PIPSO
Pacific Islands Private Sector Organisation

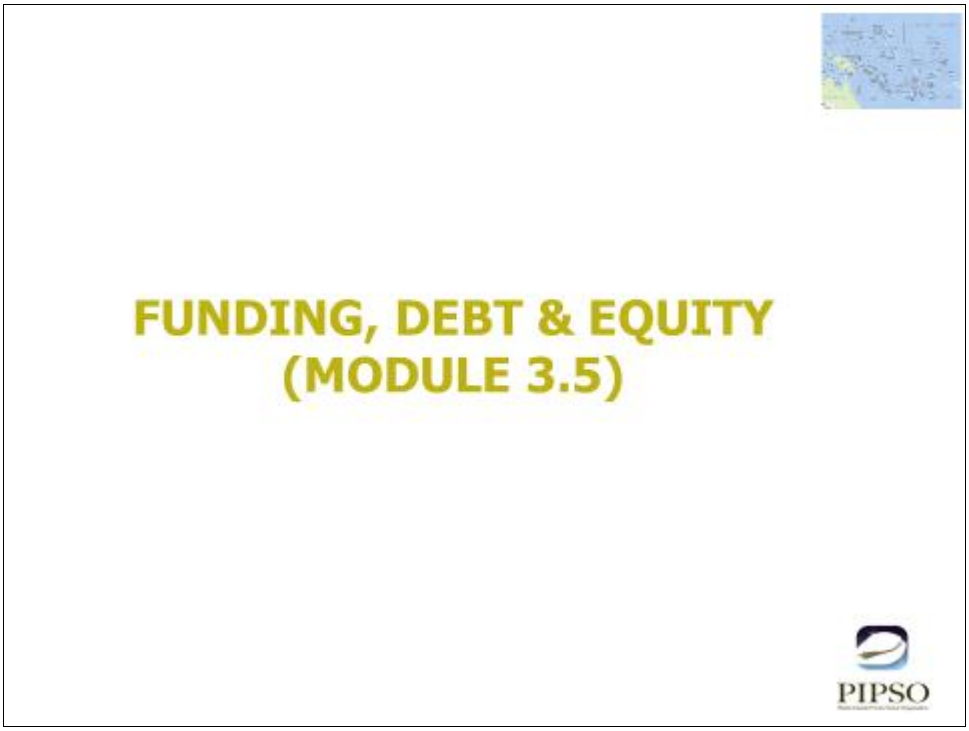
FUNDING, DEBT & EQUITY

January 1

2014

This Module looks at the sources of funds for a business; debt & equity. It looks at the variety & the relative cost of debt & equity to the business. The Module also looks at the impact on business profitability & viability of gearing, the ratio of debt to assets, with surprising results.

MODULE 3.5



Contents

PURPOSE

This Module is designed to do three things as follows:

1. Review alternative debt & equity funding options
2. Calculate & compare the cost of equity & debt funding
3. Compare the advantages & disadvantages of debt as compared to equity

Debt options that are available in major developed countries are not all available in the pacific. While some of the specific options discussed herein may not be availablethe basic range of choices is still reflective of the options available.

Most small business owners are unaware that the cost of debt is often substantially cheaper than equity. While this may surprise many it is true for a successful & profitable business. If it is not, why would a business owner choose to borrow? Surely the logical choice is the cheapest option. In this Module we calculate the cost of equity & debt & do several exercises to practice the calculations.

We consider the consequences of different levels of debt on business profitability.Weconsider the possibility that, for businesses that have the capacity to borrow, some level of debt finance is desirable as it improves overall profitability without raising the level of business risk substantially. We discover the theoretical point where a change in the level of debt has no impact on equity return. Again this is demonstrated via the use of an example.

Finally we review the advantages & disadvantages of each, debt & equity.

On completion of this Module participants may have different views of both the relative cost of debt & equity, the circumstances under which debt is preferable as a part of a business funding package.

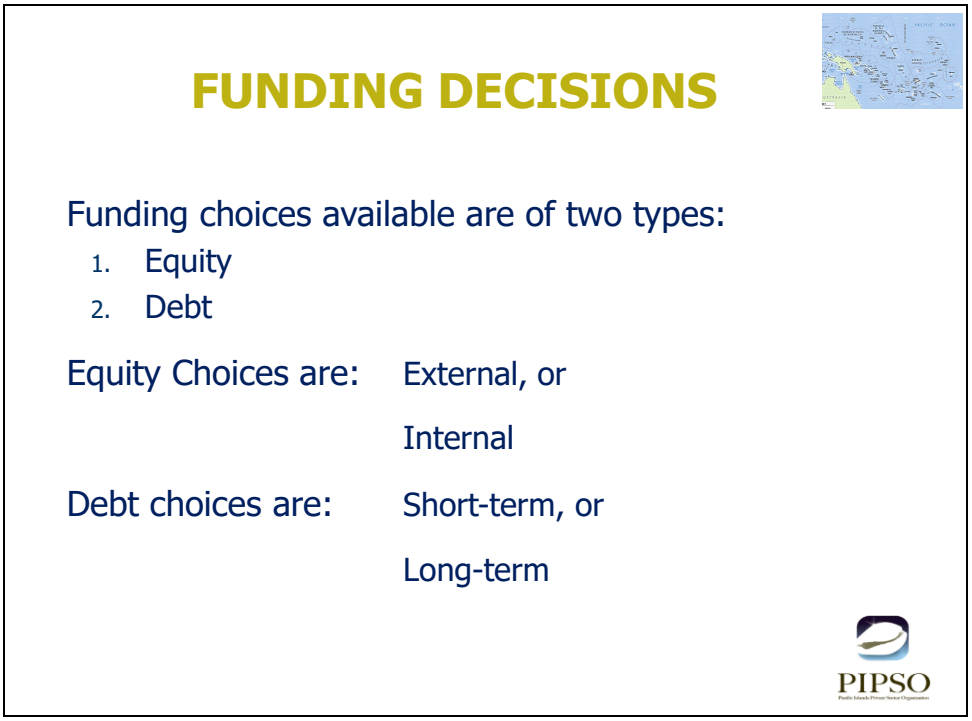
FUNDING DECISIONS – DEBT VERSUS EQUITY

Before beginning this Module answer the following question.

If you were raising new funds to expand your business which would you expect to be cheaper, i.e. cost you less as the current business owner ... debt or equity?

Having made your choice, read on. At the end consider whether your expectation was met. If so why? If not, why not?

The following slides highlight the choices available to a business when considering the funding choices available to it.



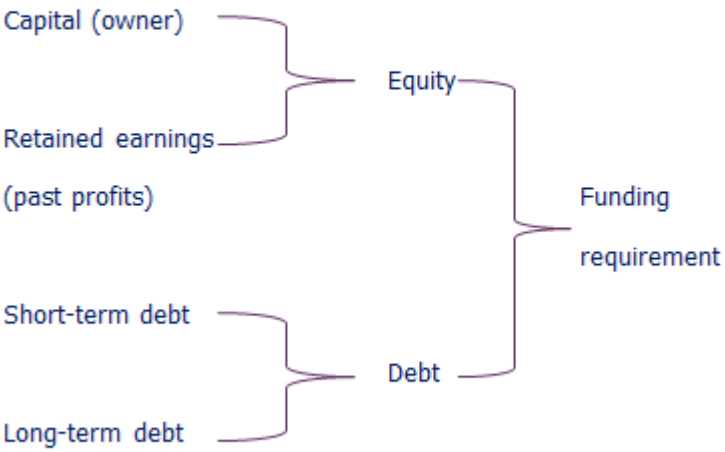
All debt & equity comes from outside the business except profits or earnings retained in the business from prior years.

There are several important distinctions between debt & equity as follows:

1. Debt is repayable at the end of a contracted loan period or periodically over the term of the loan while equity is a long term investment
2. Debt incurs interest at an agreed rate regardless of business performance while equity earns a return based on business profitability & cash flow
3. In the event of a business failure debt is repayable in full before any equity monies are repayable

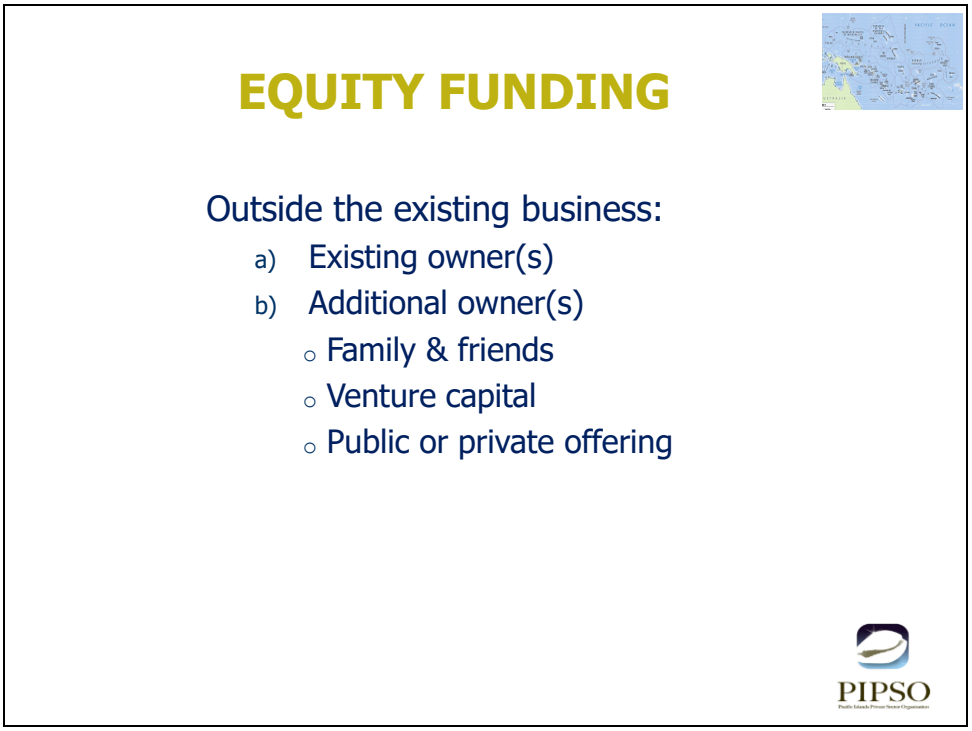
Investors, therefore, take greater risk than lenders

FUNDING DECISIONS



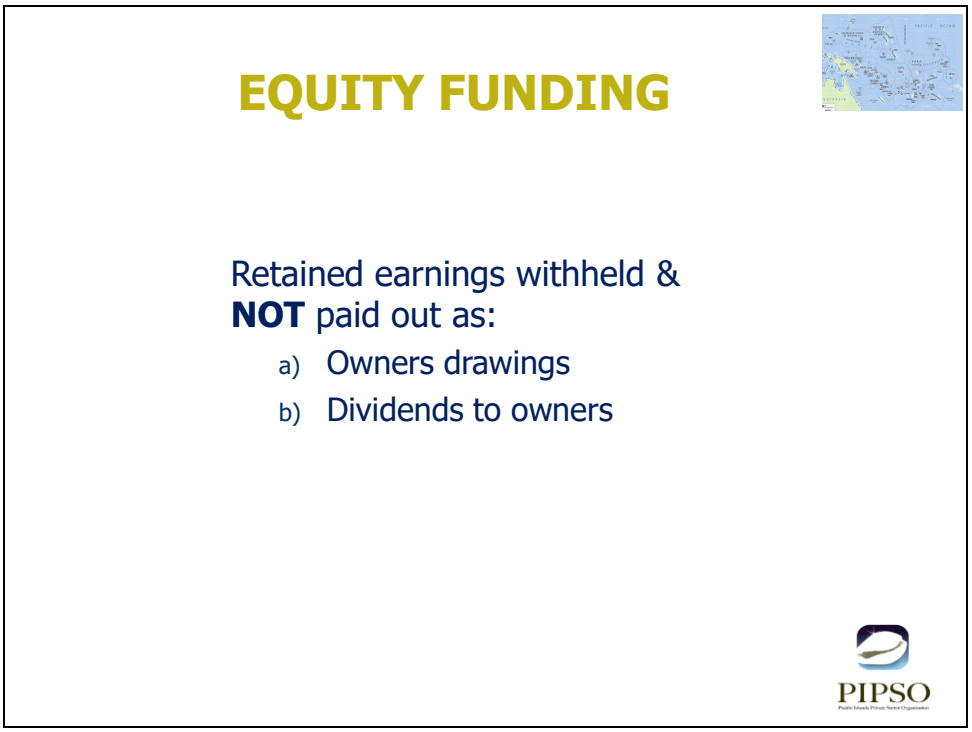
PIPSO

EQUITY FUNDING



For a small business, equity investors may be hard to find outside family & friends. The returns required by sophisticated investors may be in excess of the returns available based on businessperformance.

Venture capital & seed capital are scarce in the Pacific.

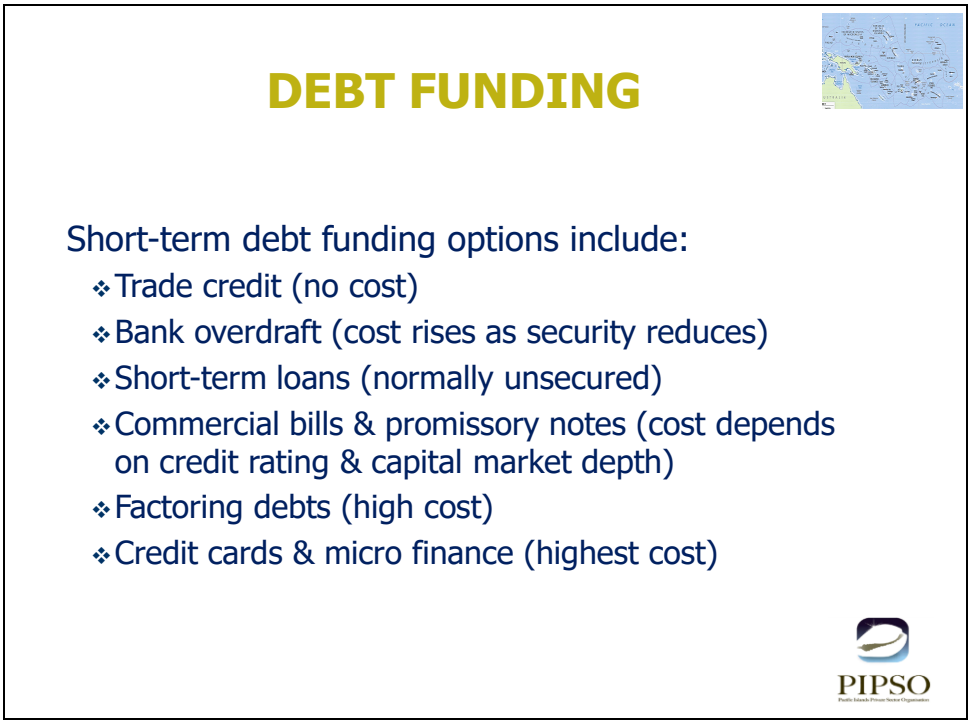


Many micro & small businesses draw out all or most of the business profits for private & personal use. However, if a business is to grow from the grass roots upward, its initial source of funds is most likely to come from retained earnings. Hence the taking of modest drawings or dividends during the growth phase of a young business is normal as the business lacks the evidence of its ability to service & repay debt.

As businesses grow there are advantages to becoming companies. There are also significant tax advantages available to listed companies, but these need to be weighed against the additional reporting requirements & the workload entailed.

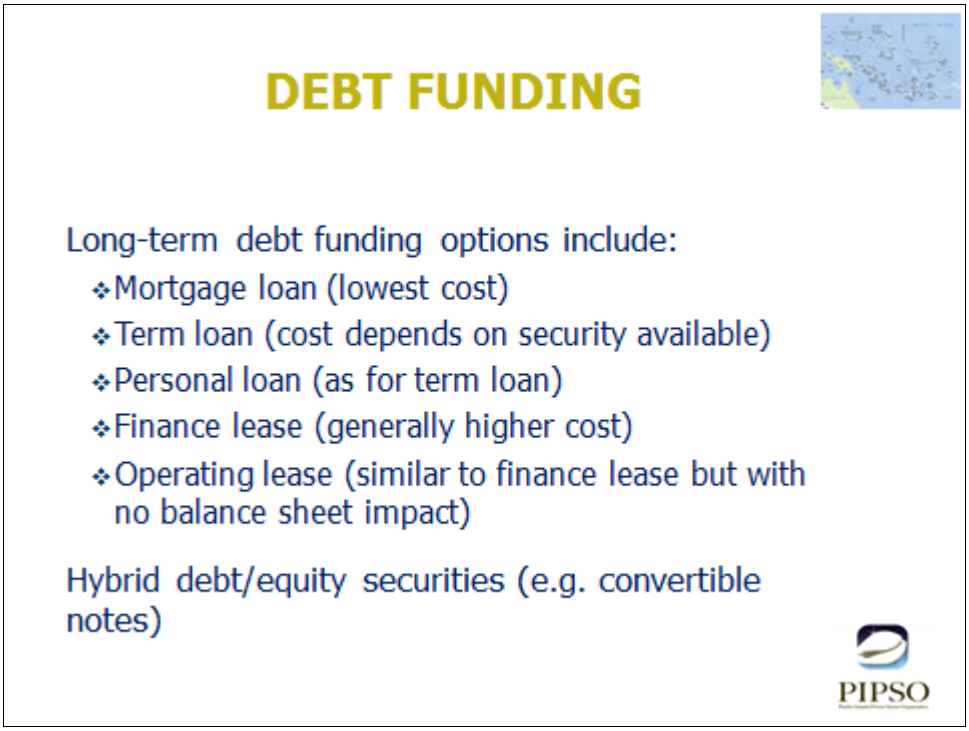
DEBT FUNDING

Available choices of debt funding depend on the period that funds are required. Products offered for long-term debt are different to those available for short-term & the longer the funds are required the greater the security that will be required.



NOTES:

1. Trade debtors may be the only free, no cost, debt that a business has available
2. Not all these options may be available across the Pacific, thereby limiting options
3. Bank overdraft is the most flexible option available subject to cost considerations



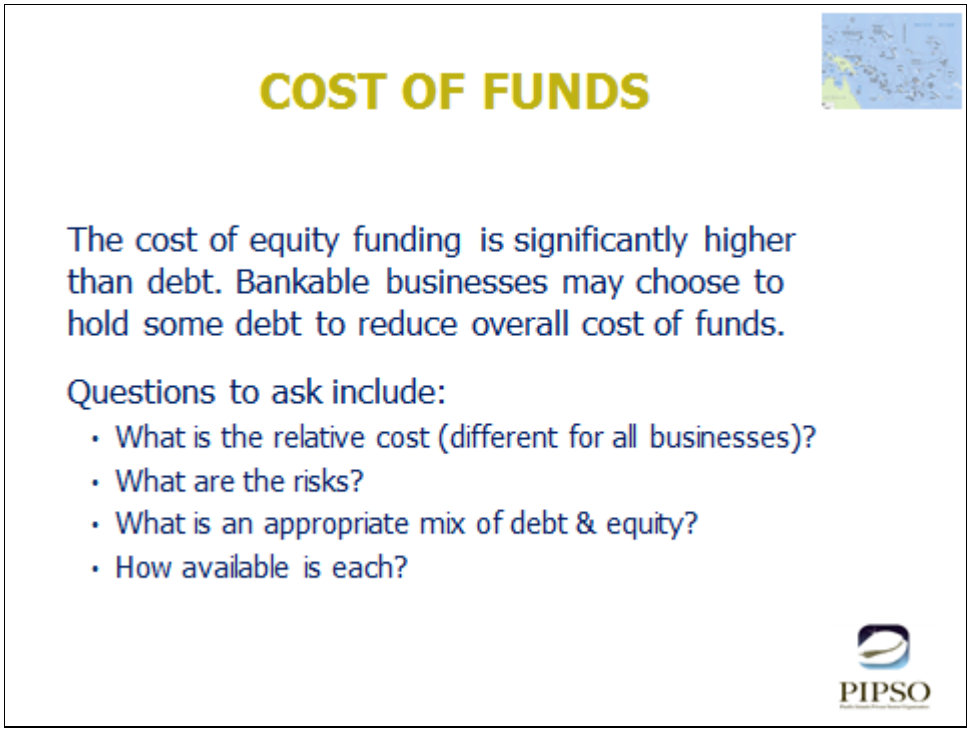
The mortgage loan is by far the most common form of long-term loan & the cheapest due to the quality of the security.

Personal loan is included in the list because many businesses that cannot directly borrow funds can get them indirectly through the owner borrowing on personal account & on-lending funds to the business.

Finance leases are typically used for vehicle purchases.

Hybrid & other securities options require a larger pool of investors than is apparent across the Pacific. These would need to be stock exchange listed securities.

COST OF FUNDS

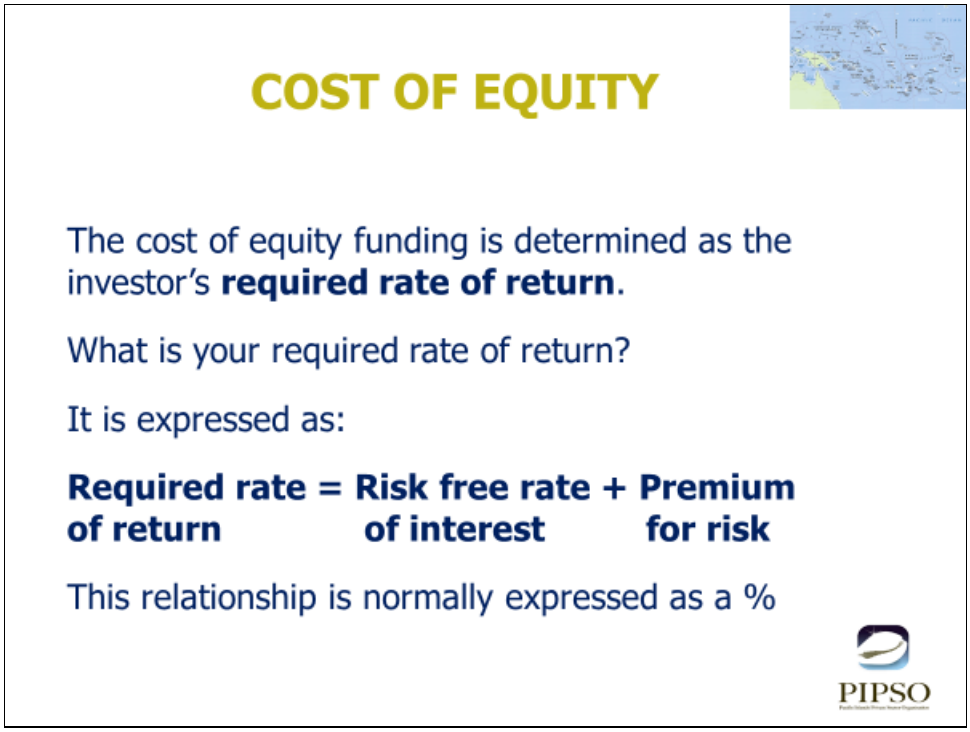


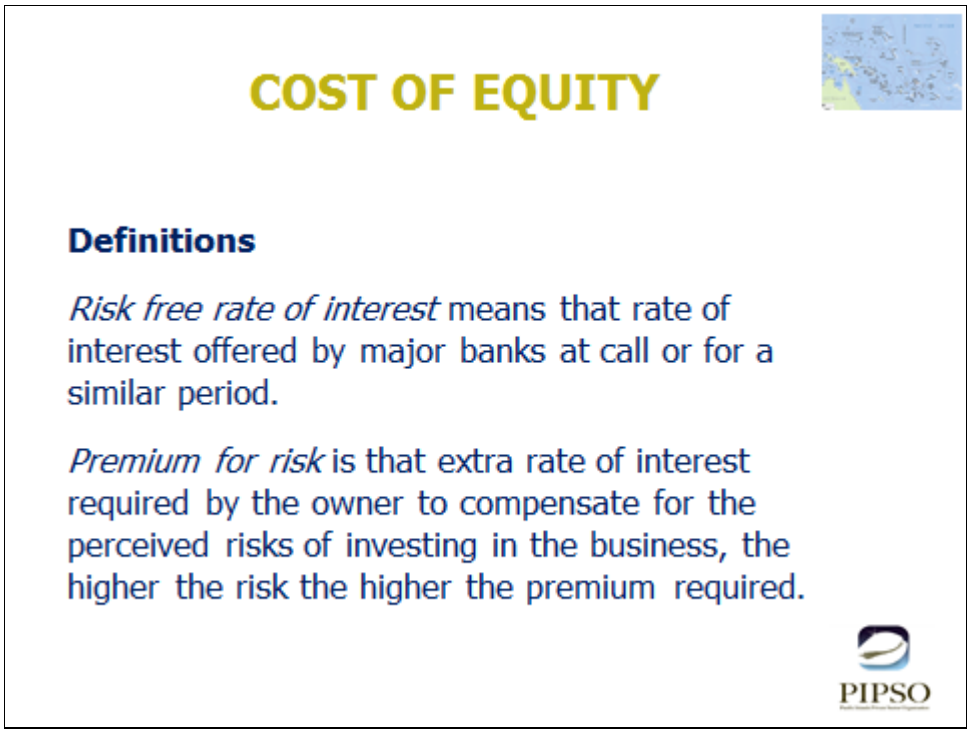
Let's explore the cost of each of debt & equity, one at a time, before doing a comparison & some calculations.

Practically speaking, it is suggested that debt should always be cheaper than equity. If it is not, then a business should not borrow because it lacks the revenues to meet the interest payments & capacity to repay the debt on maturing without damaging the quality of the balance sheet of the business.

This hypothesis will be tested later in this Module.

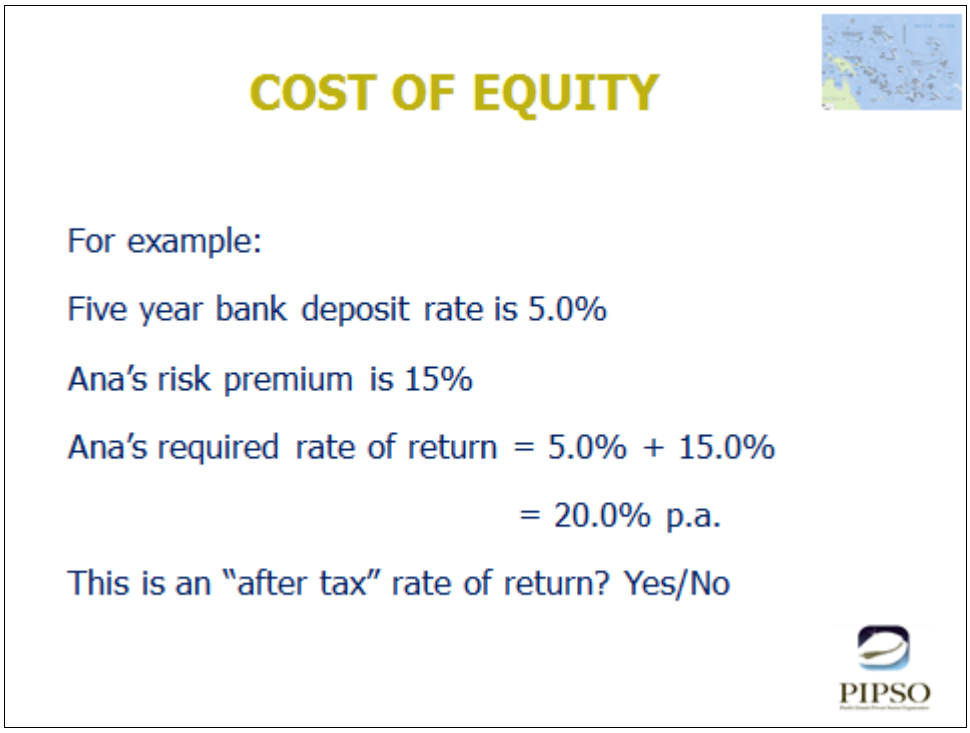
COST OF EQUITY





This calculation is the theoretical expression of the practical decision that an investor will make when deciding on their personal rate of return required based on their perceived risk in the business that they are looking at. Different businesses opportunities will attract different

required rates of return or an investor may set a minimum required rate of return, similar to any investment decision as per Module 3.4, Capital Expenditure Decisions.



The answer to the question asked is "yes" the return is after tax.

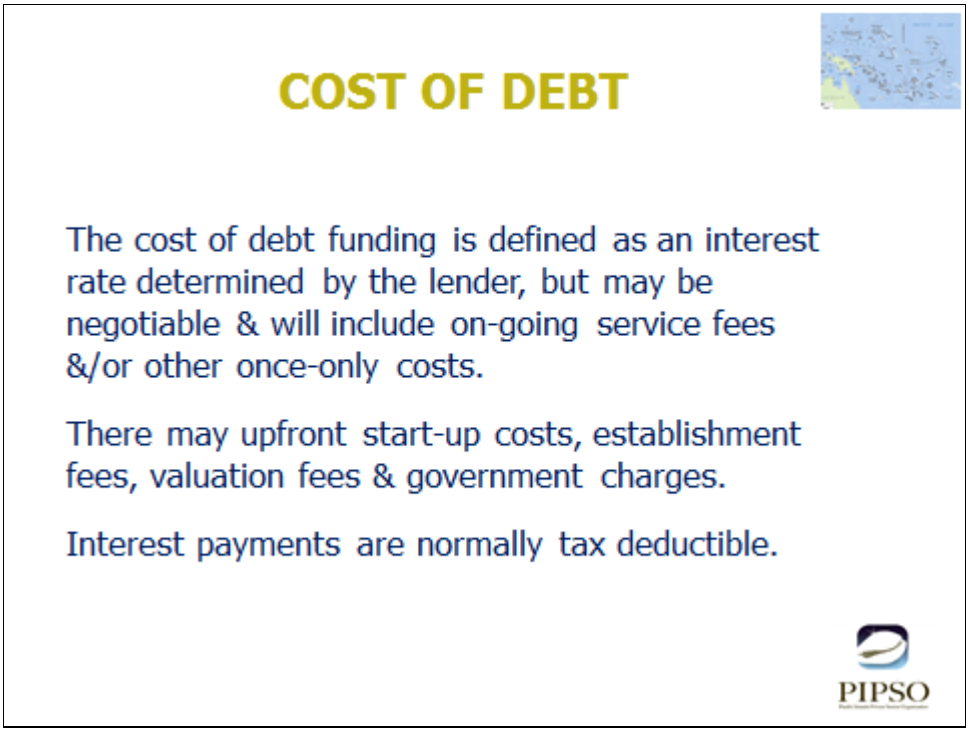
From an unincorporated business an owner receives their income after the business tax is paid. From an incorporated business there may be tax payable by both the business & the individual on any dividends paid (unless the individual receives a tax offset for company tax paid). Therefore the return from a company may, in fact, be double taxed & in this event can be very expensive.

The impact of tax depends on who's perspective it is viewed from.

From a business owner's perspective, equity is paid after tax (or even double taxed) regardless of the legal form of the business.

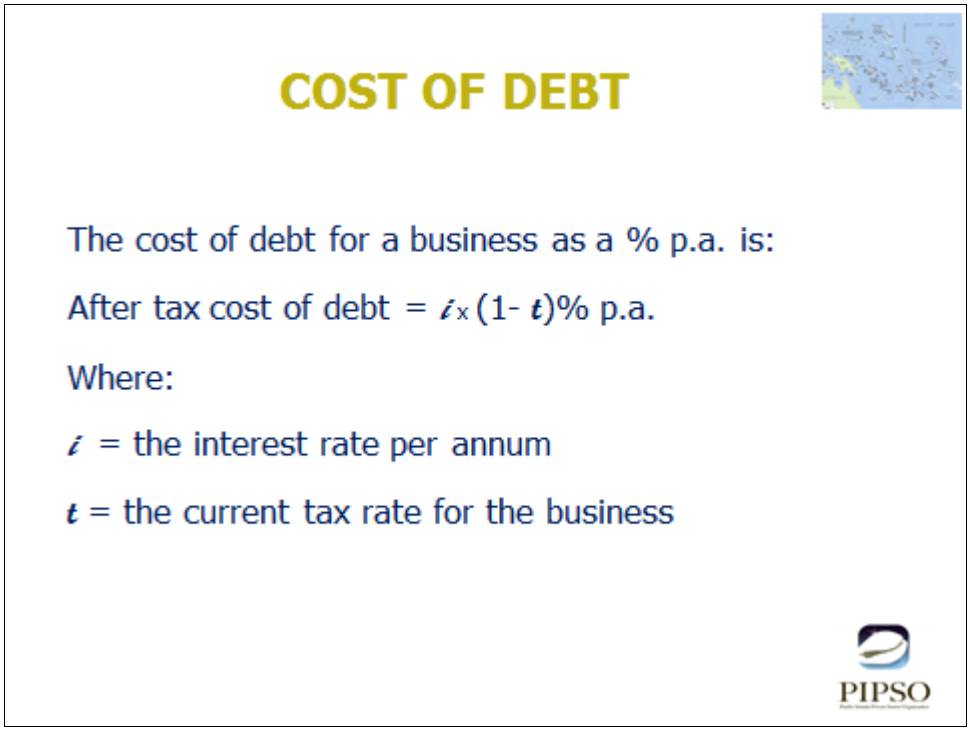
However, the imposition of taxation is one, but not the only, influence on the relative cost of debt & equity.

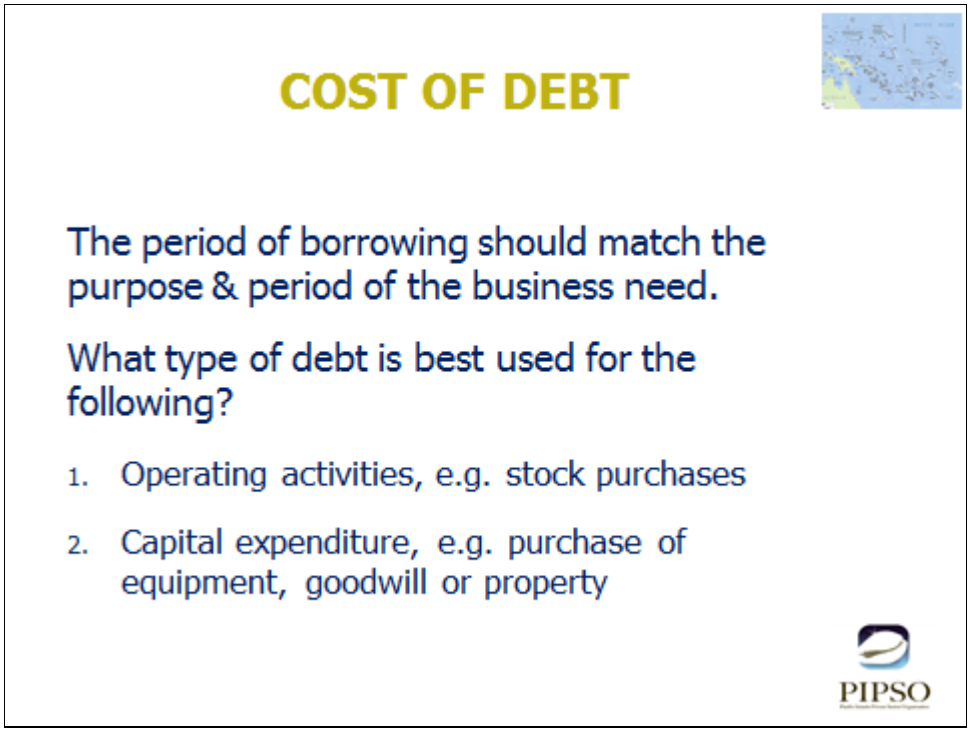
COST OF DEBT



The interest rate charged by a bank or lending institution will depend on the lenders cost of funds & the margin above this they require based on a credit assessment of the borrower.

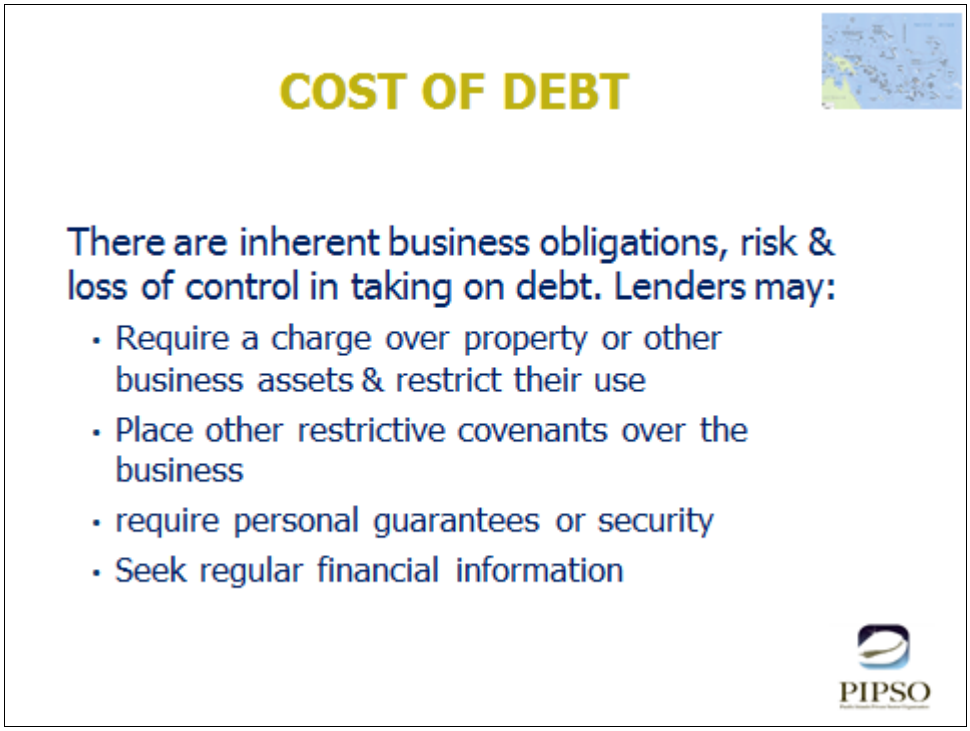
NOTE: As an expense of the business interest is tax deductible in most tax regimes. In this event we must convert interest to after tax cost or equity return to before tax cost in order to compare the relative costs.





Frequently small business owners neglect the matching of debt to the asset acquired.Ability to repay, i.e. cash flow, is also very relevant to the term of a borrowing, the matching principle should not be forgotten. Where the ability to repay allows for repayment earlier than the matching principle it may reasonably be applied.

The ability to **prepay** fixed term debt without, or with little, cost should also be a part of the overall consideration &negotiation of any borrowing.

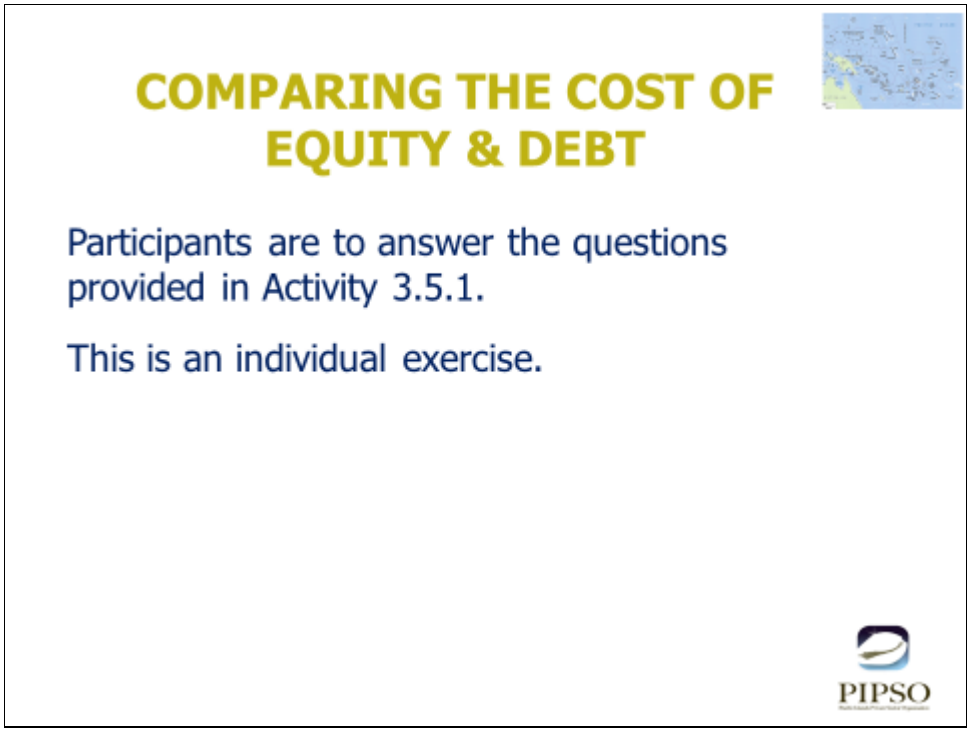


Lenders take commercial risk not entrepreneurial risk. This is why they seek security & place other restrictions on a business in the loan documentation.

A lender seeks to receive their interest & repayment of principal, not to operate a business it lends to. Refer Module 3.6, A Bank's View of Finance, for a more in specific perspective on the requirements of a commercial lender, in particular a bank.

Loss of control or lender interference will only occur in a default situation as defined in the signed documents between the two parties.

COMPARING THE COST OF DEBT & EQUITY



The exercises that followprovide the opportunity for participants to do some calculations of debt & equity costs. They are not indicative of actual interest rates, but are designed to simulate results that can be evaluated by a business owner having done the calculations.

Activity 3.5.1

Funding Questions

Section A: True or False

1. Debt funding should generally be cheaper than equity
2. A term loan is a good way to finance debtors
3. The undistributed profits of a business are a part of its liabilities
4. Increasing gearing decreases risk
5. Raising more equity restricts the ability to borrow in the future
6. Increasing gearing increases return on equity
7. Payments to owners from equity are tax deductible
8. If the tax rate is 25% debt of 10% is cheaper than equity costing 7.5%

Section B: Short Questions

Question 1

Jone requires $50,000 to expand the assets in his business. He has the choice of debt & equity funding.

Jone's required risk premium is 9%. The bank lending rate is 15%. The equivalent bank deposit rate is 4%. The current tax rate is 20%.

Calculate the after tax cost of equity funds & the cost of debt. Which is preferable? Why?

Question 2

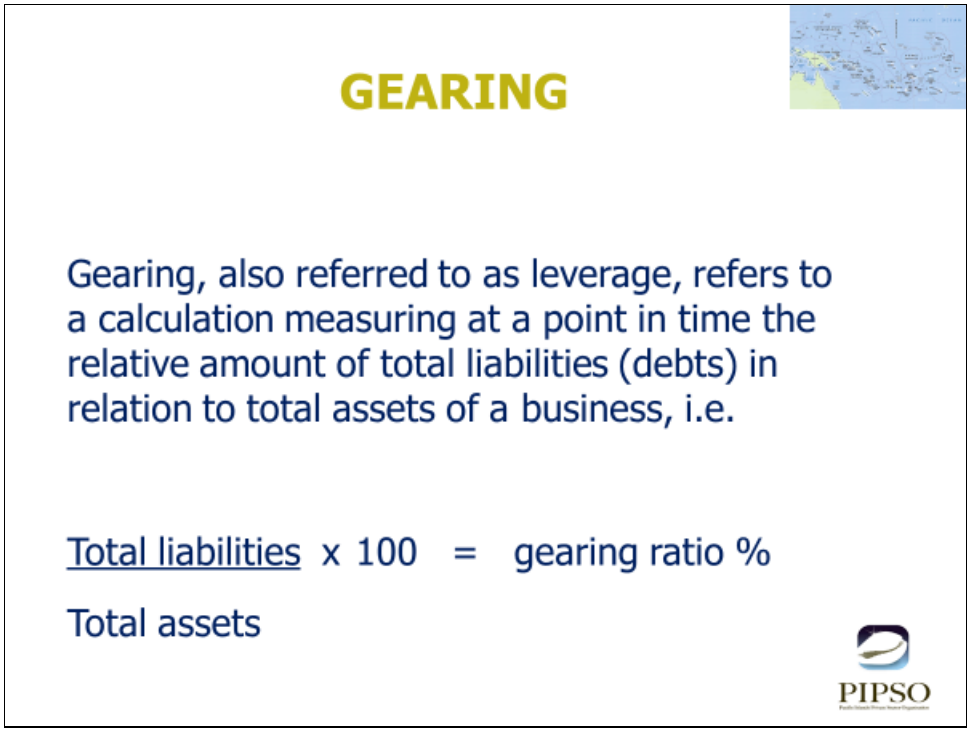
Ana has borrowed $20,000 at an after tax rate of 10.0%. If the tax rate was 30%, what was the bank lending rate?

Question 3

Mere's required rate of return is 12.0% p.a. She can borrow at 13.5%. The current tax rate is 15.0%.

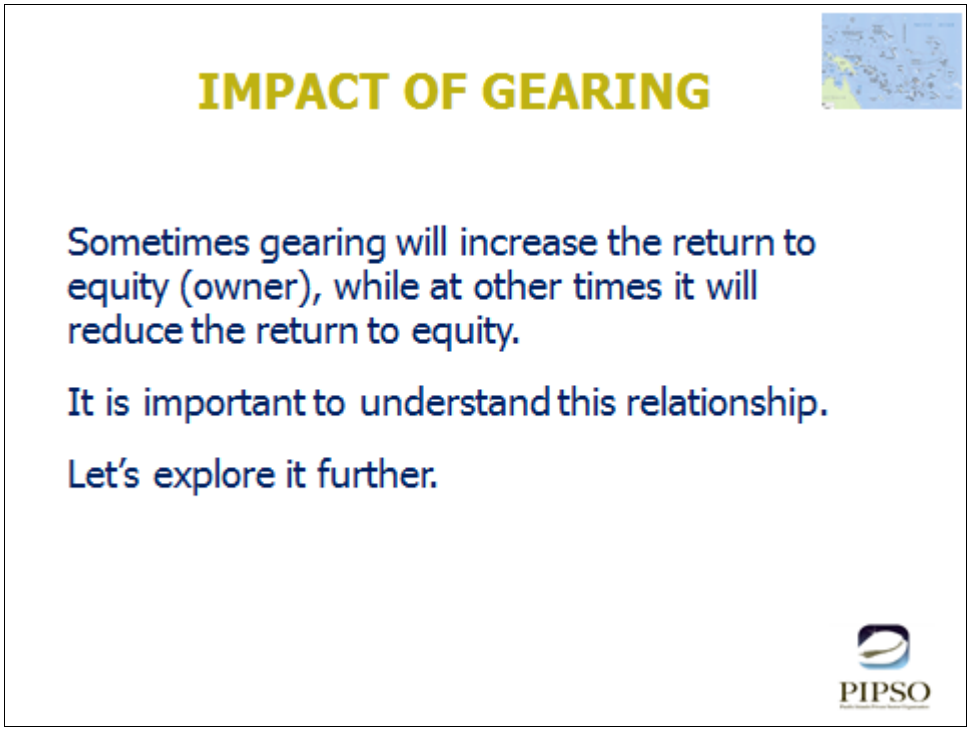
If she wishes to expand her business, is it cheaper for Mere to put up her own funds or to borrow?

IMPACT OF GEARING

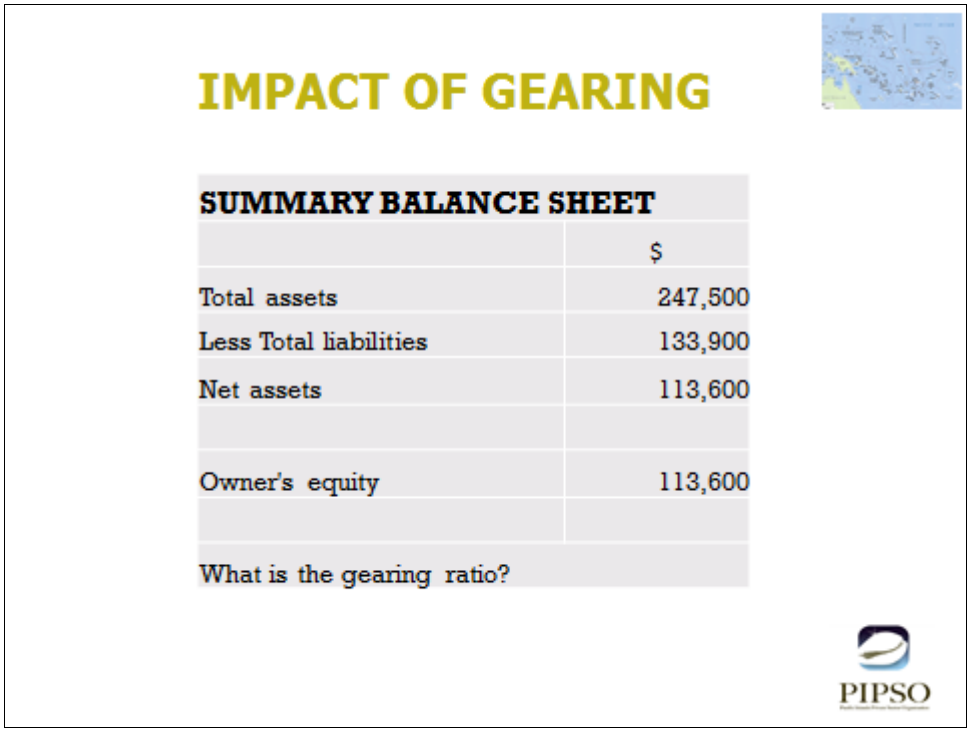


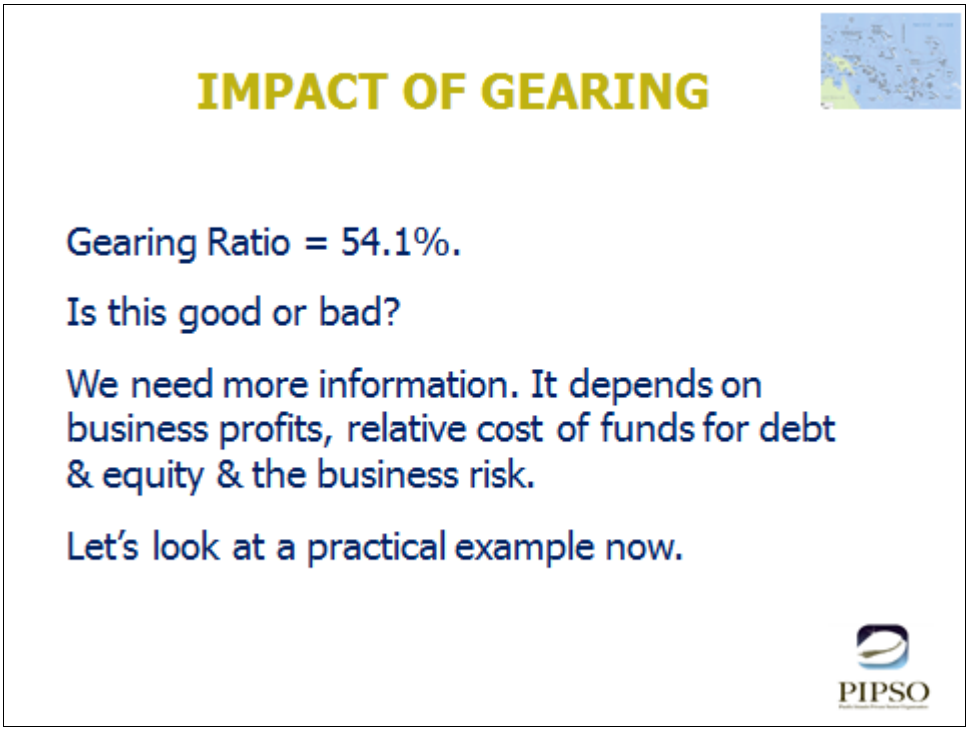
Is there such a thing as an acceptable gearing, or leverage, level?

Theoretically the answer to the question above is “yes” for any given level of return on equity, but in practice, it also depends on the reliability of the future income stream. The more reliable the income stream, the higher the level of debt that the income stream can support, with or without security.



The income stream of a small business is not normally considered highly reliable, especially when in competition with larger businesses or where business records are incomplete, hence the conservative lending criteria of commercial banks when assessing a micro or small business.

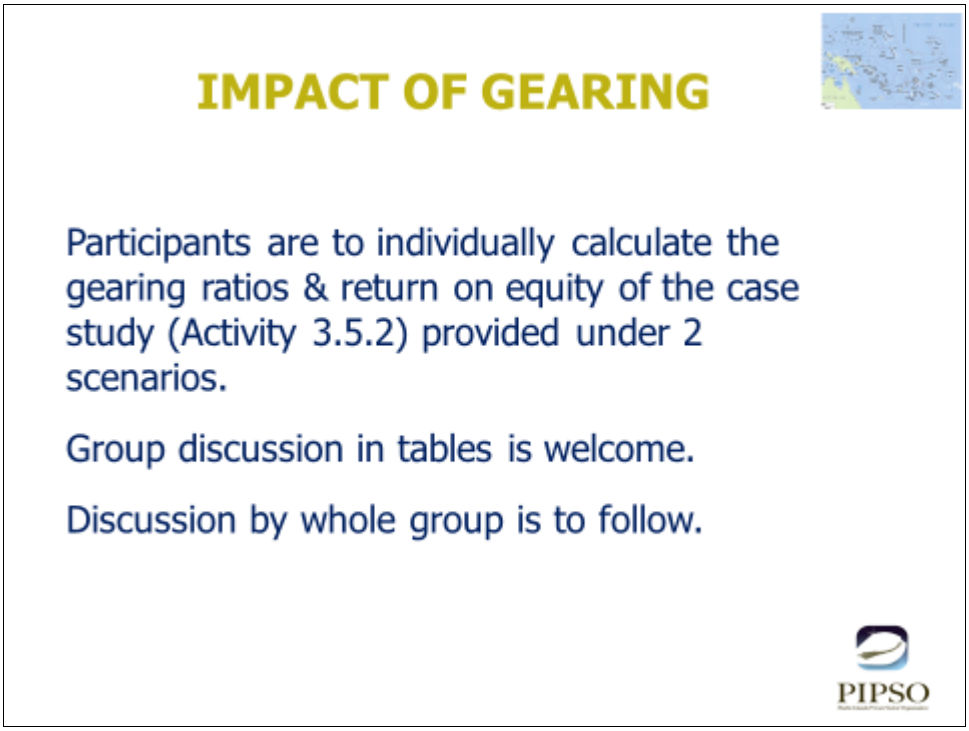




Conservative management may choose to borrow only small amounts, but determining whether a level of gearing is appropriate or not requires further analysis. Business returns & the certainty of cash flows are very important when making an assessment of an appropriate level of gearing or range of debt levels that benefit a business without unduly increasing the riskto owners.

The following activity shows how the profitability of a business materially affects its ability to borrow.

Also changes in profitability have a profound impact on the benefit of borrowed funds.



Highly profitable businesses provide sound investment opportunities for banks &borrowing also makes higher profits for the business.

Low profit businesses do neither.

The following case study illustrates this point clearly.

For participants not attending a workshop, what are the issues? Write them down. Now compare your answers to the relevant issues raised in the answers provided.

Activity 3.5.2

A CASE STUDY ON THE IMPACT OF GEARING

Jone's footwear business has prepared a budget for the next 12 months.
Jone has approached his local bank & been advised that he may borrow up to $100,000 at 12% interest.
Below is a summary of Jone's budget for the next 12 months assuming no borrowing.
Jone's forecast total assets are $150,000 and forecast net profit is $50,000 for the year.

Using the template below:

1. Calculate Jone's balance sheet assuming gearing as indicated.
2. Calculate Jone's return on equity under each scenario.
3. Which scenario should Jone choose if he wishes to maximise return on equity?
4. Why might he make a different choice?

SUMMARY BALANCE SHEET

	No gearing	33% gearing	67% Gearing
Total assets	150,000	150,000	150,000
Less Total liabilities	0	50,000	100,000
Net assets	150,000		
Owner's equity	150,000	150,000	150,000

SUMMARY INCOME STATEMENT

Net profit (before interest)	50,000	50,000	50,000
Less Interest	0		
Net profit	50,000		
Return on equity			

If Jone's net profit forecast was $10,000, what leverage level should he choose?

SUMMARY BALANCE SHEET

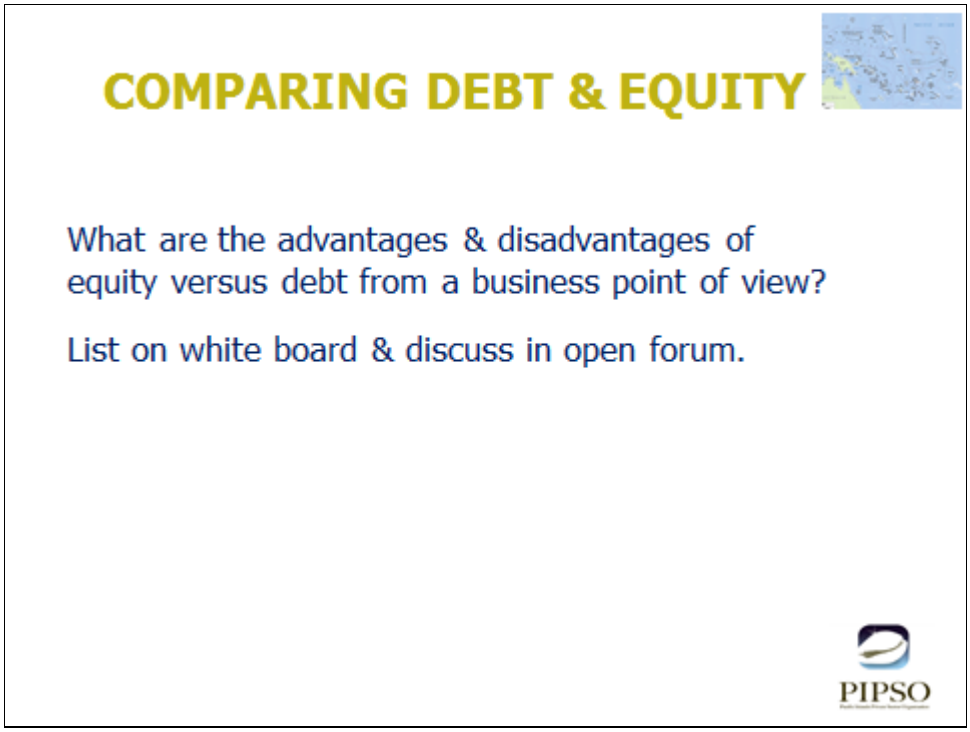
	No gearing	33% gearing	67% Gearing
Total assets	150,000	150,000	150,000
Less Total liabilities	0	50,000	100,000
Net assets	150,000		
Owner's equity	150,000	150,000	150,000

SUMMARY INCOME STATEMENT

Net profit (before interest)	10,000	10,000	10,000
Less Interest	0		
Net profit	10,000		
Return on equity			

Is there a profit level at which gearing has no impact on return on equity?If so, what is it?

ADVANTAGES OF DEBT & EQUITY



The following is a table to use as a guide.

ADVANTAGES & DISADVANTAGES OF DEBT & EQUITY FUNDING

	Advantages	Disadvantages
Debt	1. Generally lower cost 2. No ownership rights or claims 3. Fixed term 4. Usually tax deductible 5. Offers greater variety of methods	1. Legally enforceable loan obligations 2. Must be repaid when due 3. Lenders criteria must be met 4. Security will normally be requested 5. Cost rises as quality of security falls
Equity	1. May be easier to access or only available option initially 2. No repayment obligations 3. Does not restrict, & may enhance, future opportunities to borrow 4. Company dividends may be tax paid in hands of receiver	1. Owners funds are limited 2. Drawings are made after tax 3. Additional investors dilutes control of existing owner(s) 4. Owners require a higher return in the long run

This ends the Module.

ANSWERS TO ACTIVITIES

Activity 3.5.1

Funding Questions

Section A: True or False

9. Debt funding should generally be cheaper than equity T
10. A term loan is a good way to finance debtors F
11. The undistributed profits of a business are a part of its liabilities F
12. Increasing gearing decreases risk F
13. Raising more equity restricts the ability to borrow in the future F
14. Increasing gearing increases return on equity T
15. Payments to owners from equity are tax deductible F
16. If the tax rate is 25% debt of 10% is cheaper than equity costing 7.5% F

Section B: Short Questions

Question 1

Jone requires $50,000 to expand the assets in his business. He has the choice of debt & equity funding.

Jone's required risk premium is 9%. The bank lending rate is 15%. The equivalent bank deposit rate is 4%. The current tax rate is 20%.

Calculate the after tax cost of equity funds & the cost of debt. Which is preferable? Why?

Answer:

Cost of equity = 4% + 9%
= 13%

Cost of debt = 15% x (1 – 0.2)
= 15% x 0.8
= 12%

Debt is cheaper by 1.0%

Other issues:

- Current debt level
- Equity is not much more expensive, might be better
  1. No lender restrictions
  2. No specific commitment to regular interest payments
  3. No repayment obligation
  4. Privacy
  5. Other qualitative issues?

Question 2

Ana has borrowed $20,000 at an after tax rate of 10.0%. if the tax rate was 30%, what was the bank lending rate?

Answer:

Bank lending rate = 10% / (1 – 0.3)
= 10% / 0.7
= 14.3%

Question 3

Mere's required rate of return is 12.0% p.a. She can borrow at 13.5%. The current tax rate is 15.0%.

If she wishes to expand her business, is it cheaper for Mere to put up her own funds or to borrow?

Answer:

Mere's after tax cost of funds = 13.5% x (1 -0.15)
= 13.5% x 0.85
= 11.5% p.a.

Therefore, it is cheaper for Mere to borrow funds, but only by 0.5% p.a. Refer other issues raised in 1 above.

Activity 3.5.2

A CASE STUDY ON THE IMPACT OF GEARING

Jone's footwear business has prepared a budget for the next 12 months.Jone has approached his local bank & been advised that he may borrow up to $100,000 at 12% interest.Below is a summary of Jone's budget for the next 12 months assuming no borrowing.Jone's forecast total assets are $150,000 and forecast net profit is $50,000 for the year.

Using the template below:

1. Calculate Jone's balance sheet assuming gearing as indicated.
2. Calculate Jone's return on equity under each scenario.
3. Which scenario should Jone choose if he wishes to maximise return on equity?
4. Why might he make a different choice?

SUMMARY BALANCE SHEET

	No gearing	33% gearing	67% Gearing
Total assets	150,000	150,000	150,000
Less Total liabilities	0	50,000	100,000
Net assets	150,000	100,000	50,000
Owner's equity	150,000	100,000	50,000

SUMMARY INCOME STATEMENT

Net profit (before interest)	50,000	50,000	50,000
Less Interest	0	6,000	12,000
Net profit	50,000	44,000	38,000
Return on equity	33.3%	44.0%	76.0%

Gearing of 67.0% provides the highest return on equity, but also the highest risk. The higher the risk Jone is willing to accept, the higher the gearing ratio he will target. This result highlights the advantages of gearing when the business is highly profitable. Other issues that are relevant include:

1. How reliable is the business forecast? It was good enough for the bank, a good sign.
2. What are the other business risks?
3. What is the Jone’s attitude to risk, i.e. how risk averse is the owner?
4. What other profitable business opportunities does Jone have available?

If other opportunities are available Jone can spread their investment to make more profit. If not, there is no incentive to be more highly geared. If Jone's net profit forecast was $10,000, what leverage level should he choose?

SUMMARY BALANCE SHEET

	No gearing	33% gearing	67% Gearing
Total assets	150,000	150,000	150,000
Less Total liabilities	0	50,000	100,000
Net assets	150,000	100,000	50,000
Owner's equity	150,000	100,000	50,000

SUMMARY INCOME STATEMENT

Net profit (before interest)	10,000	10,000	10,000
Less Interest	0	6,000	12,000
Net profit	10,000	4,000	-2,000
Return on equity	6.7%	4.0%	-4.0%

Clearly, if the profitability is low, **any borrowing** reduces profit. Also, where do the funds come from to repay the debt when due?

Is there a profit level at which gearing has no impact on return on equity? If so, what is it? YES. When the rate of return of the business equals the interest rate. In the above example this is 12.0% per annum. However, unless the return substantially exceeds this, how is the debt repaid?