

Introduction to Margin Lending Workbook

August 2018

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Learning Outcomes

This session aims to build awareness about Margin Lending. By the end of the session you should be able to:

- 1 Explain what Margin Lending is and how it works
- 2 Calculate how much a customer can borrow and perform other basic calculations
- 3 Explain Margin Calls and strategies to reduce their probability
- 4 Explain why a customer would use Margin Lending

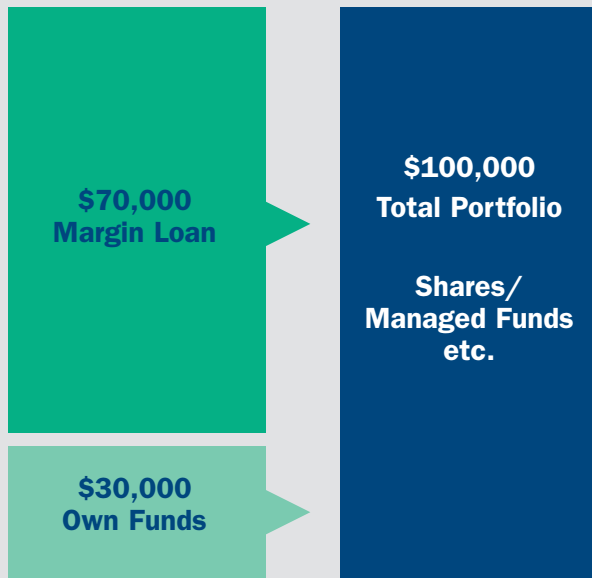
What is Margin Lending?

Margin Lending is a loan secured by a portfolio of securities, most commonly shares, managed funds and cash.

Customers use the borrowed money to invest in financial products.

Customers using a Margin Loan increase the total amount available for investment and potentially increase returns.

The below example shows this in a simple illustration:



How much can a customer borrow?

The amount of money a customer can borrow from Leveraged depends on:

1. The **Credit Limit** of their facility.
2. The type of security (i.e. shares/managed funds and other investments) that they pledge.
3. The amount of security they pledge.
4. How diversified their portfolio is.

Credit Limit

The credit limit is the maximum amount a customer can borrow.

Customers nominate a credit limit when they apply. The credit limit is assessed by Leveraged to ensure it is reasonable based on the customer's financial circumstances.

LE has a list of Acceptable Investments. This list contains the securities that LE is comfortable to lend money against.

Activity

Each approved security is assigned a Standard LVR and a Diversified LVR. LVR stands for:

L _____ **to V** _____ **R** _____

Leveraged Equities Margin Loan

Approved Shares

Effective From 02 July 2018



The professional's choice

Code	Security Name	Restricted	Standard LVR	Diversified LVR	Concentration limit
AX1	Accent Group Limited		0%	50%	20%
AYS	Amaysim Australia Limited		0%	40%	20%
AZJ	Aurizon Holdings Limited		75%	75%	100%
BAL	Bellamy's Australia Limited		0%	50%	30%
BAP	Bapcor Limited		50%	60%	50%
BBN	Baby Bunting Group Limited		0%	40%	20%
BEN	Bendigo and Adelaide Bank Limited		70%	75%	80%
BENHB	Bendigo and Adelaide Bank Limited Hybrid 3-Bbsw+1.00% Perp Sub Cum Red		70%	75%	80%
BENPE	Bendigo and Adelaide Bank Limited Cnv Pref 6-Bbsw+3.20% Perp Non-Cum Red T-11-20		70%	75%	80%
BENPF	Bendigo and Adelaide Bank Limited Cnv Pref 6-Bbsw+4.00% Perp Non-Cum Red T-06-21		70%	75%	80%
BENPG	Bendigo and Adelaide Bank Limited Cnv Pref 3-Bbsw+3.75% Perp Non-Cum Red T-6-24		70%	75%	80%
BFG	Bell Financial Group Limited		0%	50%	20%
BGA	Bega Cheese Limited		55%	65%	50%
BHP	BHP Billiton Limited		75%	75%	100%
BIN	Bingo Industries Limited		0%	60%	50%
BKI	BKI Investment Company Limited		60%	70%	60%

Code	Security Name	Restricted	Standard LVR	Diversified LVR	Concentration limit
CBAPC	Commonwealth Bank of Australia Cap Note 3-Bbsw+3.80% Perp Non-Cum Red T-12-20		70%	75%	50%
CBAPD	Commonwealth Bank of Australia Cap Note 3-Bbsw+2.80% Perp Non-Cum Red T-12-24		70%	75%	50%
CBAPE	Commonwealth Bank of Australia Cap Note 3-Bbsw+5.20% Perp Non-Cum Red T-10-21		70%	75%	50%
CBAPF	Commonwealth Bank of Australia Cap Note 3-Bbsw+3.90% Perp Non-Cum Red T-03-22		70%	75%	50%
CBAPG	CommBank PERLS X Capital Notes Def Settlement		70%	75%	50%
CCL	Coca-Cola Amatil Limited		65%	75%	80%
CCP	Credit Corp Group Limited		0%	55%	30%
CCV	Cash Converters International		0%	50%	20%
CDA	Codan Limited		0%	45%	20%
CDD	Cardno Limited		0%	50%	20%
CDM	Cadence Capital Limited		0%	50%	30%
CDP	Carindale Property Trust		0%	55%	30%
CGC	Costa Group Holdings Limited		50%	60%	50%
CGF	Challenger Limited		60%	70%	80%
CGFPA	Challenger Limited Cnv Pref 3-Bbsw+3.40% Perp Sub Non-Cum Red T-05-22		60%	70%	50%
CGFPB	Challenger Limited Cap Note 3-Bbsw+4.40% Perp Non-Cum Red T-05-23		60%	70%	50%

Lending Value

Example: As per the Approved Shares list shown above, BHP has a Diversified LVR of 75%. That means for every \$1 of BHP a customer holds, LE could lend them \$0.75.

The Lending Value refers to the dollar amount LE will lend against a line of security. It is calculated as follows:

$$\text{Lending Value} = \text{Market Value} \times \text{LVR}$$

Using the above BHP example, if a customer had \$10,000 worth of BHP shares LE could lend them \$7,500.

\$10,000 (Market Value) X 75% (LVR) = \$7,500 (Lending Value)

Activity

Referring to our current list of Approved Shares, complete the Diversified LVR and Lending Value for each share in the below customer portfolio:

Stock	Market Value	LVR	Lending Value
CBA	\$7,500	75%	\$5,625
PGF	\$5,000		
TCL	\$2,750		
RIO	\$4,500		
WOW	\$3,500		
BSL	\$3,250		
BUL	\$2,000		
ADH	\$1,500		
TOTAL	\$30,000		

What is the total Lending Value of this Portfolio?

.....

.....

Purchasing Capacity

If a customer pledged the portfolio above to a new margin loan they could draw down a cash amount of _____ against their existing security.

However, if this customer chose to draw down their loan to purchase further investments, they would be able to spend a great deal more than the _____. This is because the further investments purchased also allow further lending.

To calculate how much of a particular security a customer could purchase, i.e. their purchasing capacity, the following formula is used:

$$\text{Purchasing Capacity} = \text{Lending Value} / (1 - \text{LVR})$$

Continuing with the same example portfolio, assume the customer would like to use their margin loan to purchase ANZ shares. Leveraged offers an LVR of 75% on ANZ so the calculation would be:

$$\text{Lending Value} / (1 - 0.75) = \$ \underline{\hspace{2cm}}$$

The customer could purchase \$ _____ worth of ANZ shares.

Activity

1 What is the same customer's purchasing capacity of FlexiGroup Ltd (FXL) shares?

(Diversified LVR of FXL is _____)

Purchasing Capacity = _____

2 What is the same customer's purchasing capacity of Telstra Corporation Ltd (TLS) shares?

(Diversified LVR of TLS is _____)

Purchasing Capacity = _____

LVRs

The larger the relative market capitalisation (how big the company is) and lower the volatility (degree to which the security's price moves up and down) of a share, the higher the LVR Leveraged is able to offer on a particular security.

A portfolio of shares presents less risk if it is well diversified. Leveraged offers higher LVRs on shares in portfolios which are not heavily concentrated in smaller and more volatile shares.

Concentration Limits

The table below outlines what proportion of a portfolio's lending value a stock can make up and still be eligible for the higher diversified LVR. For amounts over the concentration limit, the standard LVR will apply.

Category	Concentration Limit
ASX20	100%
ASX50	80%
ASX100	60%
>ASX100	50%
If R (Restricted)	30%
If RNB (Restricted no buffer)	20%

Standard vs. Diversified LVRs

The standard criteria for determining the difference between the standard and diversified LVR is shown below:

Stock Category	Rule	Stock Code	Examples	
			Standard LVR	Diversified LVR
ASX 20	Standard LVR = Diversified LVR	BHP	75%	75%
ASX 50	Standard LVR = Diversified LVR – 5%	TCL	70%	75%
ASX 50 +	Standard LVR = Diversified LVR – 10%	BKI	60%	70%
Restricted & RNB	Case by case			

IMPORTANT: these are general guidelines only. Individual securities may vary and fall outside of these parameters.

How Margin Lending works

We will use a simple example to illustrate how margin lending works:

Example: Assume a customer's goal is to invest \$100,000 in some "blue chip" shares. The customer does not have \$100,000 so wants to use a margin loan to help him reach his investment goals. Leveraged offers a LVR of 70% on the shares the customer would like to purchase and he is comfortable borrowing the maximum Lending Value available to purchase these shares.

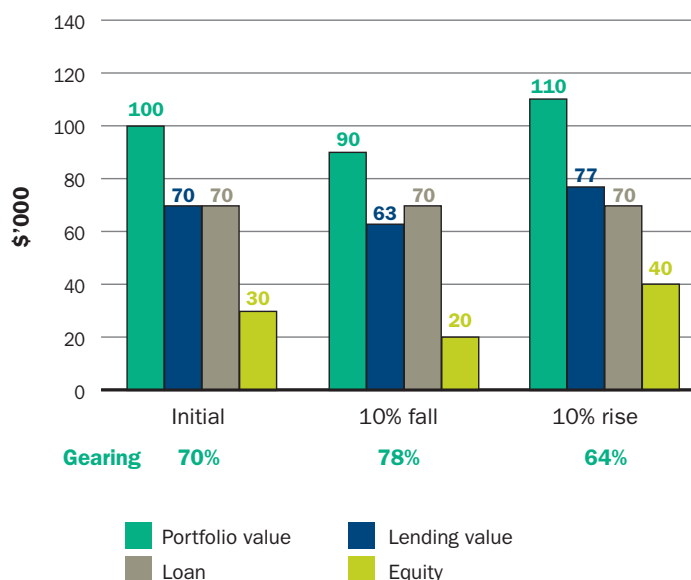
From the previous section you will recall that Lending Value is calculated as follows:

$$\text{Market Value (\$100,000)} \times \text{LVR (70\%)} = \text{Lending Value (\$70,000)}$$

Therefore the customer can borrow \$70,000 and he would need to contribute \$30,000 of his own funds to purchase the \$100,000 share portfolio.

The customer's initial margin lending facility position is illustrated in the first part of the graph below and summarised as follows:

Market Value	=	\$100,000
Lending Value	=	\$70,000
Loan	=	\$70,000
Customer Equity	=	\$30,000
Gearing Ratio*	=	70%



*The Gearing Ratio of a customer's facility is their loan balance as a percentage of the market value of their portfolio. It is calculated as follows:

$$\text{Gearing Ratio} = \text{Loan Balance} / \text{Market Value of Portfolio}$$

The Gearing Ratio of the customer's initial facility in the above example is calculated as:

$$70,000 / 100,000 = 0.7 \text{ or } 70\%$$

Now we will look at what happens to the customer's margin loan facility when the market value of the shares rises by 10% and falls by 10%.

10% rise in market value of shares:

The Market Value of the customer's shares has risen from \$100,000 to \$110,000.

The new Lending Value is calculated as follows:

$$\text{\$110,000} \times \text{70\%} = \text{\$77,000}$$

The Loan remains the same at \$70,000.

The customer's equity is calculated as Market Value - Loan. It is what the customer has left after the loan has been paid off. After a 10% rise in the market value the client's equity has increased to \$40,000 (\$110,000 - \$70,000)

The new Gearing Ratio of the facility is calculated as follows:

$$70,000 / 110,000 = 0.64 \text{ (rounded to 2 digits) or } 64\%$$

After a 10% rise in the market value of the portfolio the margin loan facility's position is summarised as:

Market Value	=	\$110,000
Lending Value	=	\$77,000
Loan	=	\$70,000
Customer Equity	=	\$40,000
Gearing Ratio	=	64%

Now we will work through the following activity to look at what happens to the customer's margin loan facility when the market value falls by 10%

Activity:

Fill in the blanks below to calculate what happens to the customer's margin loan facility when the market value falls by 10%:

The Market Value of the customer's shares has fallen from \$100,000 to _____

The new Lending Value is calculated as:

_____ x 70% = _____

The Loan remains the same at \$70,000

The customer's equity is calculated as:

_____ - \$70,000 = _____

The new Gearing Ratio of the facility is calculated as:

_____ / _____ = _____

After a 10% fall in the market value of the portfolio the margin loan facility's position is summarised as:

Market Value = \$ _____

Lending Value = \$ _____

Loan = \$70,000

Customer Equity = \$ _____

Gearing Ratio = _____

Margin Calls

In simple terms, a Margin Call is a Margin Lender's demand to a customer to restore their margin loan facility to an acceptable position within a set time frame (at Leveraged it is within 24 hours).

At Leveraged a customer's margin loan facility goes into Margin Call when the Loan exceeds the Lending Value plus Buffer.

Buffer

At Leveraged we have a 10% buffer of the Lendable Market Value*.

The Buffer is added to the Lending Value in order to protect against small market fluctuations.

Buffer = Market Value X 0.10

*Securities with a 0% LVR do not receive a buffer of 10%.

The following calculations are important in understanding when a customer has gone into Margin Call:

You will recall that a customer's current Gearing Ratio is calculated as follows:

Gearing Ratio = Loan Balance / Market Value of Portfolio

A customer's Maximum Gearing Ratio is calculated as follows:

Maximum Gearing Ratio = Lending Value / Market Value of Portfolio

When a customer's current Gearing Ratio rises above their Maximum Gearing Ratio (or Lending Value in dollar terms) they have entered their "Buffer" and additional funds may be required to reduce their current Gearing Ratio. If a customer's Gearing Ratio exceeds their Maximum Gearing Ratio by 10% of the portfolio value (of lendable securities) a margin call is triggered.

The customer has 24 hours to satisfy the margin call. If the customer does not satisfy the margin call, Leveraged has the authority to sell shares or managed funds on the customer's behalf to restore their margin loan facility to their Maximum Gearing Ratio.

Providing cash to pay down the loan

Providing additional shares or managed funds as security

Selling shares or managed funds from the portfolio

Purchasing "put protection" for the shares in the portfolio

Margin Call satisfaction methods:

Margin Call examples

In Scenario 1

The Market Value of the portfolio is worth \$100,000 and they are allowed a Lending Value (maximum loan) of \$70,000 plus a buffer of \$10,000 (10% of \$100,000) so the account is in order with the loan of \$65,000

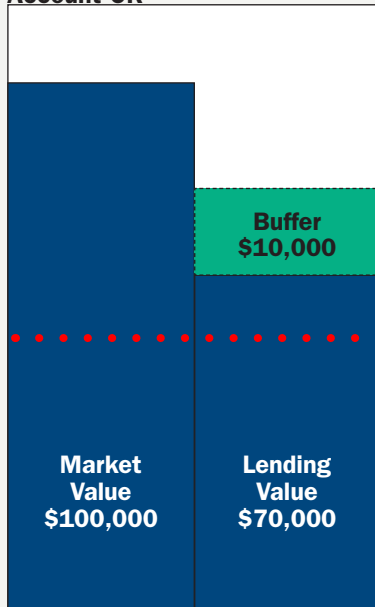
In Scenario 2

The Market Value has fallen by 10% to \$90,000, so this reduces their Lending Value to \$63,000 (70% of \$90,000) plus a buffer of \$9,000 (10% of \$90,000). Their loan amount remains the same (\$65,000) meaning they are now geared at 72% (Gearing Ratio = \$65,000/\$90,000). This means they are over their Lending Value (Max. Gearing Ratio), but due to the 10% buffer there is no margin call made.

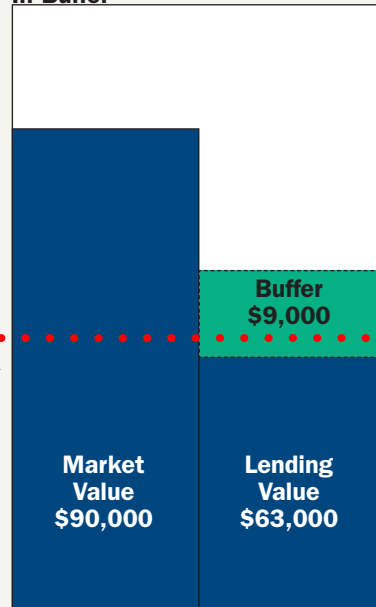
In Scenario 3

The Market Value has fallen even further to \$80,000, so this reduces their Lending Value to \$56,000 (70% of \$80,000) plus a buffer of \$8,000 (10% of \$80,000). Their loan amount remains the same (\$65,000) meaning they are now geared at 81% (Gearing Ratio = \$65,000/\$80,000). This means they have exceeded the buffer and a Margin Call will be made.

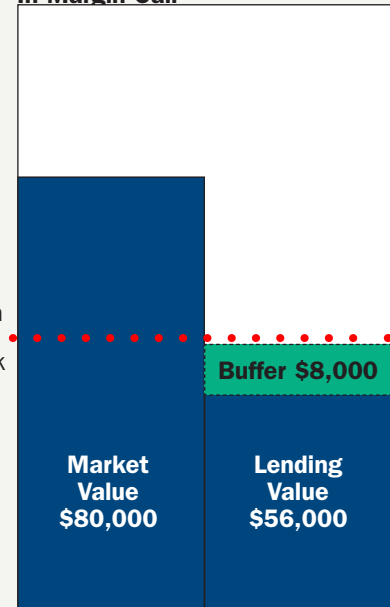
Scenario 1: Account OK



Scenario 2: In Buffer



Scenario 3: In Margin Call



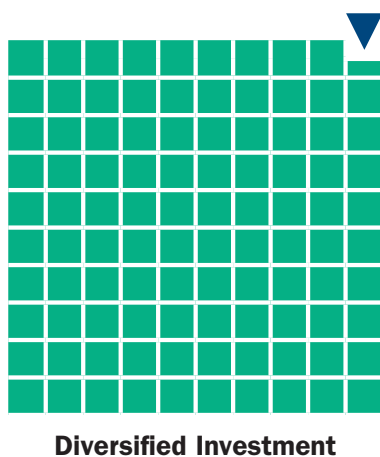
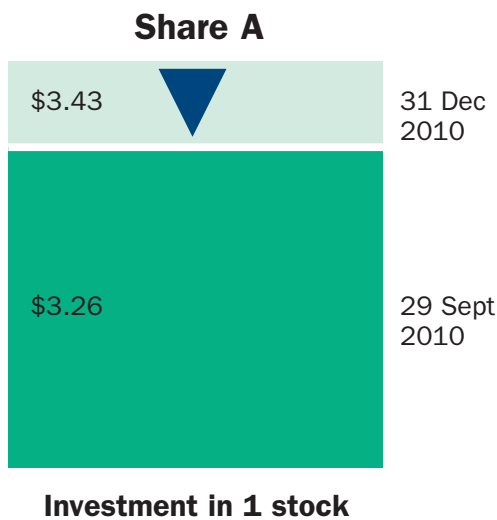
Reducing the probability of a Margin Call

There are many ways a customer can reduce the probability of going into a Margin Call. Some examples are:

- Have a well-diversified portfolio
- Maintain a low level of gearing
- Make regular cash contributions
- Reinvest dividends/distributions
- Pay interest rather than capitalising interest to the loan

Risk management – Diversification

Impact of a 5% drop in the value of 1 stock



Discussion Questions:

1 Explain why having a well diversified portfolio would reduce the probability of a Margin Call?

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2 How can maintaining a low level of gearing reduce the probability of a margin call?

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3 What does making regular cash contributions do to a customer's margin loan facility?

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4 What is a dividend? How can reinvesting dividends reduce the probability of a margin call?

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5 What does it mean to “capitalise interest”? What is the benefit of paying interest rather than capitalising to the loan?

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Why use Margin Lending?

1	Diversify an existing portfolio without selling
2	Unlock equity in an existing portfolio
3	Potential tax deductibility
4	To increase the amount of funds available to invest and take advantage of 'compounding'
5	Gearing magnifies investment gains

1. Diversify an existing portfolio without selling

Margin Lending can allow a customer to diversify their portfolio without selling existing stock. Having a diversified portfolio can "smooth out" larger market fluctuations and has the potential for greater long term wealth creation.

2. Unlock equity in an existing portfolio

Unlock the equity in an existing portfolio to make further investments. A customer can take advantage of unrealised capital gains in their existing portfolio to increase wealth creation.

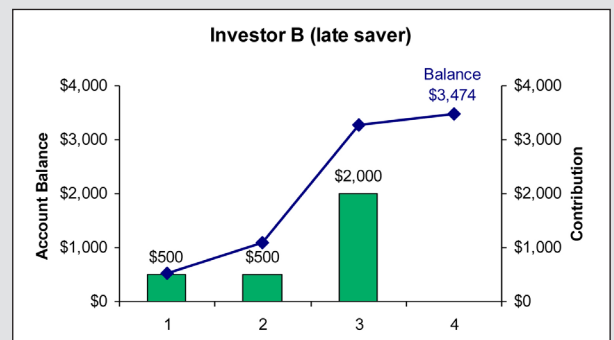
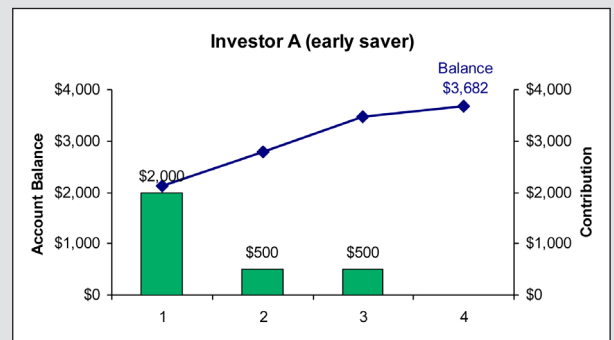
3. Potential tax deductibility

A customer may be entitled to claim an income tax deduction for some or all of their interest costs depending on their individual circumstances. In addition, Australian shares often generate franked dividends, which yield imputation credits that may be used to offset other tax liabilities.

4. To increase the amount of funds available to invest and take advantage of 'compounding'

By borrowing money to invest the customer has more funds invested for longer.

Compounding can be explained by comparing two simple examples. Two investors will both save a total of \$3,000 over 3 years and both earn 6% p.a. on their savings. But each investor is able to save different amounts at different times.



Investor A, the early saver, earns \$682 compared to \$474 earned by Investor B, the late saver. The \$120 earned on Investor A's initial \$2,000 continues to earn 6% p.a. in the following two years. In contrast, Investor B's initial \$500 only earns \$30 in the first year giving them a smaller amount to earn 6% p.a. in subsequent years.

This simple example shows the power of early savings. Using a margin loan to invest a larger amount of funds initially, can have a dramatic affect over the long term through the power of compounding.

5. Gearing magnifies investment gains.

The below table shows that with a margin loan, a 10% increase in Market Value resulted in a 30% gain. The customer achieved an additional \$4,000 profit by using a margin loan.

Comparisons between Gearing and No Gearing		
	With a margin loan	Without a margin loan
Your funds	\$20,000	\$20,000
Loan	\$40,000	\$0
Market Value of Acceptable Investments	\$60,000	\$20,000
Positive Impact: price increases		
Market Value of Acceptable Investments after 10% assumed increase	\$66,000	\$22,000
Your remaining capital after loan repayment	\$26,000	\$22,000
Gain as percentage of funds you invested	30%	10%

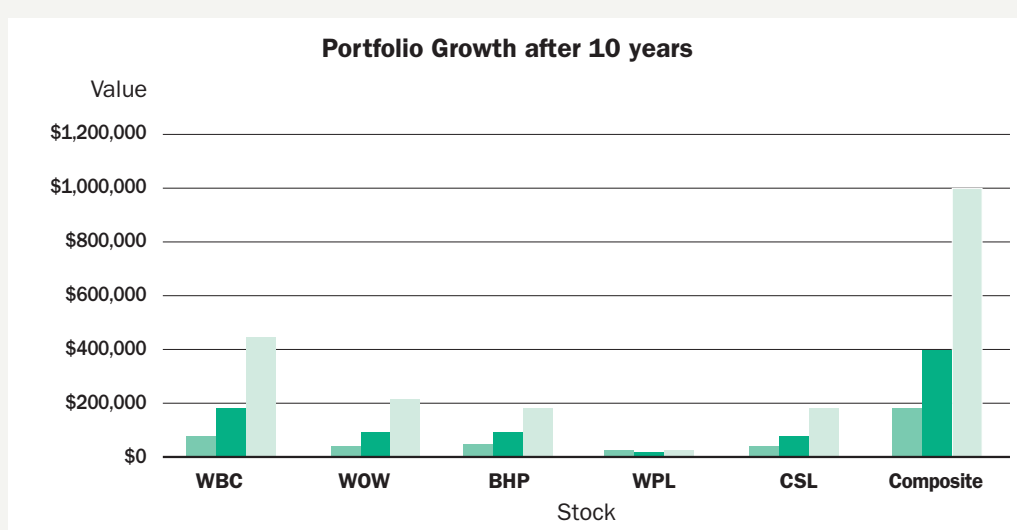
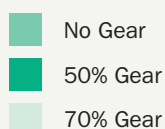
It is important to note that gearing also magnifies investment losses. The below table illustrates that a 10% decrease in Market Value resulted in a 30% loss. The customer lost an extra \$4,000 by using a margin loan.

Comparisons between Gearing and No Gearing		
	With a margin loan	Without a margin loan
Your funds	\$20,000	\$20,000
Loan	\$40,000	\$0
Market Value of Acceptable Investments	\$60,000	\$20,000
Negative Impact: price decreases		
Market Value of Acceptable Investments after 10% assumed decrease	\$54,000	\$18,000
Your remaining capital after loan repayment	\$14,000	\$18,000
Loss as percentage of funds you invested	30%	10%

The below graph is another example that shows the magnified effects of gearing:

Adviser use only.

How returns and losses are multiplied by gearing – geared investments vs un-gearred investments of \$10,000 in certain Australian Shares 1999-2009



Assumptions:

Marginal Tax Rate (including Medicare Levy) 39%

Borrowing Cost 6%

Ignores capital gains tax, fees and brokerage

	Starting Capital	Dividend	Franking	Growth p.a.
WBC	\$36,187	6.04%	100%	6.21%
WOW	\$11,891	4.32%	100%	8.99%
BHP	\$27,190	3.51%	100%	6.21%
WPL	\$9,421	4.74%	100%	2.13%
CSL	\$15,311	2.02%	2%	10.00%
Composite	\$100,000			

Quiz

Multiple Choice

(please circle the answer)

- 1. A Margin Call is when the _____ is less than the loan balance**
 - a) Lending Value
 - b) Lending Ratio
 - c) Buffer
 - d) Lending Value + Buffer

- 2. Which of the below strategies does NOT reduce the probability of a Margin Call?**
 - a) Reinvesting dividends
 - b) Capitalising interest
 - c) Maintain a low level of gearing
 - d) Having a well diversified portfolio

- 3. The Gearing Ratio is best defined by:**
 - a) Loan Balance as a percentage of the Market Value.
 - b) Lending Value as a percentage of the Market Value.
 - c) Lending Ratio as a percentage of the Loan Balance.
 - d) Market Value as a percentage of the Loan Balance.

- 4. What does gearing do to the potential profits made on a portfolio?**
 - a) Magnifies both gains and losses.
 - b) Magnifies only losses.
 - c) Magnifies only gains.
 - d) Has no effect on the profits.



The professional's choice

For more information or to obtain a copy of the PDS, or the other information referred to in this Product Guide, speak to your Financial Adviser or contact the Client Service Team.

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