



AASB 16 Leases –

Variable lease payments that
depend on an index or a rate

Practical guide

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At a glance

Variable lease payments that vary according to an index or a rate are included in the measurement of the lease liability.

Key facts

AASB 16.BC166

AASB 16 *Leases* was issued in February 2016 and is effective for annual reporting periods beginning on or after 1 January 2019. AASB 16 requires a lessee to recognise a lease liability and a right-of-use asset for all leases.

The lease liability is measured at the commencement date of the lease as the present value of the lease payments that are not paid at that date.

AASB 16.Appendix A

At the commencement date, a lessee includes the following payments relating to the use of the underlying asset in the measurement of the lease liability:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable
- **variable lease payments that depend on an index or a rate**
- amounts expected to be repayable by the lessee under residual value guarantees
- the exercise price of a purchase option that the lessee is reasonably certain to exercise and
- payments for terminating the lease if the lease term reflects early termination.

AASB 16.12, 15

Lease payments do not include payments allocated to non-lease components of the contract, for example, servicing the asset, unless the lessee elects to account for the non-lease component as a lease component.

This publication illustrates the measurement of the lease liability and the right-of-use asset for leases where the lease payments vary according to an index or a rate.

Variable lease payments

AASB 16.Appendix A

Variable lease payments are the portion of payments made by a lessee to a lessor for the right to use an underlying asset during the lease term that varies because of a change in factors or circumstances occurring after the commencement date, other than the passage of time.

AASB 16 requires the variable lease payments that vary according to an index or a rate to be included in the measurement of the lease liability.

AASB 16.28

Variable lease payments based on an **index or a rate** include, for example, payments linked to a consumer price index, payments linked to a benchmark interest rate (such as LIBOR) or payments that vary to reflect changes in market rental rates.

Initial measurement of lease liability

AASB 16.BC166

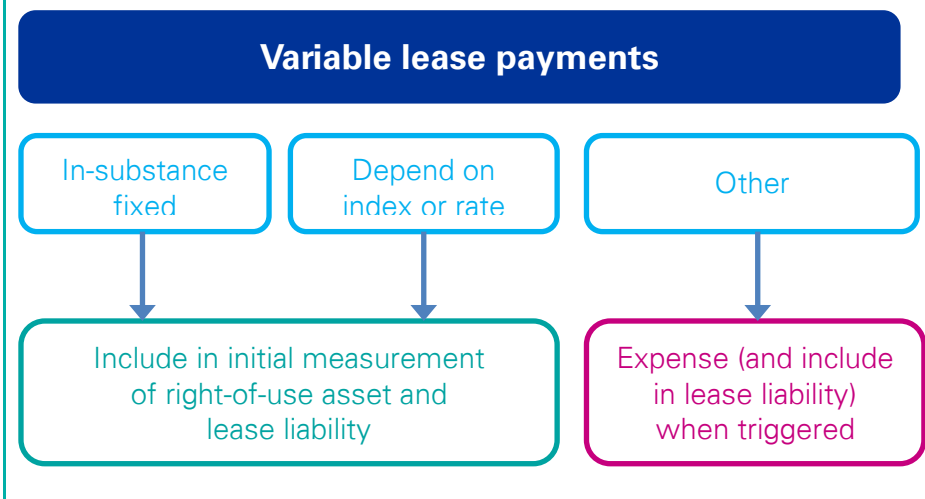
Initially, variable lease payments that depend on an index or rate are measured using the index or rate at the commencement date and future changes in the index or rate are **not** estimated.



KPMG insight – Initial measurement of the lease liability includes only certain variable lease payments

The initial measurement of the lease liability includes variable lease payments that depend on an index or rate – e.g. the CPI or a market interest rate.

- Other variable payments are excluded from the initial measurement of the lease liability. Instead, such payments – e.g. payments based on revenues or usage – are recognised in profit or loss in the period during which the event or condition that triggers those payments occurs. A lessee’s apparent indebtedness will depend on the mix of fixed lease payments and the factor that determines the variability of the lease payments within its lease portfolio. For example, Retailer X leases a portfolio of retail outlets with fixed lease payments. Retailer Y leases a similar portfolio of retail outlets on similar terms but with a mix of fixed lease payments and lease payments that depend on turnover. X will recognise higher lease liabilities than Y – even if the total expected lease payments of X and Y are the same.
- Lessees may continue to not recognise any indebtedness from their lease arrangements in certain circumstances. For example, if a lessee enters into an agreement to purchase all of the electricity produced by a wind farm or hydroelectric plant and the lease payments depend wholly on the amount of electricity produced. In this scenario, the lessee’s lease liability will be zero.



**Example 1 – Variable lease payments not dependent on an index or a rate**

Company W leases a car. The lease payments depend on the number of kilometres travelled – i.e. W has to pay \$2 per km of use. There is no minimum payment under the terms of the arrangement. The expected travelling distance per year is 15,000 km.

In this case, although there is an expected travelling distance per year, there is no minimum rental payment, and therefore, the lease payments are not in-substance fixed payments.

The lease contains variable lease payments that do not depend on an index or a rate, but are based on the usage of the car. Therefore, W measures the lease liability at the commencement date of the lease as zero.

The lease payments are expensed as the car is used and are recognised as a lease expense in profit and loss.

(Note there are specific disclosure requirements).

**Example 2A – Variable lease payments dependent on an index**

Lessee Z rents an office building for a four-year term, commencing on 1 July 2018. The lease payment is \$50,000 per year (payable at the beginning of each year), indexed annually for the change in the consumer price index (CPI) for the preceding year.

At the commencement date, the CPI for the previous year is 120. Z incurs no initial direct costs to enter into the lease and does not receive any lease incentives.

Z uses its incremental borrowing rate of 4% p.a. as its discount rate.

The measurement of the lease liability at commencement of the lease is based on the payment made on the commencement date – i.e. Z does not estimate future changes in CPI and the impact on future lease payments. Z assumes an annual rental of \$50,000 for the remaining three lease payments.

At commencement date, Z measures the lease liability at the present value of the remaining three lease payments of \$50,000 each, discounted at 4%, which is \$138,754 as illustrated in the following table.

Year	Lease payment (A)	Discount factor @ 4% (B)	Present value of lease payment* (A x B)	Lease liability			
				Beginning balance (C)	Lease payment (D)	Interest expense* [E=(C-D)*4%]	Ending balance (F=C-D+E)
1	-	-	-	138,754	-	5,550	144,304
2	50,000	0.96153	48,077	144,304	50,000	3,772	98,076
3	50,000	0.92455	46,228	98,076	50,000	1,924	50,000
4	50,000	0.88899	44,450	50,000	50,000	-	-
	150,000		138,754		150,000	11,246	

* The lease payments are made at the beginning of each year.

Z records the following entries for the first year.

	Debit (\$)	Credit (\$)
Right-of-use asset	188,754	
Lease liability		138,754
Cash (payment for Year 1)		50,000
<i>To recognise lease at commencement date (1 July 2018)</i>		
Interest expense (\$138,754 x 4%)	5,550	
Lease liability		5,550
<i>To recognise interest expense at the end of Year 1 (30 June 2019)</i>		
Depreciation expense (\$188,754 ÷ 4)	47,188	
Accumulated depreciation right-of-use asset		47,188
<i>To recognise straight-line depreciation charge at the end of Year 1 (30 June 2019)</i>		



Example 3A – Variable lease payments dependent on future market rent reviews

Lessee LE enters into a 4-year lease of a property, commencing on 1 July. The lease payments are initially \$50,000 p.a. (payable at the beginning of each year). The contract includes a clause specifying that at the beginning of the third year, a Market Rent Review will occur to adjust the lease payments to reflect a fair market rent for the remaining term. LE incurs no initial direct costs to enter into the lease and does not receive any lease incentives. Assume that the interest rate implicit in the lease is 4% p.a.

The lease payments that are subject to the Market Rent Review escalation provision, that is, the lease payments that vary to reflect changes in market rental rates are considered variable lease payments based on an index or a rate. Consistent with example 2A above, the initial measurement of the lease liability is based on the lease payment paid at the commencement date – i.e. LE does not estimate the impact of the market rent review on future lease payments. It assumes an annual rental of \$50,000 for the remaining three lease payments.

At commencement date, LE pays the lease payment for the first year and measures the lease liability at the present value of remaining three payments of \$50,000, discounted at 4%, which is \$138,754 (see example 2A above for calculation of the present value of the lease payments).

LE records the following entries for the first year.

	Debit (\$)	Credit (\$)
Right-of-use asset	188,754	
Lease liability		138,754
Cash (payment for Year 1)		50,000
<i>To recognise lease at commencement date (1 July)</i>		

Interest expense (\$138,754 x 4%)	5,550	
Lease liability		5,550
<i>To recognise interest expense at the end of Year 1 (30 June)</i>		
Depreciation (\$188,754 ÷ 4)	47,188	
Right-of-use asset		47,188
<i>To recognise straight-line depreciation charge at the end of Year 1 (30 June)</i>		



Example 4A – Variable lease payments depending on the higher of changes in an index and a fixed rate

Lessee L enters into a 5-year lease of a warehouse, commencing on 1 July. The lease payments are initially \$100,000 p.a. (payable at the beginning of each year). The contract includes an escalation clause specifying that the lease payment for each year (excluding the first year of the lease) will increase by the higher of the annual increase in the CPI for the preceding 12 months, or 2%. At the commencement date, the CPI for the previous year is 120. L incurs no initial direct costs to enter into the lease and does not receive any lease incentives. Assume that the interest rate implicit in the lease is 4% p.a.

At commencement date, L makes the lease payment for the first year and measures the lease liability based on an increase of 2% per year, that is, lease payments of \$102,000 in Year 2, \$104,040 in Year 3, \$106,121 in Year 4, and \$108,243 in Year 5. Based on the amount paid at commencement date, L is required to make payments of at least these amounts, regardless of the movement in the CPI.

The lease liability at the present value of remaining payments, discounted at 4%, is \$381,136, as illustrated in the following table.

Year	Lease payment (A)	Discount factor @ 4% (B)	Present value of lease payment* (A x B)	Lease liability			
				Beginning balance (C)	Lease payment (D)	Interest expense* [E=(C-D)*4%]	Ending balance (F=C-D+E)
1	-	-	-	381,136	-	15,245	396,381
2	102,000	0.96153	98,077	396,381	102,000	11,775	306,156
3	104,040	0.92455	96,191	306,156	104,040	8,085	210,201
4	106,121	0.88899	94,341	210,201	106,121	4,163	108,243
5	108,243	0.85480	92,527	108,243	108,243	-	-
	420,404		381,136		420,404	39,268	

*The lease payments are made at the beginning of each year.

L records the following entries for the first year.

	Debit (\$)	Credit (\$)
Right-of-use asset	481,136	
Lease liability		381,136
Cash (payment for Year 1)		100,000
<i>To recognise lease at commencement date (1 July)</i>		
Interest expense (\$381,136 x 4%)	15,245	
Lease liability		15,245
<i>To recognise interest expense at the end of Year 1 (30 June)</i>		
Depreciation (\$481,136 ÷ 5)	96,227	
Right-of-use asset		96,227
<i>To recognise straight-line depreciation charge at the end of Year 1 (30 June)</i>		



Example 5A – Variable lease payments depending on the lower of changes in an index and a fixed rate

Lessee P enters into a 5-year lease of a warehouse, commencing on 1 July. The lease payments are initially \$100,000 p.a. (payable at the beginning of each year). The contract includes an escalation clause specifying that the lease payment for each year (excluding the first year of the lease) will increase by the lower of the annual increase in the CPI for the preceding 12 months, or 5%. At the commencement date, the CPI for the previous year is 120. P incurs no initial direct costs to enter into the lease and does not receive any lease incentives. Assume that the interest rate implicit in the lease is 4% p.a.

In this case, the initial measurement of the lease liability would be based on the lease payments at the commencement date – i.e. P does not estimate future changes in CPI and assumes an annual rental of \$100,000 for the remaining four lease payments.

P makes the lease payment for the first year and measures the lease liability at the present value of remaining four lease payments of \$100,000 each, discounted at 4%, which is \$362,989, as illustrated in the following table.

Year	Lease payment (A)	Discount factor @ 4% (B)	Present value of lease payment* (A x B)	Lease liability			
				Beginning balance (C)	Lease payment (D)	Interest expense* [E=(C-D)*4%]	Ending balance (F=C-D+E)
1	-	-	-	362,989	-	14,520	377,509
2	100,000	0.96153	96,154	377,509	100,000	11,100	288,609
3	100,000	0.92455	92,455	288,609	100,000	7,545	196,154
4	100,000	0.88899	88,900	196,154	100,000	3,846	100,000
5	100,000	0.85480	85,480	100,000	100,000	-	-
	400,000		362,989		400,000	37,011	

*The lease payments are made at the beginning of each year.

P records the following entries for the first year.

	Debit (\$)	Credit (\$)
Right-of-use asset	462,989	
Lease liability		362,989
Cash (payment for Year 1)		100,000
<i>To recognise lease at commencement date (1 July)</i>		
Interest expense (\$362,989 x 4%)	14,520	
Lease liability		14,520
<i>To recognise interest expense at the end of Year 1 (30 June)</i>		
Depreciation (\$462,989 ÷ 5)	92,598	
Right-of-use asset		92,598
<i>To recognise straight-line depreciation charge at the end of Year 1 (30 June)</i>		

Remeasurement of lease liability

AASB 16.42-43, B42

A lessee remeasures the lease liability when there is a change in future lease payments resulting from a change in the index or rate that is used to determine those payments. For example, a change in lease payment to reflect changes in market rental rates following a market rent review would result in the lessee remeasuring the lease liability.

The lessee would use the same discount rate as used at inception, unless the lease payments vary according to interest rates, in which case, the discount rate will change on remeasurement to reflect the changes in the interest rate.

All of the following examples assume an increase in the index or rate that is used to determine the future lease payments. The remeasurement of the lease liability therefore results in an increase in the lease liability. The same principles would apply if there was a decrease in the rate or index that is used to determine the lease payments. In such circumstances the remeasurement would result in a decrease to the lease liability.



Example 2B – Variable lease payments dependent on an index

Assume the same facts as in example 2A above. At the end of the first year the CPI has increased to 121.2. Therefore, the lease payment on 1 July 2019 for the second year would be \$50,500 (adjusted for the increase in CPI: $\$50,000 \times 121.2 \div 120$).

Z remeasures the lease liability to reflect the revised lease payments at the beginning of the second year of the lease. Z does not estimate future changes in CPI. It remeasures the lease liability based on three annual lease payments of \$50,500. The revised lease liability calculated at the present value of three payments of \$50,500 discounted at an unchanged discount rate of 4%p.a. is \$145,748 (as illustrated in the table below).

Year	Lease payment (A)	Discount factor @ 4% (B)	Present value of lease payment* (A x B)	Lease liability			
				Beginning balance (C)	Lease payment (D)	Interest expense [E=(C-D)*4%]	Ending balance (F=C-D+E)
2	50,500	1	50,500	145,748	50,500	3,810	99,057
3	50,500	0.96153	48,558	99,057	50,500	1,943	50,500
4	50,500	0.92455	46,690	50,500	50,500	-	-
	151,500		145,748		151,500	5,753	

*The lease payment for second year is not discounted as the lease payments are made at 1 July each year.

At the beginning of the second year, before any adjustments including any payment, the lease liability would be \$144,304 (See Example 2A). Z increases the lease liability by \$1,444, which represents the difference between the revised amount of \$145,748 and its previous carrying amount of \$144,304. The corresponding adjustment is made to the right-of-use asset.

Z records the following entries for the second year.

	Debit (\$)	Credit (\$)
Right-of-use asset	1,444	
Lease liability		1,444
<i>To recognise remeasurement at the beginning of the second year (1 July 2019)</i>		
Lease liability	50,500	
Cash (payment for Year 2)		50,500
<i>To recognise payment for Year 2 at the beginning of the second year (1 July 2019)</i>		
Interest expense $[(\$145,748 - \$50,500) \times 4\%]$	3,810	
Lease liability		3,810
<i>To recognise interest expense for the second year at the end of Year 2 (30 June 2020)</i>		
Depreciation $[(\$188,754 - \$47,188 + \$1,444) \div 3]$	47,670	
Right-of-use asset		47,670
<i>To recognise straight-line depreciation charge for the second year at the end of Year 2 (30 June 2020)</i>		



Example 3B – Variable lease payments dependent on future market rent reviews

Assume the same facts as in Example 3A above. At the beginning of third year, the lease payments are increased to \$55,000 p.a. based on a market rent review as per the terms of the contract.

Because the lease payments are variable lease payments that depend on an index or a rate, LE remeasures the lease liability to reflect the revised lease payments. The revised lease liability is calculated at the present value of two payments of \$55,000 discounted at an unchanged discount rate of 4%p.a.

A corresponding adjustment is made to the right-of-use asset. Consistent with Example 2B, both depreciation expense and interest expense will increase prospectively compared to the amounts estimated at commencement date.



Example 4B – Variable lease payments depending on the higher of changes in index and a fixed rate

Assume the same facts as in example 4A above. At the end of the first year the CPI has increased to 123.6.

Therefore, the lease payment on 1 July 2019 for the second year would be \$103,000 (i.e. $\$100,000 \times 123.6 \div 120$).

This adjusted amount which reflects the amount paid at the beginning of the second year becomes the new base payment to which the fixed rate of 2% is applied for remeasuring the lease liability. The lease liability calculated at the present value of revised lease payments discounted at an unchanged discount rate of 4% p.a. is \$400,266 (as illustrated in the table below).

Year	Lease payment (A)	Discount factor @ 4% (B)	Present value of lease payment* (A x B)	Lease liability			
				Beginning balance (C)	Lease payment (D)	Interest expense [E=(C-D)*4%]	Ending balance (F=C-D+E)
2	103,000	1	103,000	400,266	103,000	11,891	309,157
3	105,060	0.96153	101,019	309,157	105,060	8,164	212,261
4	107,161	0.92455	99,076	212,261	107,161	4,204	109,304
5	109,304	0.88899	97,171	109,304	109,304	-	-
	424,525		400,266		424,525	24,259	

*The lease payment for second year is not discounted as the lease payments are made at the beginning of each year.

At the beginning of the second year, before any adjustments including payment, the lease liability would be \$396,381 (see Example 4A). L increases the lease liability by \$3,885, which represents the difference between the revised amount of \$400,266 and its previous carrying amount of \$396,381. The corresponding adjustment is made to the right-of-use asset.

L records the following entries for the second year.

	Debit (\$)	Credit (\$)
Right-of-use asset	3,885	
Lease liability		3,885
<i>To recognise remeasurement at the beginning of Year 2 (1 July)</i>		
Lease liability	103,000	
Cash (payment for Year 2)		103,000
<i>To recognise payment for Year 2 at the beginning of Year 2 (1 July)</i>		
Interest expense [(\$400,266 – \$103,000)x4%]	11,891	
Lease liability		11,891
<i>To recognise interest expense for the second year at the end of Year 2 (30 June)</i>		
Depreciation [(\$481,136 – \$96,227+\$3,885)÷4]	97,199	
Right-of-use asset		97,199
<i>To recognise straight-line depreciation charge for the second year at the end of Year 2 (30 June)</i>		



Example 5B – Variable lease payments depending on the lower of changes in index and a fixed rate

Assume the same facts as in example 5A above. At the end of the first year the CPI has increased to 123.6. Therefore, the lease payment on 1 July 2019 for the second year would be \$103,000 (i.e. $\$100,000 \times 123.6 \div 120$).

This adjusted amount which reflects the amount paid at the beginning of the second year becomes the new base payment for remeasuring the lease liability. The revised lease liability calculated at the present value of four lease payments of \$103,000 each discounted at an unchanged discount rate of 4% p.a. is \$388,834 (as illustrated in the table below).

Year	Lease payment (A)	Discount factor @ 4% (B)	Present value of lease payment* (A x B)	Lease liability			
				Beginning balance (C)	Lease payment (D)	Interest expense [E=(C-D)*4%]	Ending balance (F=C-D+E)
2	103,000	1	103,000	388,834	103,000	11,433	297,267
3	103,000	0.96153	99,038	297,267	103,000	7,771	202,038
4	103,000	0.92455	95,229	202,038	103,000	3,962	103,000
5	103,000	0.88899	97,567	103,000	103,000	-	-
	412,000		388,834		412,000	23,166	

*The lease payment for second year is not discounted as the lease payments are made at the beginning of each year.

At the beginning of the second year, before any adjustments including payment, the lease liability would be \$377,509 (see Example 5A). P increases the lease liability by \$11,325, which represents the difference between the revised amount of \$388,834 and its previous carrying amount of \$377,509. The corresponding adjustment is made to the right-of-use asset.

P records the following entries for the second year.

	Debit (\$)	Credit (\$)
Right-of-use asset	11,325	
Lease liability		11,325
<i>To recognise remeasurement for the second year at the beginning of Year 2 (1 July)</i>		
Lease liability	103,000	
Cash (payment for Year 2)		103,000
<i>To recognise payment for the second year at the beginning of Year 2 (1 July)</i>		
Interest expense [(\$388,834 – \$103,000) x 4%]	11,433	
Lease liability		11,433
<i>To recognise interest expense for the second year at the end of Year 2 (30 June)</i>		
Depreciation [(\$462,989 – \$92,598 + \$11,325) ÷ 4]	95,429	
Right-of-use asset		95,429
<i>To recognise straight-line depreciation charge for the second year at the end of Year 2 (30 June)</i>		

Further information

For more information about the requirements of AASB 16 *Leases* and related KPMG resources, please refer to our global [IFRS – Leases](#) site.

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