

TREASURER'S DIRECTIONS

ACCOUNTING – ASSETS

Section A2.3 : Depreciation and Amortisation

STATEMENT OF INTENT

The objective in depreciating assets is to allocate the value of non-current assets over their expected useful lives. This Section explains the depreciation concept and requirements relating to the depreciation of non-current assets with limited useful lives. The amortisation of non-current intangible assets is also addressed.

MAIN FEATURES

Section 38 of the *Financial Management Act* requires every Accountable Officer and every employee of an Agency to comply with the Treasurer's Directions.

Depreciation

- Depreciation is the systematic allocation of the value of a non-current tangible asset less any residual value over its expected useful life.
- Depreciation is to be recognised as an expense in the Operating Statement.
- In the case of non-current intangible assets, the term amortisation is used rather than depreciation.

Expected Useful Life of an Asset

- The expected useful life of an asset is the estimated period of time over which an asset is expected to be available for use by an Agency.
- Agency assets are to be depreciated using the useful lives specified in this Treasurer's Directions Section.

Depreciation Method

- Unless approval has been obtained to use an alternative depreciation method, the straight line method of calculating depreciation is to be used.

Depreciation, Revaluation and Impairment

- Where the value of an Agency asset has been adjusted as a result of revaluation and/or impairment, the adjusted value of the asset will be depreciated over the remaining useful life of the asset.

For authoritative instruction and guidance, reference should be made to related Treasurer's Directions and associated commentary, relevant Australian accounting standards and other authoritative interpretations.

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AUTHORITIES

Financial Management Act

REFERENCES

AASB 101	Presentation of Financial Statements
AASB 116	Property, Plant and Equipment
AASB 117	Leases
AASB 136	Impairment of Assets
AASB 138	Intangible Assets
UIG 1030	Depreciation of Long Lived Physical Assets : Condition Based Depreciation and Other Related Methods

Related Treasurer's Directions:

A1.1	Accounting – Introduction : Accrual Accounting
A2.1	Accounting – Assets : Overview
A2.2	Accounting – Assets : Property, Plant and Equipment
A2.4	Accounting – Assets : Revaluation
A2.5	Accounting – Assets : Improvements and Repairs and Maintenance
A2.10	Accounting – Assets : Impairment of Assets

WHAT IS DEPRECIATION AND AMORTISATION ?

A2.3.1 **Depreciation is the systematic allocation of the cost (or other value) of a non-current tangible asset, less any residual value, over its expected useful life. Depreciation expense is to be recognised in the Operating Statement.**

- (i) Depreciation refers to the process of allocating the value (cost or fair value) of assets over their expected useful lives. Depreciation applies only to non-current assets such as buildings, infrastructure and plant and equipment that have limited useful lives and a service potential that declines with use or over time.
- (ii) Land is not subject to depreciation as it is deemed to have an infinite life and its service potential does not decline with use. In addition, depreciation does not apply to current assets and certain non-current assets such as:
 - Works or construction in progress (not depreciated until the asset is completed and ready for use);
 - Receivables;
 - Investments;
 - Inventories;
 - Investment properties; and
 - Non-current assets held for sale.
- (iii) The recognition of depreciation as an expense assists in determining the full cost of outputs and in assessing asset performance. The depreciation concept also provides Agency management with a view of the asset's remaining useful life and assists in ongoing asset management such as replacement planning.
- (iv) Depreciation expense is recognised from the time when the asset is available for use. In certain situations, assets may need to be specifically installed and/or commissioned. In these cases depreciation would commence from the date when installation and/or commissioning is complete, not the time the asset is received.
- (v) Depreciation of an asset ceases at the date the asset is derecognised, therefore unless the asset is fully depreciated, depreciation does not cease when the asset becomes idle or is retired from active use. An asset is derecognised either on disposal or when no future economic benefits are expected from its use.
- (vi) Reference should be made to Treasurer's Directions Sections A2.1 and A2.2 for an overview of assets and property, plant and equipment requirements.

A2.3.2

Amortisation is the systematic allocation of the cost (or other value) of a non-current intangible asset over its expected useful life. Amortisation expense is to be recognised in the Operating Statement.

- (i) The term amortisation applies in relation to intangible non-current assets with limited useful lives (for example, a significant off-the-shelf software package). In rare cases certain intangible assets may have indefinite or indeterminable lives. Such assets are not subject to amortisation but are tested annually for impairment.
- (ii) Amortisation is calculated and accounted for in a similar manner to depreciation. For the purposes of these Treasurer's Directions, references to depreciation encompass amortisation unless otherwise stated.

A2.3.3

Accumulated depreciation is the total amount of depreciation expensed in respect of a particular asset at a given point of time after any adjustments resulting from revaluations and asset impairment.

- (i) Accumulated depreciation is the loss of service potential recognised to date. Accumulated depreciation for any one depreciable asset cannot exceed the value of that asset. Accumulated depreciation is recorded as a reduction in the gross value of the asset in the Balance Sheet and is referred to as a 'contra asset'.

A2.3.4

The carrying amount of an asset is the asset's cost (or other value) less any accumulated depreciation and any accumulated impairment losses in relation to that asset.

- (i) An asset's carrying amount (written down value) may also be defined as the value of the asset's remaining service potential at a given point of time.

WHAT IS THE EXPECTED USEFUL LIFE OF AN ASSET ?

A2.3.5

The expected useful life of an asset is the estimated period of time over which an asset is expected to be available for use by an Agency.

A2.3.6

Agency assets are to be depreciated using the expected useful lives specified in Appendix A.

- (i) The expected useful life of an asset is the estimated period of time which an asset is expected to be available for use by the Agency. The estimated period of use may vary from the expected life span of the asset (for example, motor vehicles that are disposed of after two years even though their expected life span is longer than two years).
- (ii) A list of expected useful lives for most types of Agency assets is provided at Appendix A. In certain circumstances the same or similar assets may have varying useful lives where Agency use varies. Where practical, a range of expected useful lives is provided in Appendix A. Agencies may utilise useful lives within these ranges to better suit individual Agency asset use. The useful lives in Appendix A will be used by all Agencies to ensure consistency across Government.
- (iii) Where an asset produces or delivers readily measurable units it may be appropriate to determine a useful life based on total units rather than time. Additional requirements for depreciating a non-current asset based on total units are provided at Treasurer's Direction A2.3.14 (iii).
- (iv) In situations where parts of an Agency asset can be identified individually, and the asset has a significant value, each part with a cost significant in relation to the total cost of the item may be depreciated separately. In practice, parts of assets would only be individually identified and separately depreciated where the value of the asset was significant and the parts of the asset have different useful lives.
- (v) Spares purchased specifically for a particular asset, or class of assets, which would become redundant if that asset or class were retired are considered to form part of the historical cost of that asset or class. The depreciable amount of such spares is allocated over the useful life of the asset or class. This is also discussed further in Treasurer's Direction A2.3.17 (ii).

A2.3.7

Where the application of an alternative useful life will have a material impact on an Agency's operating result, approval is to be obtained from the Under Treasurer to vary the useful life of an asset or class of assets to that provided in Appendix A.

- (i) Agencies may encounter situations where the useful life of an asset is significantly different to the life specified in Appendix A. Where the application of an alternative useful life will have a material impact on an Agency's operating result approval is to be sought from the Under Treasurer prior to recognising the different useful life. Each Agency should consider the materiality of the change in useful life for current and future financial years.
- (ii) Approval from the Under Treasurer to vary the useful life of an asset or class of assets from that provided in Appendix A, will be sought in writing and should include:
- a clear description of the asset or class of assets to which the request relates;
 - the total value of the asset or class of assets to which the request relates;
 - details of the proposed useful life and proposed commencement date;
 - the reasons for seeking to vary the useful life;
 - quantification of the effect of varying the useful life; and
 - other information relevant to the request.
- (iii) Factors that may be considered in estimating the expected useful life of an asset include:
- expected physical wear and tear in excess of that which maintenance can restore;
 - obsolescence, both technical and commercial;
 - specific business planning and optimum replacement timing; and
 - legal or other limits on the use of the asset.
- (iv) The useful life of an asset will take account of the period of time over which the asset will be practically utilised by the Agency. For example:

Example 1: Although certain computer hardware may become technically obsolete within 3 years, it may physically last for 10 years. The appropriate useful life in this case will be the period of time that the Agency expects to utilise the asset. Where the Agency practically intends to use and replace the asset after 5 years of use, the expected useful life would be 5 rather than 3 years.

Example 2: In the case of motor vehicles, a decision is made to replace the vehicles after 2 years. This decision is made so that optimum disposal returns can be obtained. The useful life of these vehicles would be 2 years despite the fact that such vehicles may physically last for 10 years.

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- (v) Assets that can be used only in connection with a specific leased property (for example, certain fixtures and fittings) will be depreciated over the unexpired period of the lease or the useful lives of the assets provided in Appendix A, whichever is the shorter.
- (vi) Where the lease is expected to be renewed on maturity, it is appropriate to consider the extended term of the lease for the purposes of depreciating assets used in connection with the relevant leased property. The expectation that the lease will be renewed should be based on reasonable and supportable assumptions.

WHAT IS THE DEPRECIABLE AMOUNT OF AN ASSET ?

A2.3.8

The depreciable amount of an asset is the cost (or other value) less residual value of the asset.

A2.3.9

Residual value is the net amount expected to be recovered on disposal of the asset at the end of its useful life.

- (i) The depreciable amount of an asset allocated over the expected useful life of the asset determines the amount of depreciation expense.
- (ii) The residual value is the estimated net proceeds from the disposal of an asset at the end of its useful life. The estimate of residual value can be based on the net amount currently expected to be recovered for similar assets that have reached the end of their useful lives, for example, recent auction prices for vehicles and equipment. Similar assets are assets similar in type and use.

A2.3.10

Residual values of material assets are to be reviewed for reasonableness at the end of each annual reporting period.

- (i) In practice most Government assets will have a useful life that approximates the economic life of the asset and as such residual values will be 'nil' or insignificant. However, where material assets have a residual value these are to be reviewed annually 'as at 30 June'. If expectations of the residual value differ from previous estimates, any significant change(s) are to be accounted for as a change in an accounting estimate. Treasurer's Directions Section A1.1 provides instruction and guidance in relation to changes in accounting estimates.

DEPRECIATION METHOD

A2.3.11

Unless prior approval has been obtained in accordance with Treasurer's Direction A2.3.12, Agency assets are to be depreciated using the straight line method.

- (i) Depreciation expense under the straight line method is constant from one reporting period to another. Under the straight line method the depreciable amount of an asset is allocated at a constant rate from the date the asset is ready for use or in some cases such as constructed assets, from the date when installation and/or commissioning is complete.
- (ii) The straight line method has been mandated for Agencies as it will provide consistency from a whole of government reporting perspective and because the straight line method is recognised as being simple to use, is well understood and widely adopted in both the public and private sectors. The straight line method provides a good approximation of use of the service potential embodied in an asset and will provide materially correct depreciation expense figures for a vast majority of Agency assets.
- (iii) The amount of depreciation under the straight line method is calculated as follows:
- $$\frac{\text{Depreciable amount}}{\text{Expected useful life of the asset (years)}} = \text{Annual Depreciation Expense}$$
- (iv) Appendix B provides an example of calculating depreciation using the straight line method.

A2.3.12

Where an Agency considers that the straight line method is not appropriate, approval is to be obtained from the Under Treasurer before an Agency uses an alternate method for depreciating material asset classes.

A2.3.13

Where an alternate depreciation method is approved, the alternate method is to be applied consistently irrespective of the financial result for any one reporting period or whether the asset has been revalued.

A2.3.14

The approved alternate depreciation method is only to be applied to those assets or asset classes specified and are to be consistently applied to assets similar in type and use.

- (i) The straight line method is expected to be appropriate for a vast majority of Agency assets. However, there may be situations where an alternate method will more accurately reflect the pattern of use of an asset or asset class. Any assessment of alternate depreciation methods should take account of the materiality of the asset or asset class and the relative impact on depreciation expense.

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- (ii) Approval from the Under Treasurer to use an alternate method for depreciating assets, will be sought in writing and should include:
- a clear description of the asset or class of assets to which the request relates;
 - the total value of the asset or class of assets to which the request relates;
 - a description of the proposed method and proposed commencement date;
 - the reasons for seeking use of an alternative depreciation method;
 - quantification of the effect of using the straight line method and the proposed alternative; and
 - other information relevant to the request.
- (iii) The two common alternate methods of depreciating non-current assets are:
- reducing balance method – calculates the depreciation expense by applying a set percentage each year. This method is useful where the asset is expected to yield more service in earlier reporting periods than in later periods; and
 - units of use method – allocates depreciation in terms of the units of production or usage rather than on the basis of time, for example depreciation of a drilling rig based on drilling hours.
- (iv) Agencies should be aware that the Australian Accounting Standards restrict the use of condition based depreciation and other similar methods of depreciation for long-lived assets.
- (v) It is important that a depreciation method is consistently applied from one reporting period to the next. In addition, the depreciation methods should be applied consistently to assets similar in type and use. For example, where the units of use method is applied to a particular type of truck, then it must also be applied to all the other trucks of that type, used for similar purposes.

DEPRECIATION, REVALUATION AND IMPAIRMENT

A2.3.15 Where an Agency asset is revalued, the revalued amount of the asset is to be depreciated over the remaining useful life of the asset.

A2.3.16 Following the recognition of an impairment loss, the depreciation of an Agency asset is to be adjusted in future periods to allocate the asset's revised carrying amount over its remaining useful life.

- (i) Revaluation is the act of recognising a reassessment of the value of an asset at a particular date. Treasurer's Directions Section A2.4 provides instruction and guidance relating to the revaluation of non-current assets.
- (ii) A revaluation increment increases the value of an asset and a revaluation decrement decreases the value of an asset. The revalued amount (new value) of a non-current asset is depreciated over the remaining useful life of the asset.
- (iii) Provided the remaining useful life of the non-current asset remains unchanged, a revaluation increment will result in an increase in future depreciation expense, while a revaluation decrement will result in a decrease in future depreciation expense.
- (iv) An example of the effect of revaluation of a non-current asset on the asset's depreciation is provided at Appendix C.
- (v) An impairment loss is recognised when the carrying amount of an asset exceeds its recoverable amount. In recognising an impairment loss the depreciation of an asset is to be adjusted in future periods to allocate the asset's revised carrying amount over its remaining useful life. Additional instruction and guidance in relation to impairment may be found in Treasurers Directions Section A2.10.

DEPRECIATION AND IMPROVEMENTS TO EXISTING ASSETS

A2.3.17	Improvements to an existing Agency asset that do not extend the expected useful life of the asset, are to be added to the value of the asset and depreciated over the asset's remaining useful life.
A2.3.18	Improvements that extend the expected useful life of an existing Agency asset are to be added to the value of the existing asset and depreciated over the extended useful life of the asset.
A2.3.19	Where the useful life of an Agency asset is extended as a result of improvement works, the remaining useful life of the asset is not to exceed the expected useful life for that asset noted in <u>Appendix A</u> .

- (i) Where an asset is improved, the value of the existing asset will be depreciated over either its remaining useful life or its extended useful life, depending on the nature of the improvement (for example, the improvement works may increase the useful life of the asset or the works may increase the service potential of the asset). Requirements relating to asset improvements are provided in Treasurer's Directions Section A2.5.
- (ii) Spare parts and servicing equipment are usually carried as inventory and recognised in the Operating Statement as consumed. However, major spare parts and stand-by equipment would qualify as an asset if these spare parts meet the asset recognition criteria included in Treasurer's Directions Section A2.1. If the spare parts and servicing equipment can be used only in connection with an existing Agency asset, then they can be accounted for in the carrying amount of the existing asset and depreciated over the useful life of that asset.
- (iii) Where an existing asset requires a significant part to be replaced, an Agency may recognise in the carrying amount of the asset the cost of replacing the part when that cost is incurred and if the asset recognition criteria included in Treasurer's Directions Section A2.1 are met. If it meets the recognition criteria the carrying amount of the parts replaced are to be derecognised, regardless of whether the replaced part had been separately depreciated. If it is not practicable for an entity to determine the carrying amount of the replaced part, it may use the cost of the replacement as an indication of what the cost of the replaced part was at the time it was acquired or constructed.
- (iv) Appendix D provides an example of improvements to existing non-current assets and the depreciation of such improvements.

SCHEDULE OF EXPECTED USEFUL LIVES FOR NON-CURRENT ASSETS

Class and Type of Asset	Expected Useful Life (Years)
Buildings – Standard Class 842000	
Hospitals	50
Housing –	
• Urban	50
• Remote	40
Parliament / Supreme Court buildings	100
Public buildings	50
Sheds / demountables	10 – 20
Infrastructure Assets – Standard Class 843000	
Bridges	70
Hydraulic structures (sewers, culverts, dams, retarding basins, etc.)	50
Marine structures (jetties, marinas, wharves, etc)	50
Roads and footways-	
1. Sealed pavement	40
2. Road formation	Infinite – not depreciated
3. Unsealed pavement	8
Street lights	20
Traffic control systems	15
Plant and Equipment – Standard Class 845000, 847000 & 848000	
Aircraft (general use)	8
Armoury	8
Buses	15
Catering equipment	5 – 15
Computer hardware (includes servers, hubs, switches, routers, desktops and laptops)	3 – 6
Furniture and fittings (including fit-out in Government owned buildings)	10
Fit-out (on leased premises only)	10 *
Garbage collection trucks / waste disposal vehicles	6
Laundry equipment	5 – 15
Library collections (where recognised as assets)	5
Medical / ophthalmic / dental equipment	5 – 15

* or remaining life of the lease (including expected renewals) where less than 10 years.

APPENDIX A (continued)

SCHEDULE OF EXPECTED USEFUL LIVES FOR NON-CURRENT ASSETS

Class and Type of Asset	Expected Useful Life (Years)
Plant and Equipment – Standard Class 845000, 847000 & 848000	
Motor vehicles –	
• special purpose, high turnover (example, Police)	1
• general (replaced after 2 years)	2
• other (not replaced after 2 years)	5
• heavy duty (example, tankers, fire vehicles, bulldozers, etc.)	10
Musical equipment	5 – 15
Office equipment (excludes computer equipment and furniture)	5 – 10
Power generators	5 – 10
Printing plant	10
Pumping equipment	
• high wear (for example, high use salt water pumps)	2 – 5
• normal wear	5 – 10
Scientific equipment	5 – 10
Security systems	5 – 10
Sports / recreational equipment	2 – 5
Survey equipment	5 – 10
Telephone / radio / communication equipment	3 – 10
Temperature control systems (example, air conditioning plant, boilers, chillers, etc)	
• industrial	15 – 20
• small plant	10 – 15
Vessels	10
Waste disposal machines	10
Cultural Assets* – Standard Class 849000	
Artworks / sculptures	100
Monuments / war memorials	100
Intangibles – Standard Class 846000 & 850000	
Software – general (off the shelf)	2 – 5
Software – Corporate Systems	5 – 10

* Artworks and heritage and cultural assets that do not have a material or measurable reduction in service potential over time are not depreciated.

CALCULATION OF DEPRECIATION USING THE STRAIGHT LINE METHOD – EXAMPLE

Asset Type	Scientific equipment
Date of Purchase	1 July 2002
Cost	\$ 50,000 (GST exclusive)
Expected Useful Life	9 years
Estimated Residual Value	\$ 5,000
Depreciable Amount	\$ 50,000 - \$ 5,000 = \$ 45,000
Depreciation Expense	$\frac{\$ 45,000}{9 \text{ (years)}} = \$ 5,000$
Assumption	Asset valued at cost (no revaluation) No impairment loss adjustment

	Year	Depreciation expense for the year	Accumulated Depreciation balance at year end	Carrying Amount at year end
		\$	\$	\$
1	2002-03	5,000	5,000	45,000
2	2003-04	5,000	10,000	40,000
3	2004-05	5,000	15,000	35,000
4	2005-06	5,000	20,000	30,000
5	2006-07	5,000	25,000	25,000
6	2007-08	5,000	30,000	20,000
7	2008-09	5,000	35,000	15,000
8	2009-10	5,000	40,000	10,000
9	2010-11	5,000	45,000	5,000

An example of the basic journal that would be expected to be processed in years 1 to 9 is as follows:

DR	Depreciation Expense	<i>(Increase in Expense – Operating Statement)</i>	\$5,000
CR	Accumulated Depreciation	<i>(Increase in Contra Asset – Balance Sheet)</i>	\$5,000

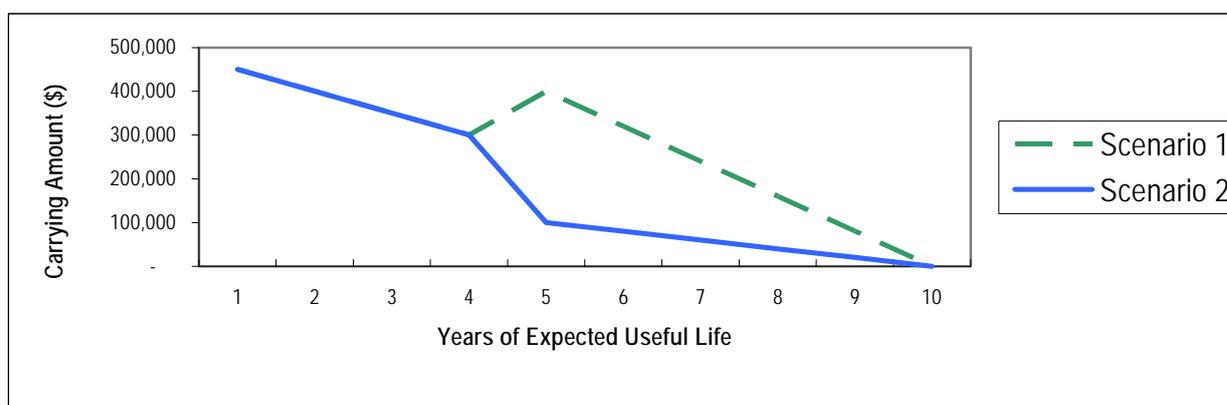
DEPRECIATION AND REVALUATION OF NON-CURRENT ASSETS – EXAMPLE

In situations where a non-current asset is revalued, the value of the asset must be increased by the amount of the revaluation increment or decreased by the amount of the revaluation decrement. The revalued amount (new value) should be depreciated over the remaining useful life of the asset.

Treasurer's Directions Section A2.4 provides guidance on revaluation of assets.

Cost of Non-Current Asset	\$500,000
Expected Useful Life	10 years
Residual Value	Nil
Depreciation Method	Straight Line Method
Revaluation	End of year 5
Scenario 1	Asset revalued to \$400,000 (*) – revaluation increment
Scenario 2	Asset revalued to \$100,000 (^) – revaluation decrement

Year	Scenario 1			Scenario 2		
	Opening Balance (\$)	Depreciation Expense (\$)	Carrying Amount (\$)	Opening Balance (\$)	Depreciation Expense (\$)	Carrying Amount (\$)
1	500,000	50,000	450,000	500,000	50,000	450,000
2	450,000	50,000	400,000	450,000	50,000	400,000
3	400,000	50,000	350,000	400,000	50,000	350,000
4	350,000	50,000	300,000	350,000	50,000	300,000
5	300,000	50,000	400,000	300,000	50,000	100,000
6	400,000 (*)	80,000	320,000	100,000 (^)	20,000	80,000
7	320,000	80,000	240,000	80,000	20,000	60,000
8	240,000	80,000	160,000	60,000	20,000	40,000
9	160,000	80,000	80,000	40,000	20,000	20,000
10	80,000	80,000	Nil	20,000	20,000	Nil



DEPRECIATION AND IMPROVEMENTS TO EXISTING ASSETS – EXAMPLE

Improvements to existing non-current assets that do not extend the useful life of the asset (for example, quality improvements) are added to the value of the asset and depreciated over the remaining useful life of the asset. However, improvements that extend the previously assessed useful life of an existing non-current asset are added to the value of the asset and depreciated over the extended useful life of the asset.

Treasurer's Directions Section A2.5 provides guidance on improvements to assets.

Cost of Non-Current Asset	\$100,000
Expected Useful Life	10 years
Residual Value	Nil
Depreciation Method	Straight Line Method
Improvement	\$40,000 on 1 July 2006 (\$50,000 + \$40,000) (*)
Scenario 1	Improvement increases service quality only
Scenario 2	Improvement extends useful life by 5 years

Year	Scenario 1			Scenario 2		
	Opening Balance (\$)	Depreciation Expense (\$)	Carrying Amount (\$)	Opening Balance (\$)	Depreciation Expense (\$)	Carrying Amount (\$)
1	100,000	10,000	90,000	100,000	10,000	90,000
2	90,000	10,000	80,000	90,000	10,000	80,000
3	80,000	10,000	70,000	80,000	10,000	70,000
4	70,000	10,000	60,000	70,000	10,000	60,000
5	60,000	10,000	50,000	60,000	10,000	50,000
6	90,000 (*)	18,000	72,000	90,000 (*)	9,000	81,000
7	72,000	18,000	54,000	81,000	9,000	72,000
8	54,000	18,000	36,000	72,000	9,000	63,000
9	36,000	18,000	18,000	63,000	9,000	54,000
10	18,000	18,000	Nil	54,000	9,000	45,000
11				45,000	9,000	36,000
12				36,000	9,000	27,000
13				27,000	9,000	18,000
14				18,000	9,000	9,000
15				9,000	9,000	Nil

