

Fact Sheet: Changes to the Performance-Based Research Fund

Section 1 provides information about policy and operational changes to improve the effectiveness and efficiency of the Performance-Based Research Fund (PBRF).

Section 2 outlines the implementation process and timeline.

Section 3 answers a number of common questions.

Section 1: PBRF changes

Status quo	Change	Rationale
<i>PBRF objectives</i>		
<p>The PBRF is designed to:</p> <ul style="list-style-type: none"> • increase the average quality of research • ensure that research continues to support degree and postgraduate teaching • ensure that funding is available for postgraduate students and new researchers • improve the quality of public information on research outputs • prevent undue concentration of funding that would undermine research support for all degrees or prevent access to the system by new researchers • underpin the existing research strengths in the tertiary education sector. 	<p>The primary objectives of the PBRF are to:</p> <ul style="list-style-type: none"> • increase the quality of basic and applied research at New Zealand's degree-granting tertiary education organisations • support world-leading research-led teaching and learning at degree and postgraduate levels • assist New Zealand's tertiary education organisations to maintain and lift their competitive research rankings relative to their international peers • provide robust public information to stakeholders about research performance within and across tertiary education organisations. <p>In doing so, the PBRF will also:</p> <ul style="list-style-type: none"> • support the development of postgraduate student researchers and new and emerging researchers • support research activities that provide economic, social, cultural, and environmental benefits to New Zealand, including the advancement of mātauranga Māori • support technology and knowledge transfer to New Zealand businesses, iwi and communities. 	<p>Clarify the Government's expectations for the PBRF. The changes set out the primary purpose of the fund and acknowledge the contribution the PBRF makes to the Government's wider priorities in science, research and innovation.</p>

Status quo	Change	Rationale
<i>Better valuing user-perspectives of research quality and engagement in user-orientated research</i>		
<p>The assessment of research performance and allocation of funding to tertiary education organisations is based on three measures:</p> <ul style="list-style-type: none"> External Research Income - income received by a tertiary education organisation for the purposes of conducting research. This component accounts for 15% of PBRF funding. the Quality Evaluation - a periodic assessment of the research quality of participating tertiary education organisations, based on peer review of Evidence Portfolios submitted by individual teaching and research staff. The Quality Evaluation accounts for 60% of PBRF funding. Research Degree Completions - the number of research-based postgraduate degrees (research masters and doctorates) that are completed within a tertiary education organisation. This component accounts for 25% of PBRF funding. 	<p>The value of the External Research Income measure will increase from 15% of total PBRF funding to 20% of total funding.</p> <p>The value of the Quality Evaluation measure will reduce from 60% to 55% of total funding.</p> <p>The value of the Research Degree Completion measure will remain the same, at 25% of total funding.</p> <p><i>A final decision on changing the relative size of the External Research Income component of the PBRF will be announced by mid-2014, following a targeted consultation with the most affected tertiary education organisations and key science stakeholders.</i></p>	<p>This is a simple and low compliance way to reward and encourage tertiary education research of relevance to end-users.</p> <p>External research income is a strong proxy indicator for knowledge transfer between tertiary education organisations and industry.</p> <p>The change brings New Zealand's research assessment system more in line with international practice.</p>
<p>Tertiary education organisations report on the total amount of External Research Income that they receive each year. There is no requirement to report External Research Income by source. Each dollar of External Research Income earned is worth the same amount of PBRF income, regardless of source.</p>	<p>Tertiary education organisations will be required to report External Research Income by the following sources:</p> <ul style="list-style-type: none"> NZ government contestable funds NZ public sector contract research Overseas research income New Zealand non-government sources (including research funding from industry, iwi, and the not-for-profit sector). <p>A new financial weighting of 2 will be placed on External Research Income from NZ non-government sources, and 1.5 on External Research Income from overseas sources.</p>	<p>Increase transparency and provide research funders with greater information about research activities in the tertiary education sector.</p> <p>Better value user perspectives of research quality and recognise the additional effort required to attract research income from international, business, iwi and community sources.</p> <p>Better incentivise tertiary education organisations to seek out research funding from non-New Zealand government sources.</p>

Status quo	Change	Rationale
<i>Simplifying the Quality Evaluation to reduce transaction costs</i>		
<p>Evidence Portfolios are required to include up to four nominated research outputs and up to 30 other research outputs.</p> <p>Evidence Portfolios can include up to 30 examples of Contribution to the Research Environment and 30 examples of Peer Esteem.</p>	<p>Evidence Portfolios will include up to four nominated research outputs (no change) and to list up to 12 other research outputs (a reduction from 30).</p> <p>The Peer Esteem and Contribution to the Research Environment measures will be combined into a single measure called 'Research Contribution'.</p> <p>Evidence Portfolios will include up to 15 examples of Research Contribution (a reduction from 30 examples of Peer Esteem and 30 examples of Contribution to the Research Environment).</p>	<p>Reducing the size of Evidence Portfolios will significantly reduce the amount of time and effort that individual researchers and tertiary education organisations spend preparing for the Quality Evaluation. It will also reduce the time that Quality Evaluation panels spend assessing each Evidence Portfolio.</p>
<p>Researchers submitting Evidence Portfolios can claim special circumstances where these account for a reduction in the quantity of research outputs and examples in their Evidence Portfolios. The types of special circumstances that can be claimed are:</p> <ol style="list-style-type: none"> a. impact of the Canterbury Earthquakes (2012 Quality Evaluation) b. extended leave c. significant community responsibilities d. leadership positions involving extended or above-the-usual time commitment e. long-term disability f. part-time employment g. other circumstances. <p>These special circumstances can be taken into account by panels when determining scores.</p>	<p>The Tertiary Education Commission will investigate the most effective approach to tighten provisions for staff to have special circumstances considered, where these account for a reduction in the quantity of research outputs and examples in their Evidence Portfolios. This work will be undertaken in consultation with a Sector Reference Group.</p> <p>To guide this work, an objective is set that no more than 10% of Evidence Portfolios submitted will seek consideration of special circumstances.</p>	<p>Special circumstances provisions are important for the perceived fairness and equity of the system.</p> <p>A large proportion of Evidence Portfolios cite special circumstances (37% in 2012). This significantly increases the time spent by peer review panels on assessments, but has a minimal impact on results.</p> <p>Transaction costs associated with special circumstances provisions can be reduced through tightening the operational guidance and criteria.</p>

Status quo	Change	Rationale
<p>Staff based overseas can be eligible for the PBRF if they meet particular requirements.</p>	<p>Streamline eligibility criteria for the Quality Evaluation to exclude staff based overseas.</p>	<p>Focus assessment on staff who contribute significantly to research and teaching in New Zealand.</p> <p>The change also:</p> <ul style="list-style-type: none"> • provides greater clarity for tertiary education organisations • removes transaction costs associated with determining whether overseas-based staff are eligible • removes incentives for tertiary education organisations to employ overseas-based staff on fractional contracts to attract additional funding.
<p>Tertiary education organisations submitting Evidence Portfolios can specify which subject area peer review panel an Evidence Portfolio will be assessed by, and request that an Evidence Portfolio is cross-referred to other panels and/or expert advisory groups to help the responsible peer review panel assess the Evidence Portfolio.</p> <p>There are two expert advisory groups for Pacific research and professional and applied research.</p> <p>When assessing Evidence Portfolios, panels can request specialist advisers to help them assess specialised material in Evidence Portfolios.</p>	<p>Tertiary education organisations will no longer be able to request that an Evidence Portfolio is considered by more than one peer review panel.</p> <p>Only the chairs of peer review panels will be able to cross-refer an Evidence Portfolio to another subject area peer review panel for further advice. The use of specialist advisors will be discontinued.</p> <p>The two expert advisory groups (for Pacific research, and professional and applied research) will be disestablished.</p> <p>Experts in professional and applied research will be included within subject area peer review panels.</p> <p>The Tertiary Education Commission will investigate the operational feasibility of establishing a subject area peer review panel for Pacific research prior to the 2013 Quality Evaluation.</p> <p>Guidance will be more explicit that the new Research Contribution measure can include examples of contribution and esteem both within and outside academia.</p>	<p>Cross-referrals to peer review panels, expert advisory groups and specialist advisers increase the time and complexity of the assessment process, with minimal impact on results.</p>
<p><i>Better supporting the sustainability of the tertiary education workforce</i></p>		
<p>The current financial weightings for Evidence Portfolios that receive different scores in the Quality Evaluation are: A=5, B=3, C=1, C (new and emerging researcher)=1.</p>	<p>Introduce a financial weighting for Evidence Portfolios submitted by new and emerging researchers who receive a 'C' in the Quality Evaluation. This will mean that financial weightings for Evidence Portfolios are: A=5, B=3, C=2 (for new and emerging researchers), C=1.</p>	<p>Improving the financial incentives for tertiary education organisations to recruit and develop new and emerging researchers will help to support the sustainability of the tertiary education research system.</p>

Status quo	Change	Rationale
<i>Strengthening reporting on research performance</i>		
<p>The 2012 Quality Evaluation reported on average research quality at the institutional level using four average quality scores (AQSs):</p> <ul style="list-style-type: none"> h. AQS(N) reported average research quality against the number of full-time equivalent staff receiving an A, B, C i. AQS(S) reported average research quality against the number of full-time equivalent teaching and research staff j. AQS(E) reported average research quality against the number of equivalent full-time students enrolled at degree level and above k. AQS(P) reported average research quality against the number of equivalent full-time students enrolled in post-graduate qualifications. <p>AQS(N) was used as the primary measure of research quality, with the three other measures providing contextual information. Only AQS(N) was reported at the level of subjects and nominated academic units.</p>	<p>AQS(S) - average quality, based on the number of teaching and research staff in tertiary education organisations will become the primary measure of research quality. The use of AQS(S) will be supported by changes to improve the quality and consistency of the staffing information collected from tertiary education organisations.</p> <p>An additional contextual measure, AQS(E), based on the number of full-time equivalent students enrolled at degree level and above, will continue to be reported at the institution level.</p> <p>The AQS(N) and AQS (P) measures will no longer be reported.</p>	<p>Reporting four measures of average quality is complex and confusing for students, the public, and research end-users, including industry.</p> <p>Replacing AQS(N) with AQS(S) as the primary measure of research quality will support more meaningful comparisons of research performance which take into account the size and scale of tertiary education organisations and their teaching and research workforce.</p> <p>AQS(E) provides complementary information about the extent to which teaching at degree-level and above is underpinned by quality research.</p>
<p>The Tertiary Education Commission produces a detailed report on research performance by tertiary education organisations, subject areas and academic units following each Quality Evaluation.</p> <p>The Tertiary Education Commission also produces regular reports which specify the total amount of funding received by each tertiary education organisation, but does not publish detailed breakdowns of PBRF funding allocations to each tertiary education organisation within each of the PBRF's three measures.</p>	<p>In addition to publishing the total amount of funding received by each tertiary education organisation against each of the PBRF's three measures, the Tertiary Education Commission will publish breakdowns within each measure as follows:</p> <ul style="list-style-type: none"> l. Quality Evaluation, by subject area m. Research Degree Completions, by subject area, and by weightings for Māori and Pasifika students and te reo theses n. External Research Income, by source. 	<p>Increase transparency for the public and for staff within tertiary education organisations regarding the relationship between performance in the PBRF and funding.</p> <p>Reinforce existing financial incentives for tertiary education organisations to maximise research performance across subject areas, boost Research Degree Completions, and attract External Research Income.</p>

Section 2: Implementation process and timeline

The PBRF assesses and allocates funding based on previous research performance, so while the next Quality Evaluation will take place in 2018, it will assess Evidence Portfolios based on the work done by researchers between 1 January 2012 and 31 December 2017. Results will reflect research strategies by tertiary education organisations and the human resource decisions they make about their research workforce during this period.

There is a similar but shorter pattern with External Research Income and Research Degree Completions where the funding that tertiary education organisations receive for these components is linked to their performance over the preceding three years.

The effect of this is that while most of the changes will take several years to be fully implemented, tertiary education organisations are expected to begin responding to these changes as soon as they are announced. All of the changes will be fully implemented prior to the next Quality Evaluation in 2018.

As with previous Quality Evaluations, the Tertiary Education Commission will establish a Sector Reference Group to support the development of detailed operational guidelines. The table below summarises when specific changes will be made, noting when the funding that tertiary education organisations receive will actually be affected.

	2014	2015	2016	2017	2018 Quality Evaluation	2019
Increase External Research Income to 20%, reduce Quality Evaluation to 55% <i>[subject to final decision]</i>		Implemented	Affects funding received			
New financial weights for External Research Income from NZ non-government sources, and overseas sources	Guidelines published (December)	Begin reporting External Research Income by source		Affects funding received		
Changes to simplify the Quality Evaluation			Guidelines published		Implemented	
New financial weight for new and emerging researchers' Portfolios					Implemented	Affects funding received
Strengthen research performance reporting in Quality Evaluation			Guidelines published		Implemented	
TEC to publish more detailed breakdowns of funding		Begin implementing				

One of the changes, to increase the proportion of funding allocated based on External Research Income to 20% (and decrease the relative size of the Quality Evaluation to 55%), was not included in the original public consultation proposal. The Ministry of Education will conduct a brief, targeted consultation with the tertiary education organisations most affected and key science sector stakeholders on this specific change. In mid-2014, following this consultation, a final decision on changing the relative size of the External Research Income component of the PBRF will be announced.

Section 3: Questions and answers

What is the role of the PBRF in the science and innovation system?

The PBRF was developed in 2002 to reward and encourage tertiary education research excellence. The PBRF works alongside tuition subsidy funding to enable New Zealand students and international students studying in New Zealand to receive degree and postgraduate qualifications that are truly world-class and internationally competitive.

The PBRF has a unique role in the tertiary education, science and innovation system. It provides financial and reputational incentives to support high-quality tertiary research and research-led teaching and learning at degree level and above by:

- assessing research excellence
- publishing information on research performance, and
- allocating funding based on research performance.

By rewarding and encouraging research excellence and research-led teaching, the PBRF also supports wider government scientific, research and innovation priorities. These include enabling research that will provide economic, social, environmental and cultural benefits to New Zealand, encouraging business innovation and commercialisation, and developing new scientific talent to strengthen New Zealand's research system. However, there are a number of other funds specifically designed to address these priorities.¹ The PBRF should, therefore, remain primarily concerned with supporting research excellence and research-led learning for students.

Why is the Government proposing changes to the PBRF?

In 2016/17 the PBRF will reach \$300 million per annum, making up 20% of the Government's total research and development investment in that year. The policy and operational changes are designed to increase the effectiveness and efficiency of the PBRF, in order to maximise the value of the Government's investment.

The 2012/13 review of the PBRF found that the fund has supported a significant increase in the research performance and productivity of New Zealand tertiary education organisations, including increases in the average quality of research, higher qualification completion rates for postgraduate research degrees, and growth in the share of world-indexed publications and citations by New Zealand tertiary education organisations. International comparisons also show that the design of the PBRF has a number of strengths, relative to other performance-based funding systems.

The review did identify some specific issues and areas for potential improvement:

- the Quality Evaluation (the largest component of the PBRF) is complex and costly to administer
- the PBRF may not adequately recognise user perspectives of research quality or reward engagement in user-orientated research
- the PBRF creates potential disincentives for tertiary education organisations to recruit and develop new and emerging researchers, and

¹ These include Vote Science and Innovation contestable funding, the National Science Challenges, the Primary Growth Partnership, Callaghan Innovation, and business-led research and development funds.

- the reporting of PBRF results is complex, may not provide a robust picture of performance across tertiary education organisations, and lacks full transparency.

What changes is the Government proposing to the PBRF?

The objectives have been updated to reaffirm that the primary purpose of the PBRF is to support high-quality tertiary education research and research-led teaching and learning at degree-level and above. The new objectives also signal that the PBRF should assist universities to maintain and lift their performance in international rankings; support the Government's wider priorities in science, research and innovation; and support the advancement of mātauranga Māori.

The policy and operational changes to the PBRF align with the revised objectives, and address the areas for improvement identified by the review. These changes will:

- better value user-perspectives of research quality and engagement in user-orientated research by rewarding tertiary education organisations that attract external research income, particularly from New Zealand industry, iwi and not-for-profit organisations
- simplify the Quality Evaluation to reduce transaction costs by reducing the size of the Evidence Portfolios submitted, and simplifying the process to assess them
- better support the sustainability of the tertiary education research workforce by increasing incentives for tertiary education organisations to recruit, develop and retain new and emerging researchers
- strengthen reporting on research performance by using fewer measures, that are robust and provide more meaningful comparisons between tertiary education organisations.

How will the proposed changes affect the allocation of PBRF funding across tertiary education sub-sectors and organisations?

Budget 2012 decisions mean that the PBRF is increasing from \$250m per year in 2011/12 to \$300m per year in 2016/17. As a result, although some tertiary education organisations may see their share of PBRF funding decrease, no tertiary education organisation is expected to receive less actual funding for 2015 than they receive in 2013, in the absence of changes in relative performance.

Three changes will affect the allocation of PBRF funding across tertiary education organisations:

- a) Increasing the proportion of PBRF income allocated based on External Research Income to 20% and decreasing the size of the Quality Evaluation to 55% of the fund – *still subject to final approval.*
- b) Introducing a financial weighting for Evidence Portfolios submitted by new and emerging researchers that achieve a 'C' score.
- c) Introducing a financial weighting of 1.5 for external research income from international sources and 2 for external research income from New Zealand non-government sources (including industry, iwi and not-for-profit organisations).

The Ministry of Education has modelled the first two of these changes. This modelling cannot take into account changes in relative performance, or human resource practices by individual tertiary education organisations, but provides a useful indication of how these changes may impact across tertiary education organisations.

It is not possible to model the impact of introducing weightings for external research income from non-New Zealand government sources, as the Government does not currently have information on the sources of external research income earned by individual tertiary education organisations.

The modelling indicates that the proportion of PBRF funding received by each subsector for 2018 is roughly the same as for 2013, though there is variation in the share of funding that different tertiary education organisations receive. This shows:

- The University of Auckland receiving a greater share of PBRF funding after these changes (+0.32%), with Lincoln University (+0.1%), the University of Otago (+0.1%), and Otago Polytechnic (+0.04%).
- The remaining universities and Unitec see a small reduction in their share of PBRF funding (between -0.02% and -0.27%), while other institutes of technology and polytechnics and all private training establishments see negligible increases or decreases in their share of funding (+/-0.01% or less).

What engagement has the Government had with tertiary education organisations, tertiary education staff and students, and research, science and industry stakeholders?

The review has been informed by stakeholder views and advice from people with expertise in the New Zealand tertiary education, research and innovation systems. Two expert advisory panels advised officials over the course of the review: a PBRF Expert Advisory Panel; and a PBRF Mātauranga Māori Advisory Panel.

Over the course of the review, officials met with key tertiary education sector, research, and business peak bodies to discuss issues with the PBRF and areas for improvement. The review was also informed by feedback from 2012 Quality Evaluation panellists.

Public consultation took place over six weeks between 26 August and 4 October 2013, using a document that set out the proposed changes. Submitters were able to provide written submissions via the Ministry of Education website, or by completing a series of questions in an online questionnaire.

The consultation process also involved officials meeting with representatives of New Zealand's eight universities, as well as wānanga, and representatives from Science New Zealand, Business New Zealand, and the Tertiary Education Union.

A total of 127 submissions were received. These included submissions from: all eight universities; 15 university academic departments; all three wānanga; four institutes of technology and polytechnics; two private training establishments; two institute of technology/polytechnic and private training establishment peak bodies; four tertiary education staff and student peak bodies; 11 science and industry peak bodies; and 78 individuals.

What did submissions say in response to public consultation about proposed changes to the PBRF?

There was strong support from the majority of submissions for improving the current PBRF, rather than fundamental change, on the basis that:

- the current system has worked well to support a culture within tertiary education organisations in which all PBRF-eligible teaching and research staff are encouraged to improve their performance
- the PBRF is well-entrenched, particularly in the university sector, which has developed and implemented customised data collection and staff management systems which align with the PBRF.

There was also significant support for the intent of the proposed changes, including clarifying the PBRF objectives, reducing transaction costs associated with the Quality Evaluation, and strengthening reporting on research performance. There was also majority support for addressing financial disincentives to the recruitment and retention new and emerging researchers.

There was concern from tertiary education organisations and academic staff that some of the proposed changes to reduce transactions costs went 'too far' and would reduce sector confidence in the robustness of Quality Evaluation, and decrease the ability of peer review panels to distinguish between Evidence Portfolios in order to allocate scores.

There were mixed views on proposals to better recognise user perspectives of research quality and reward research commercialisation.

Consultation feedback on the proposal to weight research income from non-New Zealand government sources varied, with some tertiary education organisations welcoming greater recognition of industry, iwi, and community investment and others questioning the extent to which this would lead to significant changes in the behaviour of individual researchers. Industry peak bodies, including Federated Farmers New Zealand, DairyNZ and the Institute of Professional Engineers, were strongly supportive of weighting research income from non-New Zealand government sources.

There was strong opposition to including income from the commercialisation of research (e.g. royalties) in the definition of external research income, on the basis that this could encourage tertiary education organisations to maximise the paper value of their intellectual property at the expense of strategic partnerships that can share investment and risk with the private sector. There was also concern that this would generate significant new compliance costs, create opportunities for 'gaming' around what is counted as commercialisation income for PBRF purposes.

The consultation found strong support for simplifying the publication and interpretation of Quality Evaluation results. However, feedback from the universities was mixed as to whether the primary measure for reporting Quality Evaluation results should be based on the number of Evidence Portfolios receiving funded grades (the current measure), or the average quality of research across all teaching and research staff in tertiary education organisations (the proposed new measure).

Submitters who argued in favour of retaining the status quo doubted that it would be practical to develop a robust staffing measure and were concerned that changes to the collection of staffing information would introduce new compliance costs. Submitters who supported the proposal to report the average quality of research across all teaching and research staff in

tertiary education organisations, argued that this is the best measure of research intensity, subject to developing a robust and consistent way of counting teaching and research staff.

Here is a [summary of consultation submissions](#) [PDF; 940kb].

How did the submissions received from public consultation inform the changes that are now being proposed?

The final proposal has been amended in light of consultation feedback. In particular:

- The PBRF objectives now include an explicit reference to the advancement of Mātauranga Māori, and to support for knowledge and technology transfer, rather than research commercialisation.
- A number of proposed changes to decrease transaction costs associated with the Quality Evaluation have been modified to ensure sector confidence in a robust and fair assessment process:
 - Researchers will be able to list 12 rather than 5 'other research outputs' (such as publications), and 15 rather than 8, examples of 'Research Contribution'.
 - Provisions for staff to have special circumstances taken into account in the assessment process will be tightened rather than removed.
 - Chairs of peer review panels will retain an ability to cross-refer an Evidence Portfolio to other subject panels, where required.
 - Numeric scoring of Evidence Portfolios will not be replaced by a single score.
- The final proposal does not include:
 - any change to the definition of PBRF-eligible External Research Income
 - any change to the financial weighting for Evidence Portfolios submitted by new and emerging researchers that receive a 'B' score.

The Tertiary Education Commission will investigate the operational feasibility of establishing a peer review panel for Pacific research prior to the 2018 Quality Evaluation.

The use of a new primary measure (average quality score) to report Quality Evaluation results will be accompanied by changes to improve the quality and consistency of staffing information collected from tertiary education organisations.

Do the changes to the PBRF address long-standing research concerns raised by the wānanga?

Over the course of the PBRF review, the three wānanga (Te Whare Wānanga o Awanuiārangī, Te Wānanga o Raukawa, and Te Wānanga o Aotearoa) raised long-standing concerns about their ability to meet expectations set out in the Education Act 1989. This states that wānanga are characterised by "teaching and research that maintains, advances, and disseminates knowledge and develops intellectual independence, and assists the application of knowledge regarding ahuatanga Māori (Māori tradition) according to tikanga Māori (Māori custom)".

The PBRF is not well placed to address these concerns. The wānanga have commented that, as new institutions, they did not have the same level of research capability in place as universities when the PBRF was established. Scale issues mean that small institutions, (and those with limited existing research capability), are not well served by funding which is allocated based on past research performance.

The Minister for Tertiary Education, Skills and Employment has directed the Ministry of Education to engage with the wānanga to identify potential solutions that would address their research aspirations.