

# **Modelling Individual Australian Universities Resilience in Managing Overseas Student Revenue Losses from the COVID-19 Pandemic**

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*Summary* The predicted revenue losses of 38 Australian universities to 2024, as a result of the decrease in overseas student revenues linked to the COVID-19 pandemic, are modelled in this study. A 2020 outcome and two longer term scenarios to 2023-2024 are modelled. It is demonstrated that the universities face very serious challenges with varying degrees of financial management risk.

*Based on the analyses conducted universities are placed into three categories in accord with the financial management risk challenges that have been identified. Universities are predicted to face either high, medium or low risks over the period from the present to 2024, because of the loss of overseas fee revenue. Other sources of potential revenue loss and other COVID-19 related expenses have not been modelled in the present study.*

*Seven universities are placed in the highest financial management risk category – Monash, RMIT, University of Technology Sydney, La Trobe, Central Queensland, Southern Cross and Canberra universities. Another 13 universities are assessed to face medium financial management risk. The remaining 18 universities, just under half of the total sector institutions, have been categorised as facing management risks that are of lower severity. The nature of the risk varies according to the relative reliance on international fee revenue and the underlying financial resilience of individual institutions.*

*The adverse consequences of the COVID-19 pandemic on the university sector are both immediate and can be anticipated to endure for many years. Some strategic policy choices that will need to be made to varying degrees by universities to mitigate predicted losses are discussed. These choices are likely to result in changes to sector-wide operational practices more profound than anything experienced since the establishment of the unified national system in the early 1990s.*

## **1. Introduction**

In an earlier article (1) on the financial performance of Australian Universities over the decade 2009 to 2018 it was reported that the revenue for the sector had increased by 33% to \$33.94 billion in 2018. The evidence supported the conclusion that the health of the higher education sector was exceptionally strong. Most notable was the performance of the five universities (the U5 group) each with annual operating revenues of more than \$2 billion – Sydney, Melbourne, Monash, New South Wales and Queensland. A major contributing factor was very successful entrepreneurialism displayed in recruiting overseas students. Sector-wide overseas student numbers were 409,089 in 2018 - some 30% of all enrolled students. Overseas student fees accounted for \$8.839 billion; some 26% of total revenue. In celebrating this success story no

one foresaw the very different scenario for 2020 and beyond because of the COVID-19 pandemic.

In this article the potential impact of the COVID-19 pandemic on the overseas student revenue stream for all universities is modelled. Other factors, such as the need for new revenue outlays related to on-line learning and student welfare support, as well as domestic fee income and investment losses, will also affect the total losses being experienced by universities. Here we concentrate on the potential overseas student revenue losses that might accrue in 2020 and under both optimistic and pessimistic current and future student demand scenarios. The analysis confirms that the resilience of individual universities to deal with the impact of COVID-19 varies significantly. Changed on-going sector practices are expected to continue once the crisis has passed. Some universities are likely to face existential 'going concern' challenges which without additional funding will lead to major institutional restructuring and potentially extend to mergers and takeovers within the sector. Other universities will be severely compromised in terms of their research missions. In aggregate, these developments present a huge challenge to the viability of the current higher education system which has remained largely unchanged since the introduction of the Dawkins' Unified National System. This situation poses significant policy and funding issues for the Australian Government. Some earlier related brief comments by the authors may be found in three Campus Morning Mail articles (2).

## **2. Data and Analysis Methodology**

**2.1 The Data Set:** The data for this study are sourced from the Australian Government Department of Education data base for the financial performance of universities (3). The latest data publicly available is for 2018. The 2009 and 2018 data are used to establish 10 year trends in total revenue, overseas student fee revenue and net operating results.

The analysed financial primary data for 38 universities are presented in appendices A and B. In appendix A the universities are listed in column 1 in rank order in accordance with their overseas student revenue for 2018 presented in column 4. Revenue ranges from \$885 million for Sydney to \$4 million for Notre Dame. The 2009 overseas student revenue is shown in column 2. The overseas revenue as a percentage of total revenue is given in column 3 for 2009 and in column 5 for 2018. For 2018 overseas student revenues as a percentage of total revenues varied in 2018 from 35% for Sydney to 5% for Notre Dame. The percentage for a majority of universities is greater than 20% highlighting the very significant contribution overseas students have made to universities' finances.

The 2018 fee revenue as a multiple of the 2009 income is shown in column 6 of Appendix A. The sector average for 2018 overseas student revenue growth was 2.6 times the 2009 figure, with only 13 universities not at least doubling overseas student revenues over the decade. The 2018 total revenue and total expenses from continuing operations are given in columns 7 and 8 respectively.

The cash and investments of all universities at 31 December 2018 provided by the Department of Education (3) are listed in column 6 of appendix B. These reserves span a very wide range

from \$2.9 billion for Melbourne to \$51 million for Canberra and \$30 million for the more recently-established Notre Dame. The other columns in this appendix relate to fee losses to be discussed later in this article.

For the purpose of the present in-depth modelling the universities are clustered into four groups determined according to the size of their international student activities as listed in table 1. Group A is the cluster of 5 universities profiled previously (1) with overseas student revenues in 2018 in excess of \$500m. Group B includes 7 universities with 2018 revenues between \$200m and \$500m. Group C has 14 universities with overseas revenue in 2018 between \$100m and \$200m. The remaining 12 universities in group D had overseas student revenues of less than \$100m.

**Table 1. Groupings of Australian Universities According to Overseas Student Fee Revenue**

Group A Universities Fee Revenue >\$500 m	Group B Universities Fee Revenue \$200m to \$500m	Group C Universities Fee Revenue \$100m to \$200m	Group D Universities Fee Revenue < \$100m
Sydney	RMIT	Griffith	Flinders
Melbourne	UTS	Wollongong	Victoria
Monash	Deakin	Curtin	James Cook
UNSW	ANU	Charles Sturt	Southern Cross
Queensland	Macquarie	La Trobe	Aus Catholic Uni
	Adelaide	Swinburne	Sunshine Coast
	QUT	UWA	Murdoch
		Central Queensland	Canberra
		Western Sydney	Southern Queensland
		Federation	Charles Darwin
		Uni South Australia	New England
		Tasmania	Notre Dame
		Newcastle	
		Edith Cowan	

**2.2 Financial Analysis Model:** In this analysis the financial impact of COVID-19 is viewed in two dimensions. The first is a ‘snapshot’ presentation which models the capacity of individual institutions to withstand the one year shock of the impact of COVID-19 in 2020. The second examines the sustainability of institutions over a longer period of disruption. For the purposes of this analysis a timeframe for impact of five years, i.e. from 2020 to 2024 is assumed. Two models are examined: an optimistic scenario in which the overall impact is more moderate and an eventual ‘return to normal’ is achieved by the end of 2024; and a pessimistic scenario in which the financial impact is greater and in part enduring.

The potential fee revenue losses for all universities based on various scenarios to be discussed and the relationship of these losses to the current health of universities are shown in appendix B. For the purposes of this analysis estimates of fee revenue loss and the financial capacity of individual universities to deal with this loss in income are based on the financial position of

universities in 2018. This is a conservative estimate given other data indicating a further growth in international student enrolments and fee revenue in 2019.

### 3. Historical University Performances 2009 and 2018

As previously reported (1), the period 2009-18 has witnessed a remarkable expansion of international student programs across the whole of the Australian higher education sector. Total revenue grew by 260% from \$3.4 billion to \$8.8 billion (appendix A, columns 2 and 4). Over the same period, reflecting the relatively static nature of public funding and other sources of university revenue, international student revenue increased as a proportion of total university revenue from 16.7% to 26.2% (appendix A, columns 3 and 5).

In effect, Australian universities have become increasingly reliant on international student revenue. In other analyses it has been shown that this fee revenue is in part contributing to sustaining Australian university research programs and has been the major source of capital for expansion and upgrading of facilities on many university campuses (4).

The relative importance of the four clusters of universities in aggregate in terms of their contribution to international student activities is shown in table 2, ranked in appendix A according to overseas fee revenue.

**Table 2. Overseas Student Performance of Four Groups of Universities in Aggregate and Cash and Investments for 2018**

	Group A 5 Universities >\$500m	Group B 7 Universities \$200-\$500m	Group C 14 Universities \$100-\$200m	Group D 12 Universities <\$100m	All 38 Universities
Overseas Revenue \$ '000s	\$3,901,153	\$2,241,597	\$2,003,716	\$692,425	\$8,838,891
% Distribution	44.1%	25.4%	22.7%	7.8%	100.0%
2018 Overseas Rev as Multiple of 2009	3.4	2.6	1.8	2.3	2.6
Overseas Students	132,206	100,241	121,752	54,890	409,089
% Distribution	32.3%	24.5%	29.8%	13.4%	100.0%
Cash & Investments \$ '000s	\$7,637,091	\$4,484,477	\$6,169,164	\$1,990,941	\$20,281,673
% Distribution	37.7%	22.1%	30.4%	9.8%	100.0%

The 12 universities in groups A and B enrolled 57% of the overseas students in 2018 and received 70% of the fee revenue. The group A revenues were 3.4 times greater than the 2009 result and the group B revenue 2.6 times the 2009 figure. Collectively, these universities are the dominant players in the overseas student market and ended 2018 in a strong financial position. Not all universities in these groups were equally well-placed. They also accounted for 60% of the cash and investment reserves (\$12.1 billion). In aggregate, their overseas revenue amounts to some 50% of these reserves.

The 14 universities in group C accounted for quite a high proportion of the overseas students – 30% - but only receive 23% of the total revenue. This difference may be a reflection of the cost structure, the mode of delivery of their courses, including off-shore delivery, or a partial

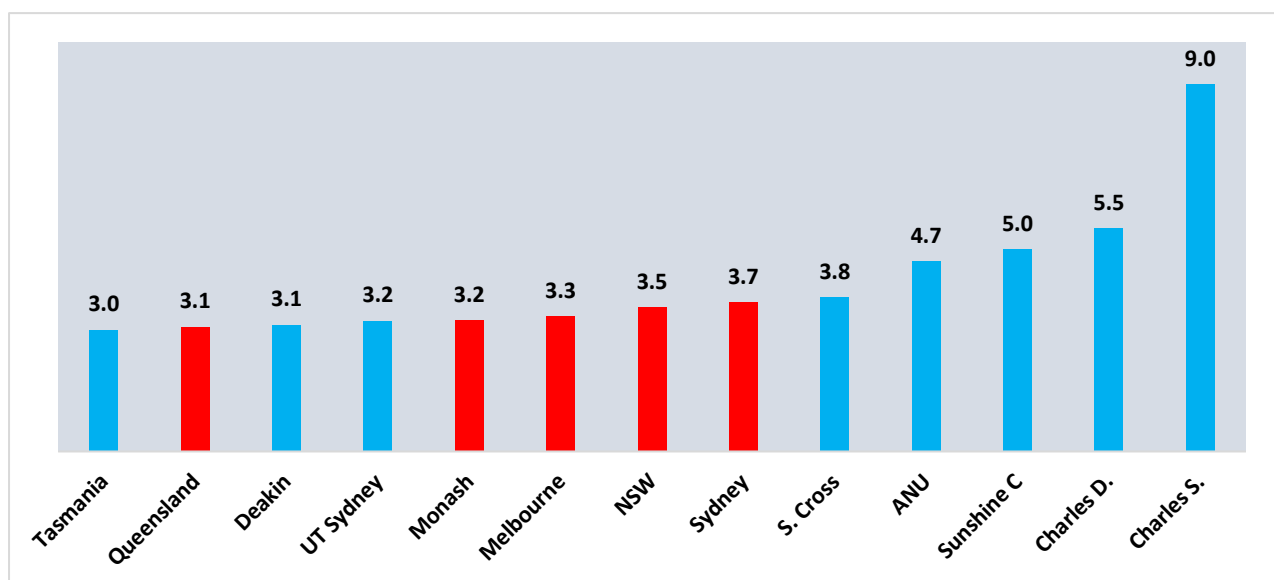
joint venture arrangement with other providers. It may also indicate increased pricing sensitivity in the markets in which they operate. Group C universities' proportional revenue growth was less than the average at 1.8 times the 2009 figure. They did however have substantial reserves of \$6.2 billion with fee income being equivalent to 33% of the reserves.

Collectively, the 12 group D universities with less than \$100m fee revenue enrolled 13% of the students but received only 8% of the income. The same factors impacting on revenue received would seem to apply as for group C universities. Their fee income did represent 35% of their reserves of \$2.0 billion.

The relationship between financial reserves and overseas student revenues relates directly to the potential vulnerability of the various groups of universities.

At an individual university level, the Group A Universities (Sydney, Melbourne, UNSW, Monash and Queensland) achieved the most sustained rate of increase in international student fee revenue of more than three times the 2009 figure over this period (appendix A, column 6). Other strong performers in group B with a multiple of more than three times were UTS, Deakin and ANU. A small number of universities in group C and D also reported strong growth over the decade as their international activities expanded from a comparatively low base. The 13 universities with exceptional growth are shown graphically in figure 1. The five group A universities are shown in red.

**Figure 1. Thirteen Universities with 2018 Overseas Student Fee Revenues more than Three-Times the 2009 Result.**



These data would indicate that Australian universities have enjoyed a decade of remarkable revenue growth as a result of the expansion of international education. This would suggest that, assuming the exercise of prudent financial stewardship over the past decade, most universities will have had the capacity to build up reserves to help deal with at least a temporary major revenue shock occasioned by COVID-19. The subsequent analysis indicates that this is not the case for all universities. Some of those with pre-existing weak balance sheets or with very large

international student programs appear not to have been able to build an adequate buffer of reserves.

#### **4. Evaluating University Resilience to Withstand Major and Substantial Fee Income Loss**

Irrespective of the outcomes from the scenarios to be proposed in a following section there are two key factors which, leaving aside the particular circumstances of COVID-19 and its impact on international student enrolments, will impact on the capacity of individual universities to withstand a major and sudden downturn in revenue. These resilience factors are:

1. the proportion of total revenue derived from overseas students in 2018 (*appendix A, column 5*), and
2. the 2018 expenses from continuing operations (*appendix A column 8*) as a ratio of cash reserves and investments held in the balance sheet at 31 December 2018 (*appendix B, column 6*)

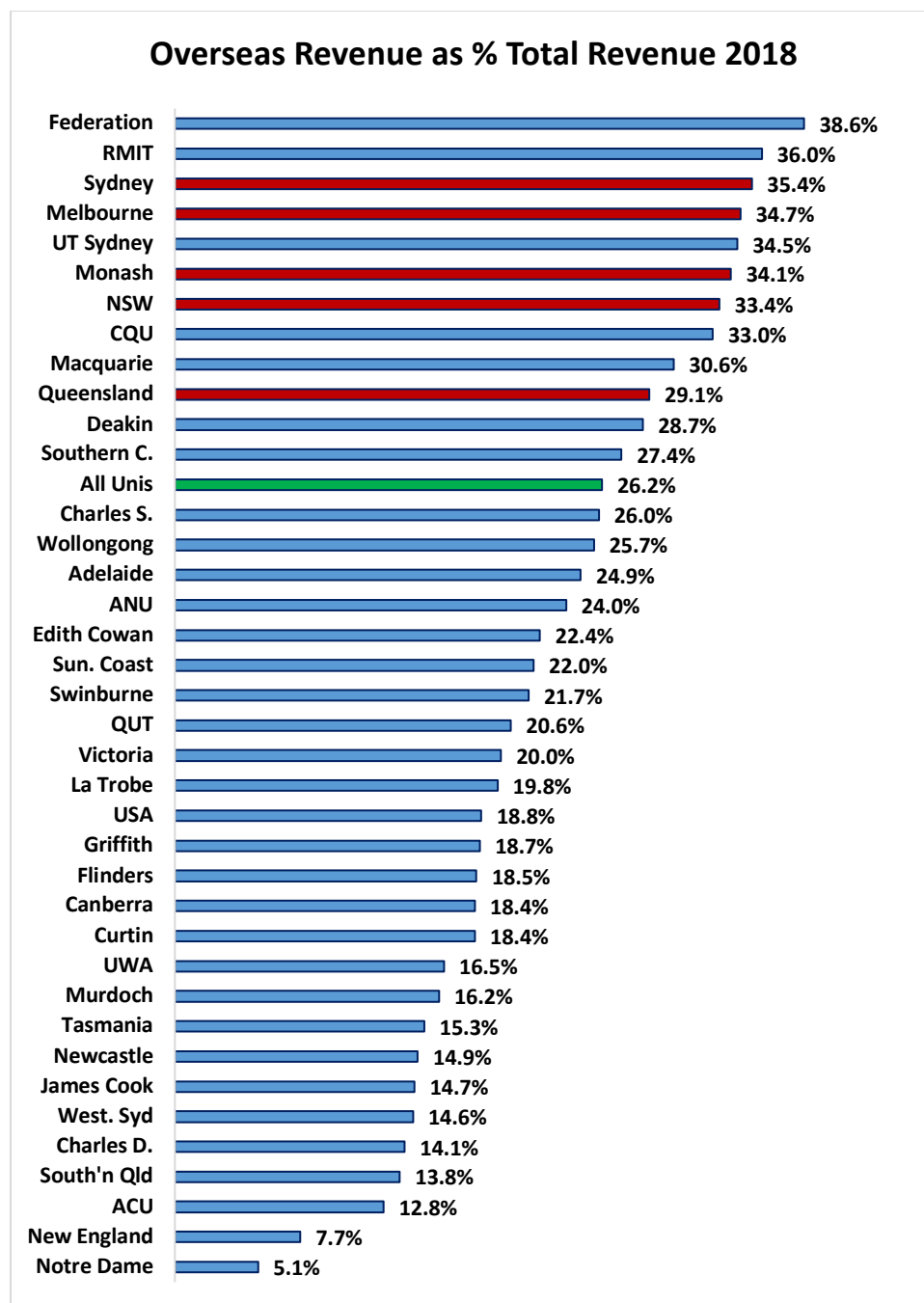
It is assumed that cash and investments constitute the majority of assets able to be freed up to offset an operating deficit. These reserves reflect in part the levels of operating surpluses individual universities have achieved in previous years. Their relative size to support financial resilience is put into context by reference to the total annual expenses.

For the purposes of this analysis, consideration has not been given to the level of current liabilities within institutions or the extent to which these liabilities affect the actual level of cash reserves available to offset an operating deficit. For 2018 Australian universities reported in aggregate current assets of \$10.9 billion and current liabilities of \$8.6 billion. Current receivables of \$1.7 billion were lower than Current Payables of \$2.5 billion. The levels of current assets and liabilities and receivables and payables vary significantly across institutions. In the analysis that follows, the total amount of cash and investment reserves have been discounted, in part to make some allowance for immediately payable current liabilities.

One risk factor that might arise in the event of a significant or sudden COVID-19 related shortfall in revenue relates to the extent of financial **reliance on international student fees** as a source of revenue. The proportion of 2018 total fee revenue derived from overseas fees is shown in appendix A column 5 and in figure 2. The universities are ranked in figure 2 in accord with their percentage exposure to overseas fee revenue. Across the sector international student fee income constituted 26.2% of total revenue in 2018. The range is wide from 38.6% of total revenue for Federation University to 5.1% for Notre Dame.

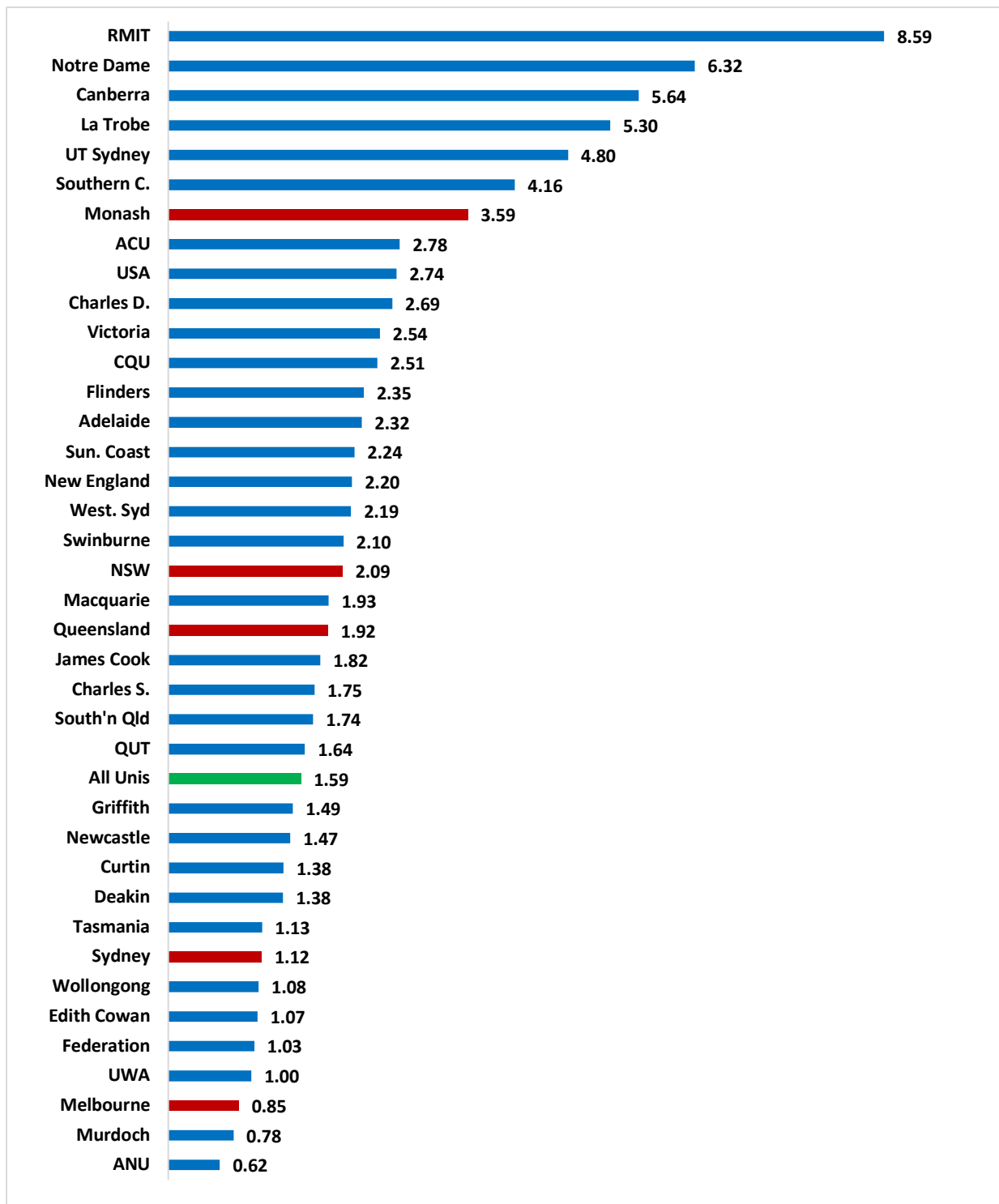
Some 12 universities have a dependence greater than the sector-wide average of 26.2%. These universities in rank order are: Federation (39%), RMIT (36%), Sydney (35.4%), Melbourne (34.7%), UTS (35%), Monash (34.1%), UNSW (33.4%), Central Queensland University (33%), Macquarie (30.6%), Queensland (29.1%), Deakin (28.7%) and Southern Cross (27.4%) It is noteworthy that all the group A universities (shown in red) are among universities with the greatest dependence. The average for all universities is shown in green.

**Figure 2 Proportion of 2018 total revenue derived from overseas fee revenue ranked from highest to lowest dependence.**



The 2018 **expenses on continuing operations as a ratio of the cash and investments** held by universities is shown in figure 3. The universities are again ranked from the highest to the lowest ratio. A number greater than one means that the university has annual expenses greater than their accumulated total cash and investments reserves. RMIT is the most vulnerable university with annual expenses being 8.6 times reserves. ANU is in the strongest position with annual expenses less than reserves at a ratio of 0.62.

**Figure 3 Proportion of 2018 Expenditure in relation to the 2018 Cash and Investments held by Australian Universities**



There are only four universities for which annual expenses are covered by 2018 reserves: ANU at a ratio of 0.62, Murdoch at 0.78, Melbourne at 0.85 and UWA at 1.0. There are 12 universities where annual expenses are more than 2.5 times the cash and investment reserves held. They are: RMIT 8.59 times, Notre Dame 6.32 times, Canberra 5.64 times, La Trobe 5.3



times, UTS 4.8 times, Southern Cross 4.16 times, Monash 3.59 times, ACU 2.78 times, USA 2.74 times, Charles Darwin 2.69 times, Victoria 2.54 times and CQU at 2.52 times.

Integrating the data shown in figures 1 and 2, there are nine universities for which international student fee income constitutes at least 30% and there are seven universities with 2018 expenditure that is more than three times 2018 cash and investments. Of these only three are regionally based, outside the major capital cities or the ACT, i.e. Federation, Central Queensland and Southern Cross. Four of the large research intensive universities in group A are included.

Three large metropolitan universities, RMIT, UTS and Monash are the only ones included in both of these extreme subsets. These are potentially the least resilient and among the most financially exposed to a loss in overseas fee revenue.

## **5. Scenarios for Evaluating Financial Impact of COVID-19**

The range of implications of COVID-19 for Australian universities is still emerging and will not be fully known for some time. Once more data become available from the Semester One 2020 census there will be a better guide as to the range and short term nature of the COVID-19 impact on both domestic and international student enrolments. The eventual impact will nevertheless be profound and widespread, with Universities Australia reporting a likely financial impact for 2020 of between \$3.0–\$4.6 billion. The group A universities have severally indicated a likely impact of between \$200m–\$600m for 2020. Several of the group B and C universities have produced estimates of between \$100m–\$150m. Modelling undertaken by the Mitchell Institute (5) suggests a total cumulative loss of \$10 billion to \$19 billion over the period 2020-23.

Based on these reports and other information for the purposes of this modelling the following assumptions have been made both for 2020 and subsequent years. The analysis includes an estimate of 2020 fee losses and an optimistic and a pessimistic scenario for losses through to 2024. In all scenarios it is assumed that the great majority of the financial impact of COVID-19 will be due to the loss of international fee revenue. Although there may also be a reduction in domestic enrolments and additional student welfare expenses as universities seek to provide support for international students ineligible for Australian Government JobSeeker and related assistance programs. It is assumed here that these will be temporary phenomena likely to impact university finances predominantly in 2020.

*The Optimistic scenario is based on the following assumptions:*

- Australian borders remain overwhelmingly closed to foreign internationals in 2020.
- Although some modest exceptions may occur earlier, the re-opening of borders will commence on a selective basis from the beginning of 2021 to foreign students from countries which have been able to demonstrate success in COVID-19 containment. This might include some or all of China.
- International demand for on-shore university education is not greatly diminished and a rebuild of international enrolments will progressively occur in 2022 and beyond.

- There will be a further decline in international student enrolments in 2021 as currently enrolled students complete their courses and universities attract a smaller commencing cohort in 2021 because of limited marketing opportunities and continuing global apprehensions concerning international travel.
- Student recruitment activities will resume in 2021.
- Overall international student numbers will return to pre-COVID-19 levels by 2024

Based on these assumptions, with this model it is estimated that the impact of COVID-19 on Australian university international fee income will be:

- 2020: a fee reduction of 40% compared to 2018 base
- 2021: a fee reduction of 45%, compared to 2018 base
- 2022: a fee reduction of 30%, compared to 2018 base
- 2023: a fee reduction of 15%, compared to 2018 base

The Optimistic scenario results in a total fee reduction relative to the 2018 base of 130% over four years. The result is a reduction in revenue of \$3.5 billion in 2020 (appendix B column 2) and an accumulated loss in revenue of \$11.5 billion by 2023 (appendix C, column 2). These are conservative estimates. They do not distinguish between on-shore and off-shore delivery of international education. They are based on publicly available data for 2018 and take no account of subsequent growth in international enrolments or indexation of fee levels. The real losses are likely to be some 10-20% higher.

*The Pessimistic scenario is based on the following assumptions:*

- The impact of the COVID-19 virus is both significant and enduring.
- A ban or severe restrictions on entry to Australia for foreign nationals remains in place until either a vaccine or an effective mode of treatment becomes available, assumed to be later in 2021.
- A foreign country imposing a ban on its citizens travelling to Australia either generally or as students.
- As a result there will be a further decline in international student enrolments in 2021 as currently enrolled students complete their courses and universities attract a smaller commencing cohort in 2021 because of limited marketing opportunities.
- Globally international education markets incur lasting damage including demand for on-shore education and there is increased competition from more established and recognised global on-line providers
- Australian universities lose market share in terms of both numbers and price.

Based on these assumptions, it is estimated that the impact of COVID-19 on Australian university international fee income will be:

- 2020: a fee reduction of 40% compared to 2018 base
- 2021: a fee reduction of 55%, compared to 2018 base
- 2022: a fee reduction of 50%, compared to 2018 base
- 2023: a fee reduction of 35%, compared to 2018 base
- 2024: a fee reduction of 25%, compared to 2018 base

The Pessimistic scenario results in a total fee reduction relative to the 2018 base of 205% over five years. A reduction in revenue of \$3.5 billion in 2020 would be realised (appendix B, column 2) with accumulated losses in revenue of \$18.1 billion for 2020-24 (appendix C, column 3). Again, these are conservative estimates as they are based on publicly available data for 2018.

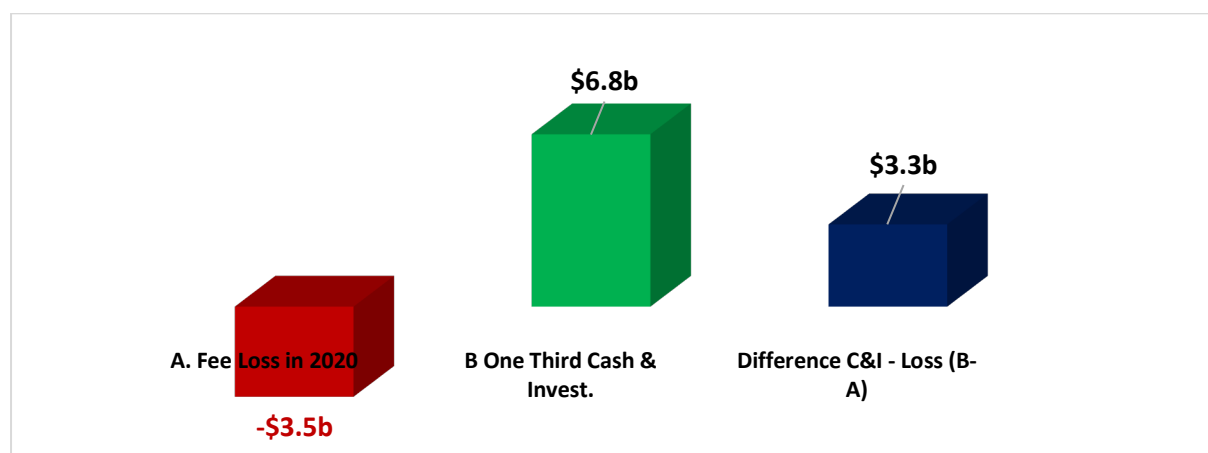
## 6. Impact of Losses on Australian universities

### 6.1 Sector-Wide Financial Impact in 2020

In respect of the current year impact, it is assumed that only one-third of cash and investment reserves would be available at relatively short notice to offset the anticipated reduction in revenue, directly or indirectly, as the remainder would be either tied to endowments or other designated purposes or be previously contractually committed to capital or other projects (appendix B, column 3). The 40% loss in overseas student fee income is given in appendix B column 3. The difference between the potentially available cash and investments and the 40% fee loss is given in column 4.

The position for the whole of the university sector is shown in figure 4. The level of available reserves of \$6.8 billion is more than sufficient to offset the anticipated loss in fee revenue of \$3.5 billion with the positive difference being \$3.3 billion. The level of offset might be expected to reduce once other declines in operating revenue or additional expenditure occasioned by COVID-19 in 2020 are taken into account. Nevertheless, it would appear that in aggregate the sector has sufficient in reserve to cater for the initial impact of COVID-19. This confirms the earlier suggestion that collectively Australian universities have managed their finances over the past decade so as to create some reserve capacity specifically to deal with a sudden downturn in revenue. Nevertheless, the robustness of the sector will in part depend on the financial health of each of its constituent parts. Extreme financial vulnerability on the part of a small number of universities has the potential to have consequences that ramify across the whole of the sector.

**Figure 4 All Universities: Estimated 2020 Fee Loss in Relation to One-Third of 2018 Cash and Investments**



## 6.2 Sector-Wide Financial Impact to 2024

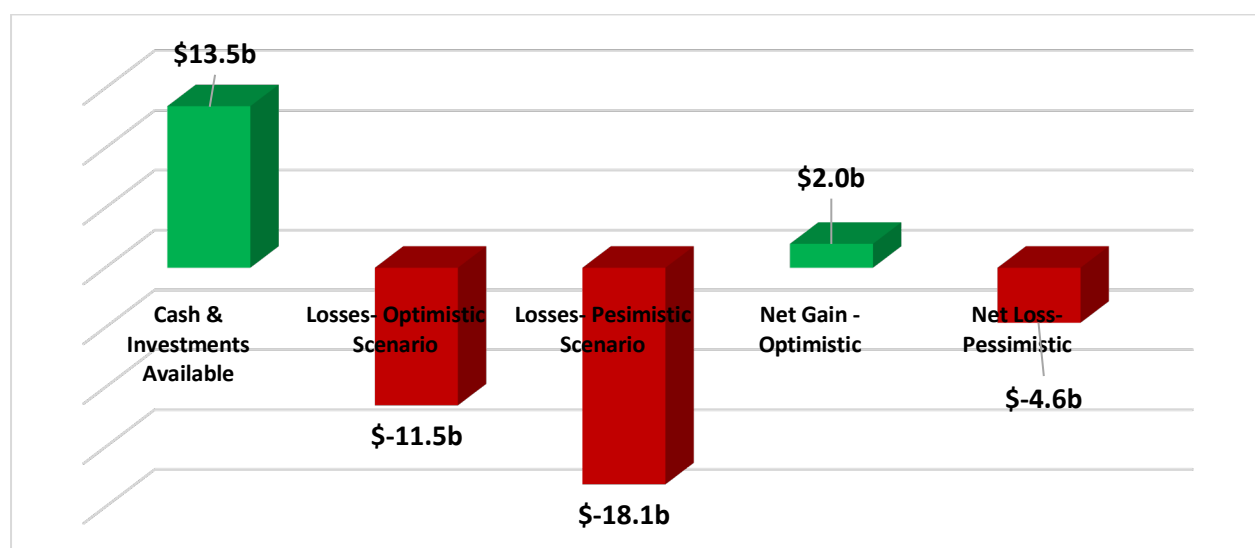
In order to assess the capacity of Australian universities to withstand the estimated loss in revenue over the period 2020-2024 under both the optimistic and pessimistic scenarios, the overall revenue loss is again contrasted with the amount of cash and investments held within university accounts. For the purposes of assessing financial resilience over the longer term it is assumed that two-thirds (66.6%) of 2018 cash and investment assets might be available, directly or indirectly, for operating purposes on the basis that with a longer period for adjustment universities would be able to free up additional reserves to offset the more sustained period of revenue shortfall. These numbers for all the universities are shown in column 4 of appendix C.

At the sector-wide level, it would appear that the sector may have barely enough cash and investments to cover a relatively benign optimistic outcome for COVID-19. Sixty-six percent of aggregate cash and investment holdings generate \$13.5 billion (appendix C, column 4), while based on (unindexed) 2018 data, the aggregate revenue shortfall is estimated to be \$11.5 billion (appendix C, column 2), so the margin is \$2 billion. This would leave little buffer to deal with other shortfalls in revenue or additional expenditure.

Under the pessimistic scenario the increased and prolonged revenue loss would create major financial challenges for Australian universities. At the sector-wide level, the cumulative losses at \$18.1 billion (appendix C, column 3) would significantly outstrip available cash and investment reserves, estimated to be \$13.5 billion leading to a shortfall of \$4.6 billion.

The predicted sector-wide financial challenge needed to be managed is summarised graphically in figure 5.

**Figure 5 Sector-Wide Predicted Losses to 2023-2024 for Optimistic and Pessimistic Scenarios and Net Position if 66.6% of 2018 Cash and Investments Deployed to Mitigate the Losses in \$ Billions**



This analysis suggests that under either scenario, the higher education sector will be facing huge challenges that will mean lasting change. Even under the conservative assumptions on which the optimistic scenario is based, the sector would exhaust 85% of available reserves, thereby compromising the capacity for major investment in programs or capital works. Under the pessimistic scenario major institutional and sectoral restructuring would be required.

The analysis indicates that the sector has insufficient capacity prudently to absorb the longer term impact of COVID-19. At both the individual institution and whole of sector levels major expenditure reduction initiatives will be required to deal with the loss of international student revenue. Under the pessimistic scenario at least, these initiatives will need to be continuing, if not in effect permanent, in order to reset expenditure to reduced revenue expectations.

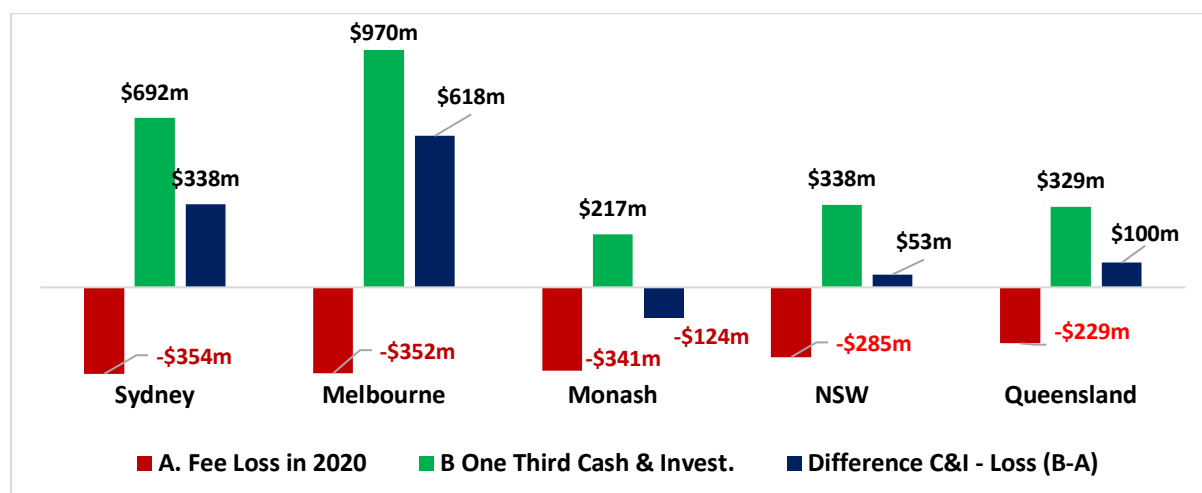
## 7. Individual Universities Financial Impact for 2020 and from 2020 to 2024

To examine the impact of the fee losses it is most instructive to examine each of the four groups of universities separately and to comment on the financial stresses that may be experienced by individual universities.

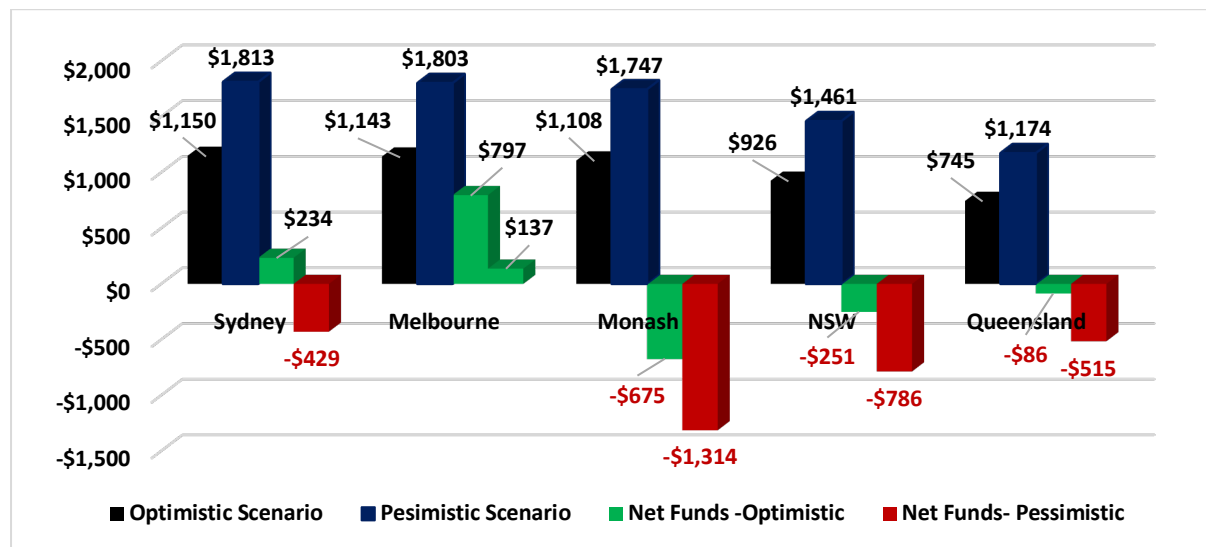
**7.1 Group A:** The five group A universities are the dominant players in overseas student recruitment with fee revenues each of more the \$500m. As highlighted through the data in table 2 these five universities have 44% of all the fee revenue, have enrolled 32% of the overseas students and in 2018 had 38% of the cash and investment assets.

For each university the short-term impact for 2020 is shown in figure 6 and the longer term impact under both the optimistic and pessimistic for scenarios is shown in figure 7, based upon the data in appendices B and C.

**Figure 6: Five Group A Universities Predicted Losses in 2020: Net Financial Position if 33.3% of 2018 Cash and Investments Are Available (\$m)**



**Figure 7: Five Group A Universities Predicted Losses to 2024: Net Financial Position if 66.6% of 2018 Cash and Investments Are Available (\$m)**



Despite their impressive levels of available reserves, the scale of their international student programs means that four of the five group A universities are facing significant financial challenges. This is accentuated for UNSW and Monash in particular as they have relatively fewer reserves on which to rely. Any enduring decline in international student enrolments threatens the business model on which these universities are based.

**University of Sydney** – It is concluded from the analysis that, notwithstanding its high level of reliance of international student fee revenue, Sydney has the reserves to adequately cover the predicted 2020 fee loss of \$354 m. It can also cover the predicted losses of \$1,150m to 2023 in the optimistic scenario, but potentially would be facing a deficit of \$429m if the pessimistic scenario were to be realised with fee losses of \$1,813m to 2024. Such a deficit amounts to 17% of 2018 revenue.

**University of Melbourne** – It is predicted that within this group, Melbourne is in a comparatively strong financial position with sufficient available cash and investments to cover all the potential fee losses for 2020 (\$352m), for the optimistic case (\$1,143m) and the pessimistic case (\$1,803m).

**Monash University** – As one of the relatively newer research-intensive universities Monash has had less time to accumulate investment reserves while building very strong overseas student enrolments. It is financially challenged under all three scenarios. Overseas student revenue represents 34% of total annual revenue. For 2020 the shortfall is predicted to be \$124m rising to \$675m for the optimistic case and to \$1,314m for the pessimistic case. Under the optimistic scenario the shortfall amounts to 27% and for the pessimistic scenario 52% of total revenue. As this analysis does not distinguish between on-shore and off-shore course delivery, Monash’s vulnerability profile may be mitigated to the extent its off-shore programs remain relatively unimpacted by COVID-19.

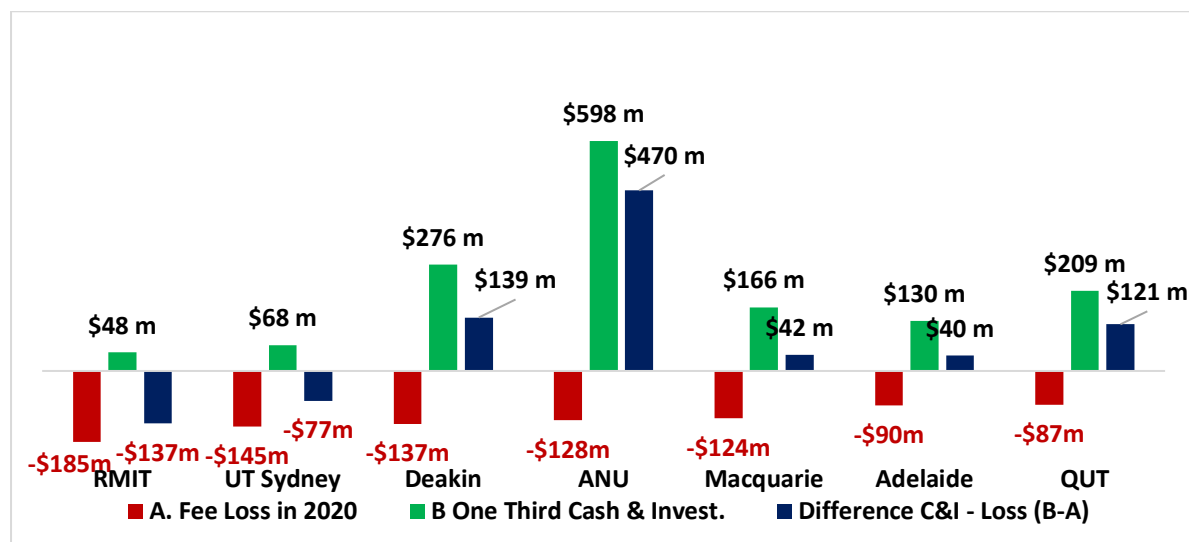
**University of New South Wales** - This university can just cover the 2020 fee revenue loss of \$285m, but in the longer term with the optimistic case to 2023 the shortfall would be \$251m and \$786m for the pessimistic case to 2024 (37% of total revenue). UNSW also has had less time to accumulate reserves than Sydney or Melbourne and relies on overseas student fees for 33% of its annual total revenue. The financial stresses it may experience are significant but of less severity than those potentially assessed for Monash.

**University of Queensland** - This university has a relatively smaller overseas student program with overseas revenue at 29% being a lower proportion of total revenue (figure 2) than others within the group A. It has sufficient reserves to cover its 2020 fee losses but may experience a shortfall of \$86m for the optimistic case and \$515m (26% of total revenue) for the pessimistic case. The financial stresses Queensland experiences may be similar to those for UNSW.

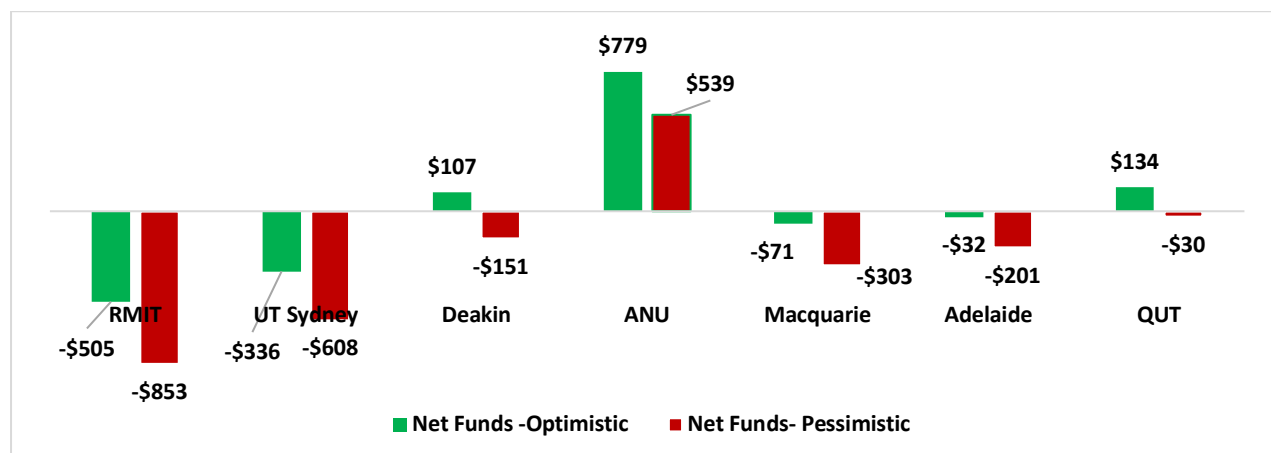
**7.2 Group B:** The outcomes for the seven group B universities with fee revenues between \$200m and \$500m are shown in figures 8 and 9. They received 25% of the fee revenue in 2018 and enrolled 25% of the overseas students (Table 2). In figure 8 the 2020 fee losses, one-third of 2018 cash and investments and the difference between the two are shown. In figure 9 for the two scenarios only the net financial position is shown, assuming that 66.6% of cash and investment reserves were available to cover the decreases in fee income.

Two of these seven group B universities RMIT and UTS are predicted to not have sufficient available cash and reserves to cover their 2020 fee losses. The other five universities would be less financially stressed to manage short term fee losses.

**Figure 8: Seven Group B Universities: Predicted Losses in 2020: Net Financial Position if 33.3% of 2018 Cash and Investments Are Available (\$m)**



**Figure 9: Seven Group B Universities: Net Financial Position to 2024 if 66.6% of 2018 Cash and Investments Are Available (\$m)**



**RMIT University** - It is predicted that this university will be one of the most financially challenged universities because of the potential fee losses. It is very dependent financially on overseas fee revenue (at 36%) as a contribution to its total revenue (figure 2) and reports relatively modest levels of cash and investment reserves. It is facing potentially large short term and longer term shortfalls of \$137m for 2020, \$505m (optimistic case) and \$853m (pessimistic case). Under the optimistic scenario the shortfall amounts to 39% and under the pessimistic scenario 66% of total revenue. As this analysis does not distinguish between on-shore and off-shore course delivery, RMIT’s vulnerability profile may be mitigated to the extent its off-shore programs remain relatively unimpacted by COVID-19.

**University of Technology Sydney** – This University is in a similar financially vulnerable category to RMIT. The predicted shortfalls are significant at \$77m for 2020, \$336m under the optimistic scenario to 2023 (32% of total revenue) and \$608m under the pessimistic scenario to 2024 (58% of total revenue). The large number of overseas student enrolments means that some 35% of their annual revenue comes from this source.

**Deakin University** – Despite the size of its international student program Deakin appears to have relatively low levels of vulnerability. Predicted 2020 fee losses of \$137m and the longer term losses predicted from the optimistic case can be covered by the available cash and investment reserve. Under the pessimistic scenario to 2024 Deakin faces a cash flow shortfall of \$151m.

**Australian National University** – Among Australian universities ANU is the one most likely to be least impacted by fee losses. It has modest overseas student enrolments and a strong balance sheet (figures 2 and 3). It is the only university in this group that has sufficient reserves to cover its potential 2020 fee losses and the longer term losses predicted under both scenarios.

**Macquarie University** – Macquarie is among the group of universities with more than 30% of its annual total revenue sourced from overseas fee income. It does have sufficient reserves to



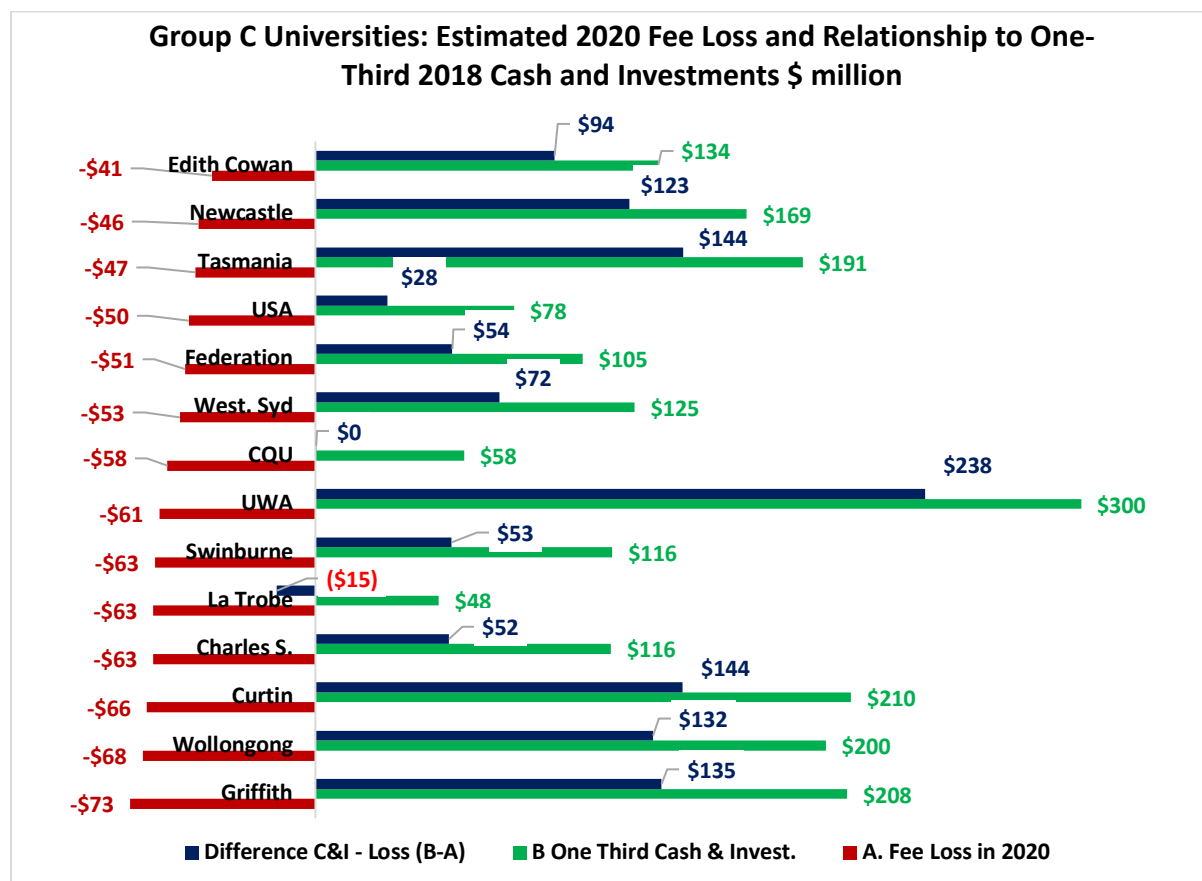
cover the short term fee loss, but under the optimistic scenario the shortfall would be \$71m and some \$303m (30% of total revenue) under the pessimistic scenario.

**University of Adelaide** – Adelaide University faces a similar situation to Macquarie but with a stronger financial reserves position. Its reserves can cover the 2020 losses. However it will experience significant financial stresses to manage predicted shortfalls of \$32m to 2023 and \$201m through to 2024 under optimistic and pessimistic scenarios respectively.

**Queensland University of Technology** – Among the technological universities QUT seems relatively well positioned. It has sufficient reserves to cover its 2020 fee losses of \$87m and predicted optimistic scenario losses to 2023. It faces a modest challenge if it has to manage the pessimistic scenario where a shortfall of \$30m is predicted.

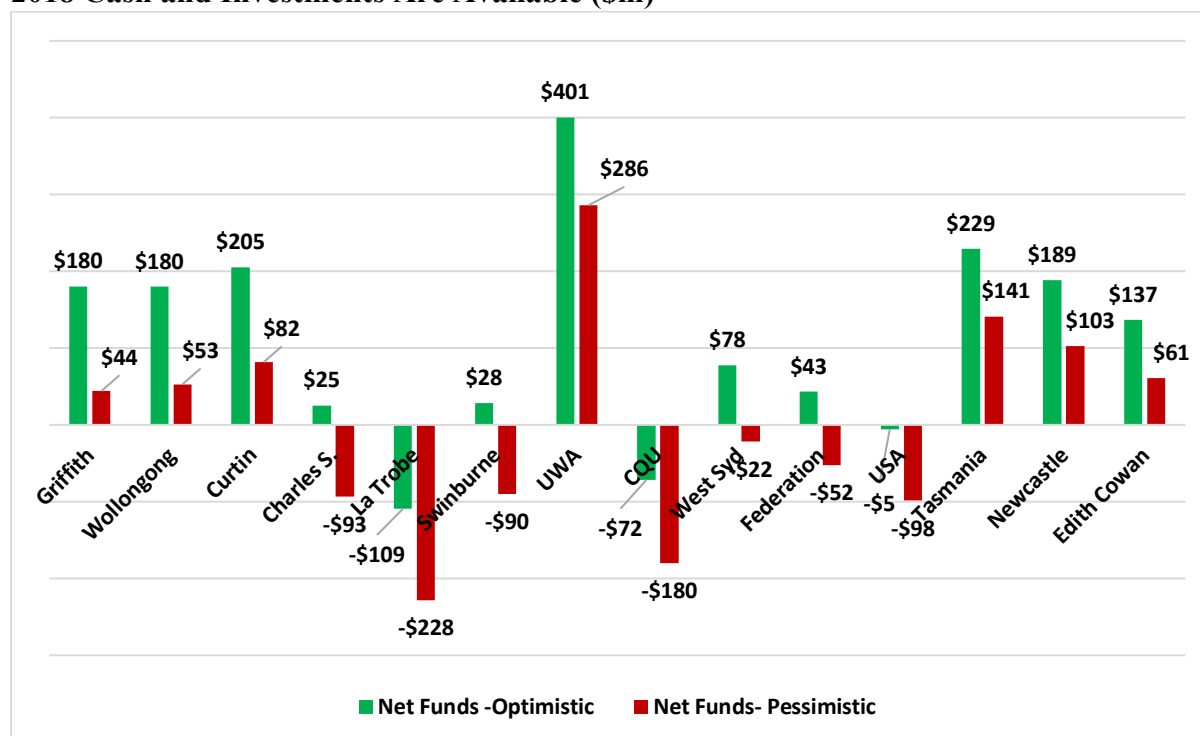
**7.3 Group C:** The net financial positions of the fourteen group C universities are shown in figure 10 for managing the 2020 losses and in figure 11 for the situation under both longer term scenarios. These universities enrolled 30% of the overseas students, but received only 22% of the fee revenue with revenues between \$100m and \$200m in 2018. Their 2020 fees losses range from \$41m for Edith Cowan University to \$73m for Griffith University. In contrast to group A and B universities La Trobe is the only university predicted to have difficulty managing the short term 2020 fee losses.

**Figure 10: 14 Group C Universities: Net Financial Position in 2020 if 33.3% of 2018 Cash and Investments Are Available (\$m)**



The financial situation to manage the long-term losses to 2023 or 2024 are more variable as graphically illustrated in figure 11 where the net results of the difference between available reserves and fee losses are shown for the optimistic and the pessimistic scenarios. Two universities, La Trobe and Central Queensland appear to be highly vulnerable.

**Figure 11: Fourteen Group C Universities: Net Financial Position to 2024 if 66.6% of 2018 Cash and Investments Are Available (\$m)**



**Griffith University** – This University is in a strong financial position to manage its predicted fee losses under the short term and both longer term scenarios.

**University of Wollongong** – The situation for Wollongong is almost identical to that for Griffith.

**Curtin University** – Curtin also is in a strong financial position to cover losses under all scenarios.

**Charles Sturt University** – This University does not have sufficient reserves to cover the pessimistic scenario that predicts losses to 2024. A potential shortfall of \$93m under this scenario is significant given it represents some 15% of total revenue. For Charles Sturt overseas fee revenue constitutes 26% of total revenue (figure 2).

**La Trobe University** – La Trobe is one of the two most financially vulnerable universities in this group. Its available reserves are not sufficient to cover any of the predicted loss situations. The predicted 2020 shortfall is \$15m, the optimistic case shortfall is \$109m and the pessimistic case shortfall in \$228m. The latter gap represents nearly 30% of total 2018 revenue.

***Swinburne University*** – Predicted losses for 2020 and under the optimistic scenario through to 2023 can be covered by available reserves. A funding shortfall of \$90m is predicted if the pessimistic scenario were to become a reality. Swinburne delivers a significant proportion of its international student programs offshore and this may moderate its financial vulnerability.

***University of Western Australia*** – UWA is the best placed of the group C universities. The fact that it has sufficient reserves to cover all loss cases, short and longer term, is a reflection of both a comparatively modest reliance on international fee revenue and its enviable level of cash and investment reserves.

***Central Queensland University*** – The financial situation for CQU contrasts sharply with that for UWA. In the short term CQU has barely sufficient reserves to cover international fee losses. Through to 2023 and 2024, losses of \$72m and \$180m are predicted for the optimistic and pessimistic scenarios. CQU relies on overseas fee income for 33% of its total revenue. The longer term losses amount respectively to 16% and 41% of 2018 total revenue. As a newly emerging university CQU has not had time to establish substantial reserves. Like La Trobe, it is among Australia’s most vulnerable universities.

***Western Sydney University*** – The proportion of fee revenue in the annual total revenue is relatively low at 14.6%. This university has sufficient available reserves to cover the 2020 predicted fee loss and the fee losses to 2023. If the pessimistic scenario were to become a reality, the shortfall would be \$22m compared with annual revenues of \$909m.

***Federation University*** – This university is more dependent on overseas fee income as a proportion of total annual revenue, at 38.6%, than any other Australian university (figure 2). The exposure does present the university with a significant financial risk challenge. Its annual expenses are modest when compared to its cash and investments (figure 3). The institution is able to comfortably cover predicted 2020 fee losses and those accrued under the optimistic scenario. It would however have a shortfall of \$52m under the pessimistic scenario.

***University of South Australia*** – USA obtains 18.8% of its total revenue from overseas students. It has sufficient available reserves to cover the 2020 fee losses. For the optimistic case the shortfall is a modest \$5m compared with annual revenue of \$658m. It would be faced with a shortfall of \$98m under the pessimistic scenario or about 15% of annual revenue.

***University of Tasmania*** – The predicted short term and longer term losses are all well covered because the university does have substantial financial reserves.

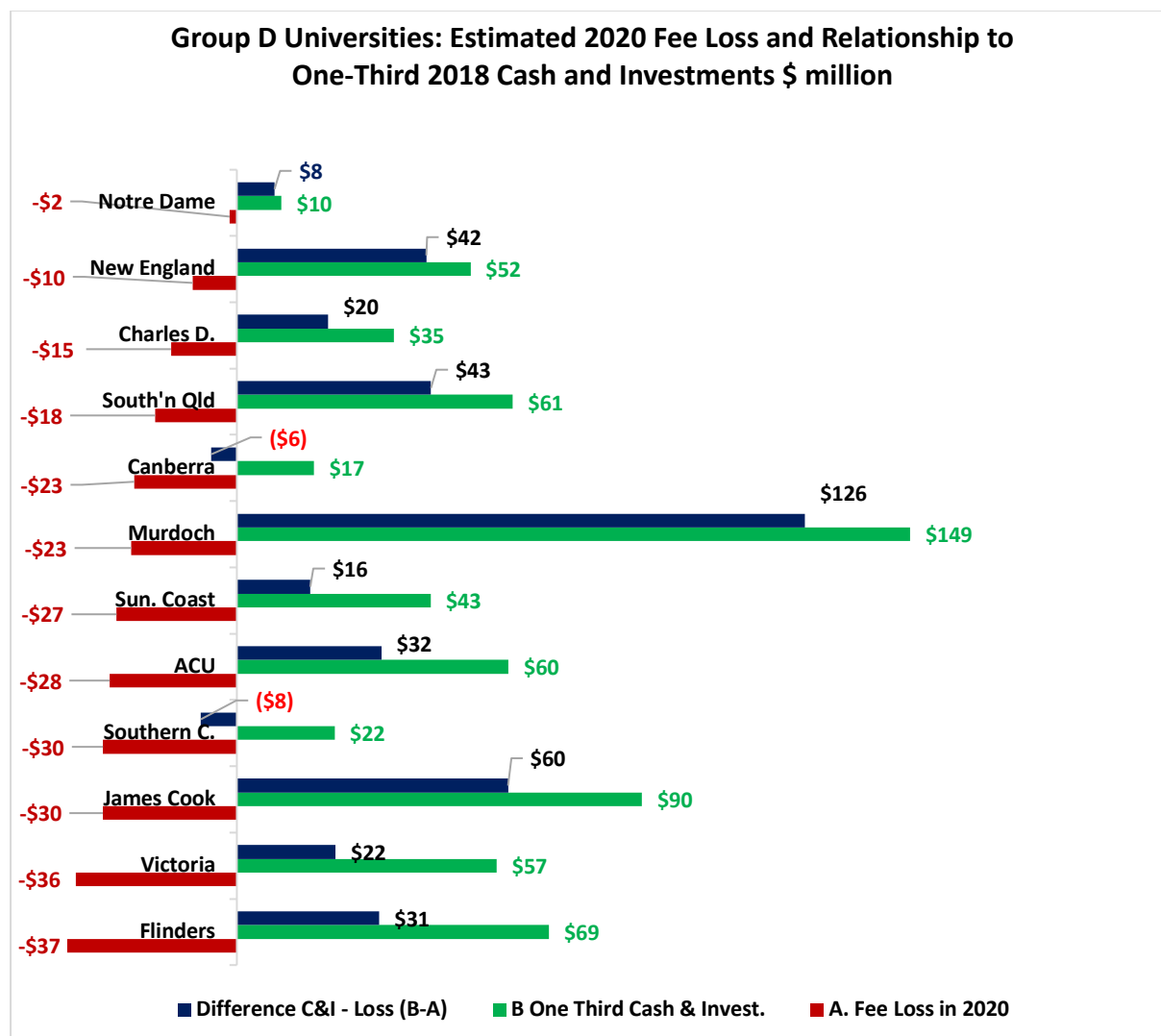
***University of Newcastle*** – The financial position for Newcastle is similar to that for Tasmania with predicted losses covered by available reserves

***Edith Cowan University*** – This University is in a similar financial position to Tasmania and Newcastle, but with lower safety margins.

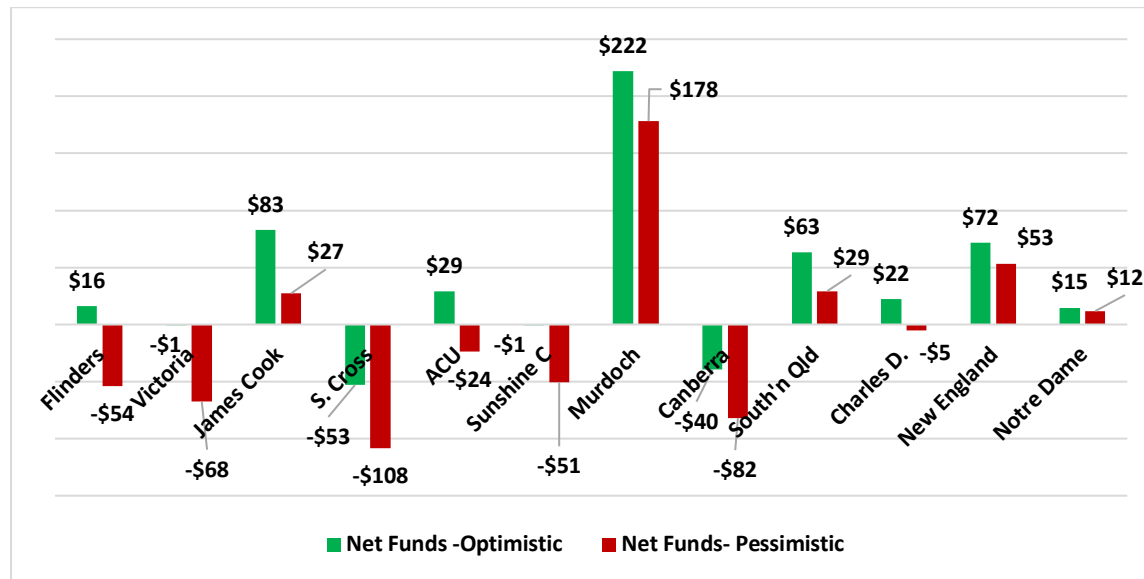
**7.4 Group D:** The 12 universities in group D had fee revenues of less than \$100m in 2018. They are a smaller part of the overseas student economy with 13% of enrolments and 8% of revenues. Their potential 2020 financial positions resulting from predicted fee losses are shown in figure 12 and the position for the two longer term scenarios are shown in figure 13.

Even though these universities have a lower level of overseas student activities some will still face significant financial challenges. While there are only three of the twelve group D universities that have difficulty covering their 2020 fee losses, all at a relatively modest level – Southern Cross at \$8m, Canberra at \$6m and Notre Dame at \$2m - Canberra and Southern Cross have high to extreme levels of financial vulnerability once longer term scenarios are taken into account.

**Figure 12: 12 Group D Universities: Net Financial Position in 2020 if 33.3% of 2018 Cash and Investments Are Available (\$m)**



**Figure 13: 12 Group D Universities: Net Financial Position to 2024 if 66.6% of 2018 Cash and Investments Are Available (\$m)**



**Flinders University** – Flinders University has sufficient available reserves to cover both a 2020 fee loss and the optimistic case to 2023, but a shortfall of \$54m is predicted for managing the pessimistic case to 2024. This shortfall is around 10% of annual revenue.

**Victoria University** – Victoria University will be financially challenged if it has to manage a predicted loss of \$68m to 2024 because this amounts to 15% of its annual revenue.

**James Cook University** – JCU is one of the four universities in group D that has sufficient available reserves to cover the predicted shortfall under all three scenarios.

**Southern Cross University** – A very major financial management challenge appears to be confronting this university. Shortfalls of \$8m in 2020, \$53m to 2023 and \$108m to 2024 under the three scenarios are significant. Under the pessimistic scenario the accumulated shortfall to 2024 would represent 40% of annual revenue.

**Australian Catholic University** – The ACU is in a similar position to Flinders and Victoria by facing a potential accumulated shortfall of \$24m to 2024. The university will be less financially challenged than the other two because the shortfall would be a lower proportion of its annual revenue at less than 4%.

**Sunshine Coast University** – This is another group D university that faces only medium financial risk because available reserves are sufficient to cover the 2020 losses and almost all the optimistic case losses. However, a shortfall of \$51m is predicted for the pessimistic case.

**Murdoch University** – Murdoch is the most financially secure among the group D universities to withstand expected fee losses under all three situations.

**University of Canberra** – Canberra is one of the two most financially vulnerable universities in group D because of the predicted fee losses. It has to manage revenue shortfalls in the short term of \$6m, of 40m to 2023 and \$82m to 2024 under the scenarios proposed. Under the latter scenario the shortfall represents 27% of total revenue.

**University of Southern Queensland** – It is predicted that this university should be able to financially manage the predicted financial losses in both 2020 and the longer term.

**Charles Darwin University** – There is a revenue shortfall of \$5m for Charles Darwin to manage if the pessimistic scenario were to become a reality. It is reasonably well-placed to manage the other predicted revenue loss scenarios.

**University of New England** – Given the small size of its international student program, UNE has sufficient available reserves to cover all three revenue scenarios.

**Notre Dame University** - Notre Dame is in a similar financial situation to New England.

### 7.5 Risk categorisation of Universities according to assessment of the financial management challenge from fee revenue losses.

Based on the analyses conducted, consistent with the scenarios modelled, universities are placed into three categories in accord with the financial risk management challenges that have been identified. The categorisation of universities as facing high, medium or low financial risk over the period from the present to 2024 is based on the impact of loss of overseas fee revenue. Other sources of potential revenue loss have not been considered in the present analysis but are briefly covered in the Conclusion below. The categorisation of universities is shown in table 3.

**Table 3 Classification of Universities according to level of Financial Risk in managing COVID-19 induced Fee Losses**

High Risk	Medium Risk	Low Risk
Monash (Group A)	UNSW	<b>Cluster I</b>
RMIT (Group B)	Queensland	Melbourne
UTS (Group B)	Deakin	ANU
La Trobe (Group C)	Macquarie	Griffith
Central Queensland (Group C)	Adelaide	Wollongong
Southern Cross (Group D)	QUT	Curtin
Canberra (Group D)	Charles Sturt	UWA
	Swinburne	Tasmania
	Uni South Australia	Newcastle
	Flinders	Edith Cowan
	Victoria	James Cook
	Sunshine Coast	Murdoch
	Federation	Southern Queensland
		New England
		<b>Cluster II</b>
		Sydney
		Western Sydney
		ACU
		Charles Darwin
		Notre Dame

This analysis and associated modelling demonstrate that both in the short term and the longer term under both benign and more lasting impact scenarios of COVID-19 several Australian universities appear to have little funding capacity, in terms of readily available current assets, to be able to absorb the likely loss in revenue as a result of a significant decline in international student enrolments. Within the sector a number of universities will be greatly challenged by the consequences of COVID-19. For a few this may create existential issues in terms of ongoing financial viability.

Interestingly, there are no clear patterns of type of university most greatly affected, although all the High Risk institutions except La Trobe and Canberra have international student programs well above the sector average. The High Risk universities are drawn from each of the broad groupings as shown in table 3 and include some with strong financial balance sheets and others with underlying financial weaknesses that are likely to compromise their capacity to meet the anticipated loss of revenue.

Interestingly only two of the High Risk category and three of the Medium Risk category universities are designated as regional universities. Three of the most vulnerable universities and ten of the 13 medium risk universities are metropolitan universities for which the scale of international student enrolments has become the greatest risk factor.

The universities in the High Risk category face significant financial challenges well above their capacity to absorb within available reserves. This suggests that without an alternative source of revenue growth they are facing a significant period of cost containment as a central part of any longer term financial sustainability strategy in the event actual COVID-19 impacts reflect the assumptions on which both the optimistic and the pessimistic scenario are based.

Four of these universities were identified in section 4 as already the least resilient irrespective of the consequences of the COVID-19 pandemic.

The thirteen universities assessed to face a medium risk financial challenge are drawn from all the four groups. They face major challenges if the pessimistic scenario was to be realised.

The remaining 18 universities, nearly half of the 38 universities, all have important financial situations to be managed. While they generally have sufficient cash and investment reserves to absorb immediate or modest shortfalls in fee revenue, not all would have the capacity to offset the consequences of the pessimistic shortfall in revenue. They are therefore placed into two clusters within the low risk category. It is anticipated that the cluster I universities will have to manage relatively lower financial risks than cluster II universities. For all these universities the financial gap will still require prudent disciplined management, but it is not as challenging as for universities in high and medium risk categories.

## Conclusion

All Australian universities are facing major financial challenges as a result of the impact of COVID-19 on their international student programs. More than half the 38 universities are severely impacted. The outcomes will be both immediate and longer term. The longer term impact will in part depend upon the timing and nature of the lifting of restrictions on international travel, and the re-emergence of a strong international student market keen to invest in a campus-based education. It is reasonable to infer that some of the adverse consequences will endure for many years and may not ever be fully reversed. It is also reasonable to anticipate that the eventual new normal will not simply be a return to business as usual as it was pre-COVID-19.

The modelling shows that, in the unlikely event of significant increases in public funding, at the individual institution level each university will to varying degrees need to identify and build additional revenue streams and/or significantly reduce expenditure in order to assure financial viability over the longer term. Few if any universities have sufficient operating margins or available cash and investment reserves to withstand a sustained reduction in international fee revenue. The nature of any 'right-sizing' would be of a dimension no university leader would have experienced previously. For some universities the scale of adjustment is likely to challenge long-term viability at least in terms of their current configuration.

This analysis has focused on the impact on Australian universities of a significant loss in international fee revenue. This is considered to be the largest and most pressing and pervasive financial risk for the higher education sector. There are of course other financial risks. These include a loss in domestic student revenue, particularly in price sensitive postgraduate programs, a loss in HECS-based enrolments (although the Australian Government has guaranteed previously determined levels of Commonwealth Grant Scheme funding for 2020), the loss in commercial income such as conferencing, accommodation and catering, the immediate and longer term loss in industry sponsored research and a possible further curtailment of public sector research funding. To the extent they occur, reductions in revenue from these other areas will aggravate the vulnerability of individual universities.

At the same time Australian universities are facing additional costs. In the short term they include providing financial aid to currently enrolled international and domestic students to whom Australian Government COVID-19 income support packages are inaccessible. They also include the immediate and longer term costs of developing and delivering on-line programs and, at least while not all international students are able to return to campus, the prospect of having to conduct parallel face to face and on-line course delivery. Australian universities have proven to be resilient in the past. Universities are actively implementing various strategies to mitigate potential losses. Some appear to be concentrating on the immediate impact for 2020, while others are clearly focussing as much on the longer term. The various actions under consideration are currently being widely discussed in various forums. The most important of which will be:

- A delay or scaling back of uncommitted capital works and other major projects. Given the decline in fee revenue, it makes sense to lower infrastructure aspirations at this



time. Many Australian universities have enjoyed an infrastructure boom over the past decade, funded largely by international student revenue. A significant deferral of uncommitted capital works is unlikely to compromise the quality of university facilities and major equipment. A re-appraisal of medium to longer term infrastructure requirements in a post-COVID-19 environment may also realise assets that are no longer required. For many universities the scaling back of capital works is likely to offer up considerable savings in the short term.

- For those universities with multiple campuses, a major review of the viability of each in a post-COVID-19 world. Increased focus on on-line delivery combined with the increased cost in university overheads in supporting multiple campuses demands that universities weigh up carefully the competing considerations of mission and finances. This will of course necessitate a discussion with government as there are no doubt political considerations around campus closures, especially in regional Australia.
- A rationalization of course and subject offerings so as to ensure individual program viability over the longer term. COVID-19 provides the opportunity for institutions to confirm the break-even revenue required to sustain individual courses and subjects and to consolidate or eliminate offerings that either are non-viable or for which there are compelling other reasons for continuation. Those institutions with a good understanding of the costs of individual course and program delivery will be better placed to determine how best to achieve efficiencies. Again consultation with government may be required in order to ensure 'public interest' programs remain regionally accessible.
- A rigorous review of Other Expenditure costs. In 2018 Australian universities spent some \$7.9 billion on Other Expenditure and a further \$337 million on Advertising, Marketing and Promotional Expenses. Possible areas for savings include travel, entertainment, use of consultants and marketing expenses.
- A reappraisal of head office structures and remuneration levels, with a view to consolidation of roles which may have emerged in a period of plenty, noting that the total cost of executive appointments often include a number of staff in support roles. Savings may include a temporary salary reduction and a longer term freeze in remuneration for university executives.
- A further review of administrative and professional staff costs which amounted to \$8.6 billion in 2018. Sector-wide benchmarking is already available to assess relative efficiency on a function by function basis. Recent benchmarking reports suggest a continuing wide variation in actual expenditure across most institutions inviting the opportunity for more productive service delivery of support services.
- Given that in aggregate employee costs represent 57% of total university expenditure, reductions will inevitably occur both to reflect the reduction in student enrolments and to adjust workforce capabilities to changed future requirements. As already reported, casual and fixed term staff are likely to bear the brunt of this. Universities Australia has estimated that job losses could be as high as 21,000. If as anticipated the sector is facing a \$3-4.5 billion reduction in revenue in 2020 and a \$12-18 billion reduction over 2020-24 then there will need to be a major reshaping of staffing costs. One approach currently underway and designed to minimise further job losses, at least within some institutions, involves university leaders seeking collaboration with unions to have existing enterprise agreements altered to allow for a temporary salary freeze,

the cumulative effect of which would be to help universities lower their expenditure base to reflect the anticipated reduction in revenue in the post-COVID-19 world.

While the attention will need to be on cost reductions in the short to medium term, universities will need to continue to invest in digital education and create new forms of student experience capable of attracting and retaining both domestic and international market share in a post COVID-19 era. In an environment where university education is increasingly a combination of ‘click and brick’ modes, Australian universities which have predominantly offered international students a campus-based experience will increasingly need to compete with globally established on-line providers if they are to rebuild market share.

There may be other sources of revenue growth for individual universities. The Australian Government’s COVID-19 Higher Education Relief package included additional funding for short courses in health and other high need disciplines. Despite the marginal rate of funding provided many universities have signalled an intention to offer courses in response. Additional funding would arise in the event additional HECS-based places were provided. However, without a significant change in national policy settings the opportunity for significant offsetting revenue from domestic programs seems marginal. Of course within a finite funding pool universities with greater brand power might seek to cannibalise the market for other institutions, thereby risking a further destabilisation of the current higher education framework.

The nature and size of the adjustment required would indicate that there are university specific and whole of system issues that the Australian Government will need to consider.

For some of those most at risk, the scale of the adjustment required may be too great for solely an internal response. Some government assistance will most likely be required if the current sector-wide fabric is to remain. At a whole of sector level, the impact of the loss of the fee revenue which cross-subsidises Australian university research, particularly in the group A universities, will create a crisis in research and research training as the Chief Scientist has recently highlighted (6).

Without such intervention it is likely that COVID-19 will impose a major reshaping of the Australian unified national system that has been in place and only marginally refined since the early 1990s. This might occur organically through a series of university-led mergers or systemically as a result of government-led policy review. The absence of some form of government intervention also risks compromising the international competitiveness of individual universities and in aggregate Australia’s higher education sector.

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The papers published by Frank Larkins referred to in this article may also be found at <https://franklarkins.wordpress.com>

## Appendix A. Some Financial Data for Australian Universities 2009 and 2018

1	2	3	4	5	6	7	8
	<i>2009 Overseas Fee Revenue Students \$ '000s</i>	<i>2009 Overseas Revenue as % 2009 Total Revenue</i>	<i>2018 Overseas Fee Revenue Students \$ '000s</i>	<i>2018 Overseas Revenue as % 2018 Total Revenue</i>	<i>2018 Overseas Revenue as Multiple of 2009 Overseas Revenue</i>	<i>2018 Total Revenues Continuing Operations \$'000s</i>	<i>2018 Total Expenses Continuing operations \$ '000s</i>
All Unis	\$3,414,687	16.7%	\$8,838,891	26.2%	2.6	33,741,910	\$32,279,145
<b>Group A</b>							
Sydney	\$241,846	17.4%	\$884,693	35.4%	3.7	2,500,481	\$2,330,883
Melbourne	\$265,541	17.9%	\$879,312	34.7%	3.3	2,530,919	\$2,462,010
Monash	\$265,565	18.8%	\$851,989	34.1%	3.2	2,498,349	\$2,335,509
NSW	\$202,000	17.2%	\$712,461	33.4%	3.5	2,130,219	\$2,117,609
Queensland	\$187,461	14.9%	\$572,698	29.1%	3.1	1,969,354	\$1,894,854
<b>Group B</b>							
RMIT	\$203,664	28.0%	\$463,206	36.0%	2.3	1,286,055	\$1,246,667
UT Sydney	\$113,454	22.0%	\$362,464	34.5%	3.2	1,049,719	\$975,017
Deakin	\$110,597	19.4%	\$343,208	28.7%	3.1	1,195,442	\$1,143,164
ANU	\$68,917	8.2%	\$320,871	24.0%	4.7	1,339,599	\$1,112,638
Macquarie	\$162,381	30.4%	\$309,280	30.6%	1.9	1,010,442	\$956,991
Adelaide	\$92,017	15.0%	\$224,511	24.9%	2.4	900,349	\$904,172
QUT	\$100,717	13.4%	\$218,057	20.6%	2.2	1,059,016	\$1,026,415
<b>Group C</b>							
Griffith	\$135,848	20.1%	\$181,477	18.7%	1.3	970,766	\$933,110
Wollongong	\$82,518	19.6%	\$169,034	25.7%	2.0	657,398	\$649,559
Curtin	\$147,590	21.6%	\$164,694	18.4%	1.1	897,207	\$870,790
Charles S.	\$17,658	5.3%	\$158,471	26.0%	9.0	609,852	\$608,903
La Trobe	\$85,856	16.3%	\$158,433	19.8%	1.8	798,779	\$768,605
Swinburne	\$108,325	25.3%	\$157,089	21.7%	1.5	723,294	\$732,604
UWA	\$71,999	9.8%	\$152,774	16.5%	2.1	926,013	\$897,393
CQU	\$87,350	35.8%	\$144,742	33.0%	1.7	438,218	\$438,139
West. Syd	\$52,533	10.5%	\$132,618	14.6%	2.5	909,269	\$822,498
Federation	\$68,426	28.9%	\$127,724	38.6%	1.9	330,906	\$324,291
USA	\$88,410	19.0%	\$123,764	18.8%	1.4	657,865	\$638,419
Tasmania	\$39,371	8.9%	\$117,201	15.3%	3.0	763,982	\$644,914
Newcastle	\$54,611	11.0%	\$114,425	14.9%	2.1	766,719	\$741,924
Edith Cowan	\$57,099	18.5%	\$101,270	22.4%	1.8	452,894	\$430,894
<b>Group D</b>							
Flinders	\$33,179	10.3%	\$93,723	18.5%	2.8	506,456	\$485,385
Victoria	\$53,219	13.3%	\$89,038	20.0%	1.7	445,028	\$437,781
James Cook	\$37,133	12.1%	\$74,071	14.7%	2.0	503,002	\$490,362
Southern C.	\$19,645	12.0%	\$73,996	27.4%	3.8	270,222	\$270,123
ACU	\$30,061	14.7%	\$70,221	12.8%	2.3	549,024	\$500,509
Sun. Coast	\$13,422	12.3%	\$66,467	22.0%	5.0	302,543	\$287,113
Murdoch	\$38,786	14.1%	\$58,286	16.2%	1.5	359,708	\$349,927
Canberra	\$19,597	12.4%	\$56,667	18.4%	2.9	307,579	\$288,738
South'n Qld	\$35,738	16.9%	\$45,223	13.8%	1.3	328,505	\$318,157
Charles D.	\$6,680	3.2%	\$36,420	14.1%	5.5	258,664	\$280,045
New England	\$10,377	5.1%	\$24,423	7.7%	2.1	319,137	\$341,574
Notre Dame	\$5,096	5.5%	\$3,890	5.1%	-0.8	186,116	\$187,401

## Appendix B. Data Related to Potential Overseas Student Fee Losses for Australian Universities

	<i>Loss in 2020 Assuming 40% decline in 2018 revenue \$'000s</i>	<i>One-Third of Cash and Investments at 31 December 2018 \$'000s Col 6</i>	<i>One Third Cash &amp; Investments Minus 2020 Fee Loss i.e. Col 3-Col 2</i>	<i>2020 Fee Loss as % Total 2018 Revenues Col 2 (B)/Col 7 (A)</i>	<i>Total Cash and Investments at 31 December 2018 \$'000s</i>
1	2	3	4	5	6
<b>All Institutions</b>	\$3,535,556	\$6,760,558	\$3,225,001	10.5%	\$20,281,673
<b>Group A</b>					
Sydney	\$353,877	\$692,207	\$338,330	14.2%	\$2,076,622
Melbourne	\$351,725	\$969,800	\$618,076	13.9%	\$2,909,401
Monash	\$340,796	\$216,616	<b>-\$124,180</b>	13.6%	\$649,847
NSW	\$284,984	\$337,613	\$52,629	13.4%	\$1,012,840
Queensland	\$229,079	\$329,460	\$100,381	11.6%	\$988,381
<b>Group B</b>					
RMIT	\$185,282	\$48,368	<b>-\$136,914</b>	14.4%	\$145,104
UT Sydney	\$144,986	\$67,736	<b>-\$77,250</b>	13.8%	\$203,207
Deakin	\$137,283	\$276,408	\$139,125	11.5%	\$829,224
ANU	\$128,348	\$598,242	\$469,894	9.6%	\$1,794,726
Macquarie	\$123,712	\$165,696	\$41,984	12.2%	\$497,088
Adelaide	\$89,804	\$129,752	\$39,948	10.0%	\$389,257
QUT	\$87,223	\$208,624	\$121,401	8.2%	\$625,871
<b>Group C</b>					
Griffith	\$72,591	\$208,055	\$135,464	7.5%	\$624,165
Wollongong	\$67,614	\$199,747	\$132,134	10.3%	\$599,242
Curtin	\$65,878	\$209,640	\$143,762	7.3%	\$628,920
Charles S.	\$63,388	\$115,708	\$52,320	10.4%	\$347,125
La Trobe	\$63,373	\$48,310	<b>-\$15,064</b>	7.9%	\$144,929
Swinburne	\$62,836	\$116,188	\$53,352	8.7%	\$348,563
UWA	\$61,110	\$299,603	\$238,493	6.6%	\$898,809
CQU	\$57,897	\$58,200	\$303	13.2%	\$174,600
West Syd	\$53,047	\$124,954	\$71,907	5.8%	\$374,863
Federation	\$51,090	\$104,679	\$53,590	15.4%	\$314,038
USA	\$49,506	\$77,711	\$28,206	7.5%	\$233,134
Tasmania	\$46,880	\$190,712	\$143,832	6.1%	\$572,136
Newcastle	\$45,770	\$168,755	\$122,985	6.0%	\$506,264
Edith Cowan	\$40,508	\$134,125	\$93,617	8.9%	\$402,376
<b>Group D</b>					
Flinders	\$37,489	\$68,954	\$31,465	7.4%	\$206,863
Victoria	\$35,615	\$57,467	\$21,851	8.0%	\$172,400
James Cook	\$29,628	\$89,568	\$59,939	5.9%	\$268,703
S. Cross	\$29,598	\$21,641	<b>-\$7,957</b>	11.0%	\$64,924
ACU	\$28,088	\$60,062	\$31,974	5.1%	\$180,187
Sunshine C	\$26,587	\$42,819	\$16,232	8.8%	\$128,457
Murdoch	\$23,314	\$148,829	\$125,514	6.5%	\$446,486
Canberra	\$22,667	\$17,054	<b>-\$5,613</b>	7.4%	\$51,161
South'n Qld	\$18,089	\$60,993	\$42,904	5.5%	\$182,980
Charles D.	\$14,568	\$34,726	\$20,158	5.6%	\$104,179
New England	\$9,769	\$51,647	\$41,878	3.1%	\$154,942
Notre Dame	\$1,556	\$9,886	\$8,330	0.8%	\$29,659

## Appendix C Potential Overseas Student Revenue Losses for Two Scenarios in \$m

	<i>Optimistic Scenario Loss 2020 to 2023 \$m 130% Col 4 Appendix A</i>	<i>Pessimistic Scenario Loss 2020 to 2024 \$m 205% of Col 4 Appendix A</i>	<i>Two-Thirds of Cash and Investments at 31 December 2018 \$m Col 6 Appendix B</i>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>All Institutions</b>	\$11,491	\$18,120	\$13,521
<b>Group A</b>			
Sydney	\$1,150	\$1,814	\$1,384
Melbourne	\$1,143	\$1,803	\$1,940
Monash	\$1,108	\$1,747	\$433
NSW	\$926	\$1,461	\$675
Queensland	\$745	\$1,174	\$659
<b>Group B</b>			
RMIT	\$602	\$950	\$97
UT Sydney	\$471	\$743	\$135
Deakin	\$446	\$704	\$553
ANU	\$417	\$658	\$1,196
Macquarie	\$402	\$634	\$331
Adelaide	\$292	\$460	\$260
QUT	\$283	\$447	\$417
<b>Group C</b>			
Griffith	\$236	\$372	\$416
Wollongong	\$220	\$347	\$399
Curtin	\$214	\$338	\$419
Charles S.	\$206	\$325	\$231
La Trobe	\$206	\$325	\$97
Swinburne	\$204	\$322	\$232
UWA	\$199	\$313	\$599
CQU	\$188	\$297	\$116
West Syd	\$172	\$272	\$250
Federation	\$166	\$262	\$209
USA	\$161	\$254	\$155
Tasmania	\$152	\$240	\$381
Newcastle	\$149	\$235	\$338
Edith Cowan	\$132	\$208	\$268
<b>Group D</b>			
Flinders	\$122	\$192	\$138
Victoria	\$116	\$183	\$115
James Cook	\$96	\$152	\$179
S. Cross	\$96	\$152	\$43
ACU	\$91	\$144	\$120
Sunshine C	\$86	\$136	\$86
Murdoch	\$76	\$119	\$298
Canberra	\$74	\$116	\$34
South'n Qld	\$59	\$93	\$122
Charles D.	\$47	\$75	\$69
New England	\$32	\$50	\$103
Notre Dame	\$5	\$8	\$20