

6. New Zealand's High Research Overheads: An International Anomaly

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Aotearoa New Zealand's high research overheads are internationally anomalous, and are over 100% of directly accounted for research costs such as salary, consumables and operating expenses. This means that the majority of taxpayer-derived funding provided by the Government to public institutions is difficult or impossible to properly account for. They also serve as a constant source of tension and confusion for all international migration and collaboration in the research sector.

Recommendations:

1. Current high overheads >100% represent a pool of funding that is difficult for the Government to account for and can be reallocated according to international best practice to more stably support workforce and infrastructure capacity.
2. A process should be undertaken to arrive at between \$240 and \$526 million of reallocation.
3. Ongoing monitoring should occur to ensure research overheads are fair and accountable.

A possible justification for high overheads is to enable institutions—Universities and Crown Research Institutes (CRIs)—to invest strategically in new directions and infrastructure. The 2010 CRI Task Force Report made this case, yet unfortunately recent rereview and the Briefing to the Incoming Minister of RSI confirm that strategic planning has been difficult in CRIs, with several on watch due partly or fully to combined financial and strategic concerns. High overheads combined infrastructure that is not in a good state or readily accessible within the research system raise further concerns about the present system. High overheads represent barriers to national and international cooperation, as well as philanthropic investment in research, which was intended when the current system was being designed.^{1,2} Currently, overheads $\geq 25\%$ are a barrier to philanthropic and non-profit NGO-funded research, yet provide important leadership in civil society that research should connect to.

A lack of overarching science strategies is also apparent but less surprising in the university sector. For universities, the question is whether such internationally anomalous overheads are justifiable when \$315 million per year is received in fully flexible funding through the Performance Based Research Fund (PBRF)? It was concerning when, in response to the pandemic budget crises related to student income, all universities raised their overhead rates for proposals to contestable research funding pools, rather than sharpening the financial efficiency of their offerings to compete better. This raises serious concerns about the entire nature of hypercompetitive funding. From a systems perspective, there is cause for concern. Non-transparent overheads are derivatives of already unstable monetary flows being used fully or partly as speculative investments intended to generate future revenue—quite possibly the academic equivalent of the repackaged mortgage debt derivatives that [caused](#) the 2008 Global Financial Crisis.

The case for calculating how much funding is potentially available to re-allocate for more efficient, equitable, and stable use is clear: there is potential to support infrastructure and fellowships for the precarious early career researcher workforce, and a stable base funding system to restore the capacity and well-being of the research workforce in general. How much is available depends on what level of overhead is accepted as an international standard that can be applied to our nation's research system. Nations with very large and successful research systems review overhead rates rigorously,³ usually referring to them as indirect costs or facilities and administration (F&A) costs. The US has had a consistent system that allows for different costs in different situations, depending on the legitimate level of costs and the degree to which some expenses, particularly infrastructure, have already been government funded. This system has proven valuable, for example, in maintaining the high social

rates of return from local agricultural universities.⁴ A preliminary international compilation of overheads suggest that applicable rates could be in the range of 25–55% (Appendix 1).

In Table 1, we review the funding directly within scope and related to Te Ara Paerangi Future Pathways consultation. The main question is whether it would also be appropriate to consider reallocation of PBRF funds. There are reasons to question this, but Universities New Zealand states in their [submission](#) (p 9) that the current situation is a “full-cost and fully funded model”. This suggests consideration or reallocation is potentially appropriate, noting that these funds are administered by TEC outside the direct scope of the Green Paper consultation. The plausible range of reallocated funds is then between \$240 and \$560 million per year. Consideration of contracting issues and unintended consequences could argue for a phase in over time, although urgency is recommended for the most critical issues.

Understanding how the rest of the world considers overheads can follow clear, stable policy guidance. For example, for the F&A costs in universities in the USA,³ there has been a durable model over 25 years for the consideration of how overhead policy can impact universities and other research organisations. It was believed that the federal government should share in these costs as these activities provide benefits to the government and society as a whole. If careful consideration is not taken reducing overhead rates, it may reduce spending into critical infrastructure needed to carry out research.

Table 1: Current research funding allocations from the Government with current and potential overhead reallocation.

Funding	\$m per year
Strategic Science Investment Fund	\$329
Endeavour Fund	\$228
National Science Challenges	\$97
Health Research Council	\$117
Marsden Fund	\$79
Centres of Research Excellence*	\$50
Other	\$30
Government Dept Research*	\$66
Total Research Funding	\$996
Current OH component estimate	\$533
Available at 55% OH	\$240
Available at 40% OH	\$320
Available at 25% OH	\$400
PBRF*	\$315
PRBF inclusive Total Research Funding	\$1,311
Current OH component estimate	\$701
Available at 55% OH	\$316
Available at 40% OH	\$421

*outside Vote RSI funds that are fully within the scope for consultation.

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References

1. Arbuckle RH. Science and technology review : a new deal. Published online 1988.
2. Beattie D. Key to prosperity, science & technology : report of the Ministerial Working Party. Published online 1986.
3. Analysis of Facilities and Administrative Costs at Universities. Accessed March 16, 2022. https://clintonwhitehouse4.archives.gov/WH/EOP/OSTP/html/analysis_univ.html#Issue_One:_Comparison_of_F&A_Rates_acros
4. Huffman WE, Just RE. Agricultural Research: Benefits and Beneficiaries of Alternative Funding Mechanisms. *Review of Agricultural Economics*. 1999;21(1):2-18. doi:10.2307/1349968

Appendix 1: Examples of overhead rates in major research funding systems New Zealand may seek to collaborate with, in comparison to New Zealand examples.

United States of America

NB: The allowable “overhead” rates (termed indirect costs) of these funding programs are set out by science policy/legislature.

Source	Maximum allowable rate	Link
University of Maryland research costs	54.5% on campus, 26% off campus F&A	https://www.umaryland.edu/spa/budgets-and-expenses/fa-cost-rates/
Massachusetts Institute of Technology	55.1% on campus, 5.8% off campus	https://ras.mit.edu/facilities-and-administrative-fa-rates
USDA NIFA (e.g. Hatch Act, Graduate Fellowship Grants, New Technologies for Agriculture Extension, etc.)	0% (No costs allowed)	https://nifa.usda.gov/sites/default/files/resource/NIFA-19-009-nifa-indirect-cost-chart.pdf
USDA NIFA (Sun Grants)	4%	https://nifa.usda.gov/sites/default/files/resource/NIFA-19-009-nifa-indirect-cost-chart.pdf
USDA NIFA (e.g. Beginning Farmer and Rancher Development Program, National Food and Agricultural Sciences)	10%	https://nifa.usda.gov/sites/default/files/resource/NIFA-19-009-nifa-indirect-cost-chart.pdf

Teaching, Extension, and Research Awards (TERA), etc)		
USDA NIFA (Food Animal Residue Avoidance Databank (FARAD))	19%	https://nifa.usda.gov/sites/default/files/resource/NIFA-19-009-nifa-indirect-cost-chart.pdf
USDA NIFA (e.g. Capacity Building Grants for NonLand Grant Colleges of Agriculture, Higher Education Challenge Grants, Renewable Resources Extension Act National Focus Funds, etc.)	30%	https://nifa.usda.gov/sites/default/files/resource/NIFA-19-009-nifa-indirect-cost-chart.pdf

Europe

Source	Maximum allowable rate	Link
Horizon Europe	25%	https://www.ffg.at/en/europe/heu/legal-financial/indirect-costs
University of Cambridge	25–28% depending on research area/school	https://www.afpa.admin.cam.ac.uk/resource-allocation/in-direct-cost-charge

New Zealand

Typical for Universities	105–120%	See specific examples below
University of Auckland	115%	https://www.auckland.ac.nz/en/about-us/about-the-university/policy-hub/research-innovation/research-finance-consulting/overhead-charging-policy.html#:~:text=Full%20recovery%20of%20overheads%20%E2%80%93%20115%25&text=2.,supported%20by%20an%20independent%20audit.
Victoria University of Wellington	110%	https://www.wgtn.ac.nz/documents/policy/research-policy

		/management-of-external-research-consultancy-and-related-contracts-policy.pdf
CRIs	100–200+%	Varies due to salary banded charge-out rates