher gearing would also raise the potential return to the owner — the risk is accepted in exchange for that potential reward.)

Question 4

- a. *Petal & Stem*: $\$20\,000 \div \$80\,000 \times 100 = 25\%$; *Bloomfield*: $\$60\,000 \div \$100\,000 \times 100 = 60\%$.
- b. **Bloomfield** is more highly geared — it finances 60% of its assets externally, against *Petal & Stem*'s 25%.
- c. **Bloomfield** faces the greater risk: with a higher Debt Ratio it has a larger fixed interest commitment that must be paid whether or not it is profitable, more debt to repay, and less capacity to raise further finance if it needs to.

Question 5

- a. **Option 1 (DR 20%)**: liabilities = $20\% \times \$100\,000 = \$20\,000$; owner's equity = $\$80\,000$; interest = $8\% \times \$20\,000 = \$1\,600$; net profit = $\$12\,000 - \$1\,600 = \$10\,400$. **Option 2 (DR 60%)**: liabilities = $60\% \times \$100\,000 = \$60\,000$; owner's equity = $\$40\,000$; interest = $8\% \times \$60\,000 = \$4\,800$; net profit = $\$12\,000 - \$4\,800 = \$7\,200$.
- b. **Option 1**: $\$10\,400 \div \$80\,000 \times 100 = 13.0\%$. **Option 2**: $\$7\,200 \div \$40\,000 \times 100 = 18.0\%$.
- c. **Option 2** gives the owner the higher return (18.0% against 13.0%), because the assets earn 12% while the debt costs only 8%, and the 4% surplus on the larger borrowing is spread over a smaller equity base. It is not automatically the better choice: the higher Debt Ratio also means higher **risk** — a larger fixed interest commitment (\$4 800 rather than \$1 600) that must be paid even in a poor year, more debt to repay, and a return that would fall faster (and could become a loss) if the assets stopped out-earning the interest rate.

Question 6

- a. Debt Ratio = $\$52\,000 \div \$80\,000 \times 100 = 65\%$.
- b. Proportion financed by the owner = $100\% - 65\% = 35\%$.
- c. At 65% the business is already **highly geared**, so a lender would see it as **relatively high risk**. The business already carries a large fixed interest commitment and a substantial amount of debt to repay, and finances only 35% of its assets from the owner. The lender may be **reluctant to advance further finance**, may require **security** over an asset, or may charge a **higher interest rate** to compensate for the added risk — and further borrowing would push the Debt Ratio higher still.

Question 7

Total Liabilities = $\$8\,000 + \$20\,000 = \$28\,000$; Total Assets = $\$10\,000 + \$70\,000 = \$80\,000$. Debt Ratio = $\$28\,000 \div \$80\,000 \times 100 = 35\%$; the owner finances $100\% - 35\% = 65\%$ of the assets. At 35% the business is **lowly to moderately geared**, relying more on the owner than on external finance.

Question 8

Debt Ratio = $\$34\,000 \div \$85\,000 \times 100 = 40\%$. External parties finance 40% of the assets and the owner finances the other 60%. At 40% the business is **relatively lowly geared**: it relies more on the owner's funds than on borrowing, so it carries a modest interest commitment, has less debt to repay, and retains the capacity to borrow further if an opportunity arises — a comparatively **low-risk** financing position.

Question 9

2024 Debt Ratio = $\$40\,000 \div \$100\,000 \times 100 = 40\%$; 2025 Debt Ratio = $\$39\,000 \div \$130\,000 \times 100 = 30\%$. The Debt Ratio has **fallen by 10 percentage points** (40% → 30%). With liabilities almost unchanged (\$40 000 → \$39 000) but assets substantially higher (\$100 000 → \$130 000), the business has grown its asset base largely from the owner's funds (contributed capital or retained profit) rather than from new borrowing. It is now **less highly geared** and relies **less** on external finance, so its **risk is lower** — a smaller share of its assets is financed by debt and its interest commitment is a smaller part of the business.

Question 10

Flexfit: $\$84\,000 \div \$120\,000 \times 100 = 70\%$; *Corefit*: $\$30\,000 \div \$75\,000 \times 100 = 40\%$. **Flexfit** is the more highly geared business, financing 70% of its assets externally against *Corefit*'s 40%. **Flexfit** therefore faces the **greater risk**: it has a larger fixed interest commitment that must be met whether or not it is profitable, more debt to repay, and less capacity to raise further finance.

Question 11

Option A (DR 20%): liabilities = $20\% \times \$250\,000 = \$50\,000$; owner's equity = $\$200\,000$; interest = $7\% \times \$50\,000 = \$3\,500$; net profit = $\$25\,000 - \$3\,500 = \$21\,500$; return on owner's investment = $\$21\,500 \div \$200\,000 \times 100 = 10.75\%$.

Option B (DR 60%): liabilities = $60\% \times \$250\,000 = \$150\,000$; owner's equity = $\$100\,000$; interest = $7\% \times \$150\,000 = \$10\,500$; net profit = $\$25\,000 - \$10\,500 = \$14\,500$; return on owner's investment = $\$14\,500 \div \$100\,000 \times 100 = 14.5\%$.

Option B gives the higher return (14.5% against 10.75%). The assets earn 10% but the debt costs only 7%, so each borrowed dollar earns a 3% surplus that belongs to the owner; because Option B borrows more, that surplus is spread over a smaller equity base ($\$100\,000$ rather than $\$200\,000$), lifting the percentage return. The higher return comes with higher gearing and therefore higher risk.

Question 12

Interest is 9% of the liabilities: low gearing (DR 25%) has liabilities of $\$50\,000 \rightarrow$ interest **$\$4\,500$** and owner's equity of $\$150\,000$; high gearing (DR 70%) has liabilities of $\$140\,000 \rightarrow$ interest **$\$12\,600$** and owner's equity of $\$60\,000$.

Good year (operating profit before interest $\$24\,000$): - Low gearing: net profit = $\$24\,000 - \$4\,500 = \$19\,500$; return = $\$19\,500 \div \$150\,000 \times 100 = 13.0\%$. - High gearing: net profit = $\$24\,000 - \$12\,600 = \$11\,400$; return = $\$11\,400 \div \$60\,000 \times 100 = 19.0\%$.

Poor year (operating profit before interest $\$12\,000$): - Low gearing: net profit = $\$12\,000 - \$4\,500 = \$7\,500$; return = $\$7\,500 \div \$150\,000 \times 100 = 5.0\%$. - High gearing: net profit = $\$12\,000 - \$12\,600 = (\$600)$ loss; return = $(\$600) \div \$60\,000 \times 100 = (1.0\%)$.

In the good year the assets earn 12%, comfortably above the 9% interest rate, so the high-gearing plan delivers the far higher return (19.0% against 13.0%). In the poor year the assets earn only 6%, below the 9% interest rate, so the high-gearing plan's $\$12\,600$ interest bill exceeds its $\$12\,000$ operating profit, turning the return **negative** (a loss and a return of (1.0%)), while the low-gearing plan still returns 5.0%. The high Debt Ratio produces both the best result when trading is good and the worst when trading is poor: **gearing magnifies the owner's return in both directions, so a higher Debt Ratio means both a higher potential return and higher risk.**

Question 13

Total Liabilities = Debt Ratio $\times$ Total Assets = $45\% \times \$120\,000 = \$54\,000$. Owner's Equity = Total Assets – Total Liabilities = $\$120\,000 - \$54\,000 = \$66\,000$.

Question 14

Total Assets = Total Liabilities $\div$ Debt Ratio = $\$72\,000 \div 60\% = \$120\,000$. Owner's Equity = Total Assets – Total Liabilities = $\$120\,000 - \$72\,000 = \$48\,000$.

Question 15

The falling Debt Ratio (55% $\rightarrow$ 45% $\rightarrow$ 30%) shows *Tamarind Trading* is steadily **reducing its reliance on external finance** — it is becoming **less highly geared** as the owner finances a larger and larger share of the assets. On the face of it this **lowers the business's risk**: its fixed interest commitment shrinks, it has less debt to repay, and it regains capacity to borrow if it needs to.

However, a continually falling Debt Ratio is **not automatically a sign of good management**. Gearing is a tool for lifting the return on the owner's investment: when a business can earn more on its assets than the interest rate it pays, **borrowing raises the owner's return**. A business that keeps cutting its debt may be **forgoing that return** — passing up profitable expansion it could have financed cheaply, or leaving the owner's own funds tied up in assets that a

lender could have financed. The business may become very safe but **under-perform** what it could achieve. A very low Debt Ratio can also mean the owner has had to pour in more of their own capital, which has its own opportunity cost. Whether the falling trend is “good” therefore depends on **why** it is falling and on whether the business is sacrificing worthwhile returns to achieve it — low risk is only an advantage if it is not bought at too high a price in return.

Question 16

The **Debt Ratio** measures the proportion of a business’s **assets that is financed by external parties** (its liabilities) rather than by the owner; it is calculated as $\text{total liabilities} \div \text{total assets} \times 100$ and read from the Balance Sheet. It is the accounting measure of **gearing** — the degree of reliance on external finance.

Increasing gearing raises the potential **return** to the owner because a business can invest **borrowed** funds in its assets. When those assets earn a return **greater than the interest rate** on the borrowing, the surplus over the interest cost flows to the owner even though the owner did not provide that money; and because the owner’s own equity is a **smaller** base when more assets are debt-financed, the surplus is spread over a smaller investment, so the **percentage return on the owner’s investment rises**.

The **same** mechanism raises **risk**. The interest on borrowings is a **fixed commitment** that must be paid whether or not the business is profitable, and the debt must eventually be repaid. If the assets earn **less** than the interest rate — for example in a downturn — the shortfall falls on the owner’s smaller equity base, so a highly geared business’s return falls faster and can turn into a **loss**. Gearing therefore **magnifies the owner’s return in both directions**: it amplifies gains when trading is good and losses when trading is poor. Because the higher potential return and the higher risk come from the very same use of debt, raising the Debt Ratio **necessarily raises both together** — this is the risk–return trade-off.

Question 17

Both businesses control \$300 000 of assets, so the difference is purely in how those assets are financed: *Alto* borrows to fund 20% of them (Debt Ratio 20%) and *Basso* borrows to fund 65% (Debt Ratio 65%), which means *Basso*’s owner has a much **smaller equity stake** in the same-sized business.

If the assets earn a return well above the interest rate, *Basso* would earn the **higher return on its owner’s investment**. Each borrowed dollar earns a surplus over its interest cost that belongs to the owner, and *Basso* has borrowed far more of the \$300 000, so a larger surplus is spread over a much smaller equity base — magnifying the percentage return to *Basso*’s owner well above *Alto*’s.

If trading conditions deteriorated sharply, *Basso* would be **worse off**. Its far larger fixed interest commitment must be paid regardless of how the assets perform; once the assets earn less than the interest rate, that heavy interest bill eats into and can exceed the operating profit, so *Basso*’s return collapses — and, spread over its small equity base, a given loss is a much larger *percentage* hit than the same conditions inflict on lowly geared *Alto*. This is the risk–return trade-off: *Basso*’s high Debt Ratio buys the higher return in good conditions **only** by accepting the greater exposure to loss in bad ones, so neither business is simply “better” — the right choice depends on how confident the owner is that the assets will keep out-earning the cost of the debt.

Question 18

Both proposals would breach **faithful representation**, which requires the information in the Balance Sheet to be **complete, free from material error and neutral (without bias)**. **Omitting the \$30 000 owed to the supplier** makes the Total Liabilities incomplete, understating what the business owes; **including the owner’s private holiday house** overstates the Total Assets and also breaches the **entity assumption**, which requires the records of the *business* to be kept completely separate from those of its owner, so the owner’s private assets are never reported as assets of the business. Both changes are deliberately designed to push the reported Debt Ratio **below the business’s true gearing**, presenting it to the bank as less reliant on debt, and therefore less risky, than it really is.

Consequence for the bank: relying on the understated Debt Ratio, the bank may **approve a loan it would otherwise decline** (or lend at an interest rate that does not reflect the true risk), misjudging how heavily geared and how risky the business really is, and facing a greater chance the business cannot repay.

Consequence for the business: the manipulation does not change the underlying gearing — the \$30 000 is still owed and the holiday house is still the owner's, not the business's — so the business takes on **debt it may not be able to service**. When the true position emerges it will have **damaged its relationship with the bank** (which may recall the loan or refuse future finance) and risks being unable to meet its commitments to the lender, its suppliers and its employees. Honest, verifiable Balance Sheet figures are essential: a financing decision built on a distorted Debt Ratio harms the very business that distorted it.