

Mahere Haumi o Te Pūtea Rangahau a Marsden

Marsden Fund Investment Plan 2021–2024

Prepared by the Marsden Fund Council
for the Minister of Research, Science and Innovation

Haratua May 2021

MARSDEN FUND
TE PŪTEA RANGAHAU
A MARSDEN

ROYAL
SOCIETY
TE APĀRANGI

Whakataki **Introduction**

The Marsden Fund Council (the Council) manages the Marsden Fund Te Pūtea Rangahau a Marsden (the Fund) on behalf of the Minister of Research, Science and Innovation. In Poutūterangi March 2017 the Minister directed the Council to prepare an Investment Plan for the Fund, as recommended in the Ministry of Business, Innovation and Employment's recent Assessment of Strategy and Management of the Fund. The first Investment Plan took effect from the 2018 Funding Round and covered the three years to 2020. The second Investment Plan covers the period to 2023 and outlines the way the Fund operates.

This Investment Plan sets out the strategic direction of the Fund, including how it will be managed to achieve its objectives and contribute to Aotearoa New Zealand's research strategy, vision and goals.

As well as replicating the Fund's enduring, overarching nature and objectives from the Fund Terms of Reference, the document sets out some specific goals and principles which the Council will use to guide decisions on Fund settings and to measure Fund performance.

Finally, the Investment Plan describes the categories of award and amount of funding available to support research over the three-year period.

The Investment Plan will be updated periodically. Changes are mainly intended to provide updates of the funding projections, reaffirm consistent, stable signals about the Fund's direction and to provide signals on changes which are being phased-in over several years. Un-signalled changes to critical Fund settings from year-to-year are highly unlikely.

Note on relationship to other Fund documents

This Investment Plan presents the Council's main policies and procedures to implement the Terms of Reference for the Fund.

The Council also publishes guidelines for applicants and assessors and a policy manual¹. If there is any discrepancy with these materials, the Investment Plan takes priority.

¹ <https://royalsociety.org.nz/what-we-do/funds-and-opportunities/marsden>

Supported by the New Zealand Government with funding from the Ministry of Business, Innovation and Employment.

Nā Te Hīkina Whakatutuki te mana hāpai.

New Zealand Government

Te āhua me ngā whāinga o te Pūtea

Nature and objectives of the Fund

The nature and objectives of the Fund are set in the Terms of Reference by the Minister of Research, Science and Innovation. The Terms of Reference were last updated in 2017 to include an objective relating to impact following the 2017 Assessment of Strategy and Management.

From the Marsden Fund Terms of Reference

Nature of the Marsden Fund

The Marsden Fund invests in excellent, investigator-led research aimed at generating new knowledge, with long-term benefit to New Zealand. It supports excellent research projects that advance and expand the knowledge base and contributes to the development of people with advanced skills in New Zealand. The research is not subject to government's socio-economic priorities.

The Marsden Fund encourages New Zealand's leading researchers to explore new ideas that may not be funded through other funding streams and fosters creativity and innovation within the research, science and technology system.

Objectives of the Fund

The primary objectives of the Marsden Fund are to:

- enhance the quality of research in New Zealand by creating increased opportunity to undertake excellent investigator-led research
- support the advancement of knowledge in New Zealand, and contribute to, the global knowledge base.

The secondary objectives of the Marsden Fund are to:

- contribute to the development of advanced skills in New Zealand, including support for continuing training of post-doctoral level researchers and support for the establishment of early careers of new and emerging researchers
- contribute in the long-term to economic, social, cultural, environmental, health or other impacts for New Zealand.

Te rautaki ahu whakamua
o te Kaunihera Marsden mō te Pūtea

The Marsden Council's strategic direction for the Fund

The Council has a mission statement, goals and principles for the Fund to guide its fund-design decisions. These are consistent with, and complementary to, the Fund's high-level nature and objectives.

The Fund is deliberately aimed at maintaining and building a diverse research ecosystem, in part because we cannot truly anticipate the nature of some of the future challenges we face. The research careers developed through these grants may play a central role in providing research capability for this unclear future. This may mean innovations or new knowledge generated by highly specific work, or the cross-fertilisation of disciplinary areas, or the creation of new liminal spaces where traditional knowledge and science find new applications and understanding.

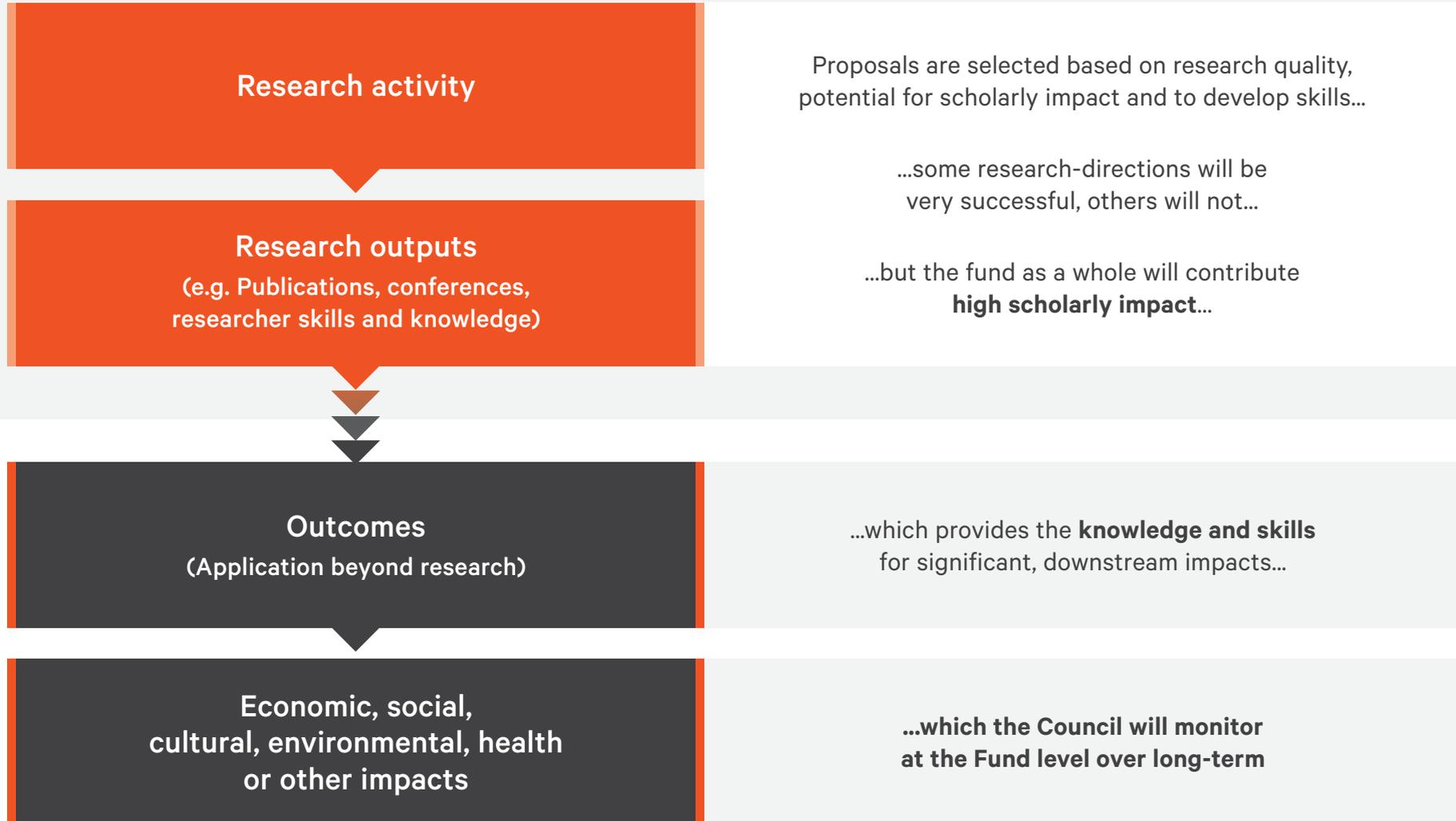
The Council's Mission Statement

To drive world-class research in New Zealand by supporting and incentivising excellent researchers to work on their best and boldest ideas and to connect nationally and internationally, leading to new knowledge and skills with the potential for significant downstream impact for New Zealand.

The Mission Statement summarises how the Fund will be managed to deliver on its objectives, including impact.

Research activity supported by the Fund will generate high scholarly impact and develop crucial knowledge and skills. Whilst the long-term benefit to New Zealand of a proposal is not explicitly considered as an assessment criterion, the Council expects that the overall portfolio of the Marsden Fund investment will lead to significant long-term benefit to New Zealand. We will identify and report on these impacts through long term monitoring. Figure 1 illustrates this approach.

Scholarly impact is a demonstrable contribution to shifting understanding and advancing methods, theory and application across and within disciplines.



The Council's goals for the Fund

The Council has the following specific goals for the Fund. The Council will work towards these goals, as well as the overarching Fund objectives in its management of the Fund and the portfolio of research it supports.

1 | Ka tautoko i te rangahau pakari, auaha hoki e whai āheinga nui ki te mātauranga whakaaweawe **Support bold, innovative research with high potential for scholarly impact**

Researchers should target significant scholarly impact even if this means taking risks. **Scholarly impact** is a demonstrable contribution to shifting understanding and advancing methods, theory and application across and within disciplines. Marsden-funded researchers should be expansive and uninhibited in their search for knowledge to maximise the scholarly impact; this can lead to discoveries with significant downstream impact over the long-term. Taking risks also means that some projects will fail to produce impacts, but the knowledge generated is still valuable.

2 | Ka whakahihiko, ka tautoko i te auaha o ngā kairangahau **Stimulate and support creativity and innovation among researchers**

This is vital to the generation of new research insights and approaches and may be supported through disciplinary and/or interdisciplinary approaches.

² <https://www.mbie.govt.nz/assets/9916d28d7b/vision-matauranga-booklet.pdf>

³ NSC approaches to Vision Mātauranga: https://www.sftchallenge.govt.nz/assets/Uploads/About-us/Rauika-Mangai_A-Guide-to-Vision-Matauranga_FINAL.pdf

3 | Ka pūmau tonu te hāpori mātanga i te katoa me te whānuitanga o ngā kaupeka rangahau **Maintain a New Zealand community of experts in the full, and expanding, range of research fields**

The Council wants to support the search for new knowledge across research disciplines. This recognises that ground-breaking discoveries could occur in any field (or across multiple fields) and builds a broad and diverse community of experts who can help Aotearoa provide a resilient research workforce and better able to meet future challenges. The Council will monitor the development of new disciplines and interdisciplinary research to ensure that important new areas are represented.

4 | Ka whāngai i te hunga kaiārahi rangahau o āpōpō **Feed the pipeline of future New Zealand research leaders**

A key pathway for the Fund to impact is ensuring Aotearoa has excellent research capability and capacity in the future. The Council wants the Fund to allow for the development of research careers and expertise in New Zealand and to attract and retain the brightest researchers.

5 | Ka tautoko i te whakawhitinga o te mātauranga me ngā pūkenga o tāwāhi **Support the flow of international knowledge and expertise**

Global connectivity is vital to connect researchers to new developments and bring new ideas and techniques to New Zealand. By presenting their work on the world stage, New Zealand researchers can attract the attention of overseas researchers and companies and discover opportunities to leverage overseas research funding.

6 | Ka āwhina ki te whakapuaki i te kaha o te mātauranga, ngā tāngata me ngā rauemi Māori **Help unlock the potential of Māori knowledge, people and resources**

The Council will recognise and support the themes of Vision Mātauranga² and ensure that meaningful and empowering partnerships can occur with Māori³. This includes supporting Council members, Panel members, researchers and communities in these goals.

7 | Ka hāpai i te hira o te rangahau me te mātauranga **Champion excellence in research and scholarship**

The Council will actively celebrate new and historical Marsden Fund research and showcase the difference this has made to New Zealand.

8 | Ka whakahaerehia ngā tukanga whakahaere pūtea iti te utu mō Te Apārangi, ngā kairangahau me ngā whare rangahau. **Run fund administrative processes which are cost-effective for Royal Society Te Apārangi, researchers and research institutions.**

Fund administrative processes should achieve Fund objectives while providing good value for government money and being user-friendly for researchers.

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The Council's principles

The Council also applies the following principles in its decisions and management of the Fund.

1. Decisions are evidence-based.
2. Processes are transparent, fair and stable.
3. The Fund is managed as a whole to achieve its goals.
4. Funding decisions are made by world class thought leaders.

Ngā tukanga me ngā haumitanga o Tēnei Pūtea

Current Fund processes and investment

Types of award

Three categories of award are available:

Fast-Start Awards are aimed at emerging researchers (up to seven years after the conferment of their PhD). Funding is set at NZ\$120,000 (excluding GST) per year for three years.

Standard Awards are larger grants open to established researchers as well as emerging researchers. Funding is for three years and the amount of funding is capped at between NZ\$220,000 - NZ\$320,000 (excluding GST) per year (cap varies by discipline).

Marsden Fund Council Awards are to support large interdisciplinary projects and are open to established researchers as well as emerging researchers. Funding is for three years and is capped at NZ\$1 million (excluding GST) per year. There is a one-stage application process, with a two-stage assessment process.

Application and assessment process

The Fund runs annual investment rounds through a two-stage, competitive process. Proposals are assessed against each other and funds are allocated on a project-by-project basis.

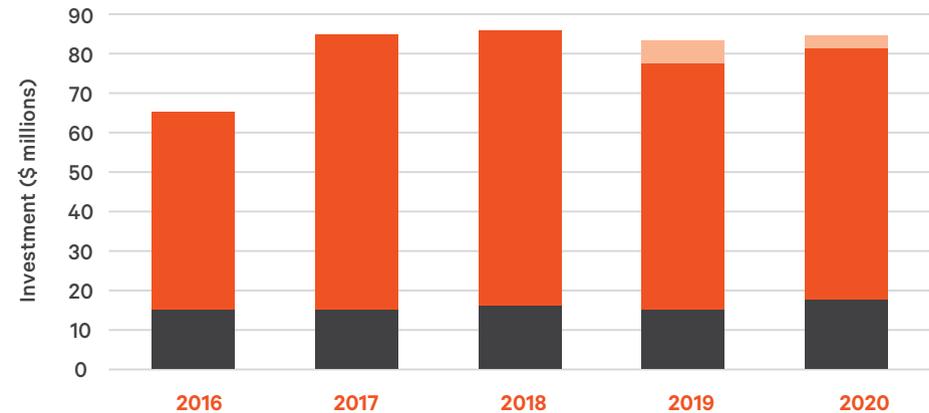
Fast-Start and Standard applications are considered by discipline-based panels of assessors. The interdisciplinary Council assesses the Marsden Fund Council Award applications. All grant categories are also assessed by international peer-reviewers at the second stage.

The Council makes final funding decisions taking into account advice from the convenor of each assessment panel.

Research supported by the Fund

Figure 2 shows the value of Fast-Start, Standard and Marsden Fund Council Awards made in each round over the last five years.

Historic Annual dollar investment in awards (\$m excl. GST)



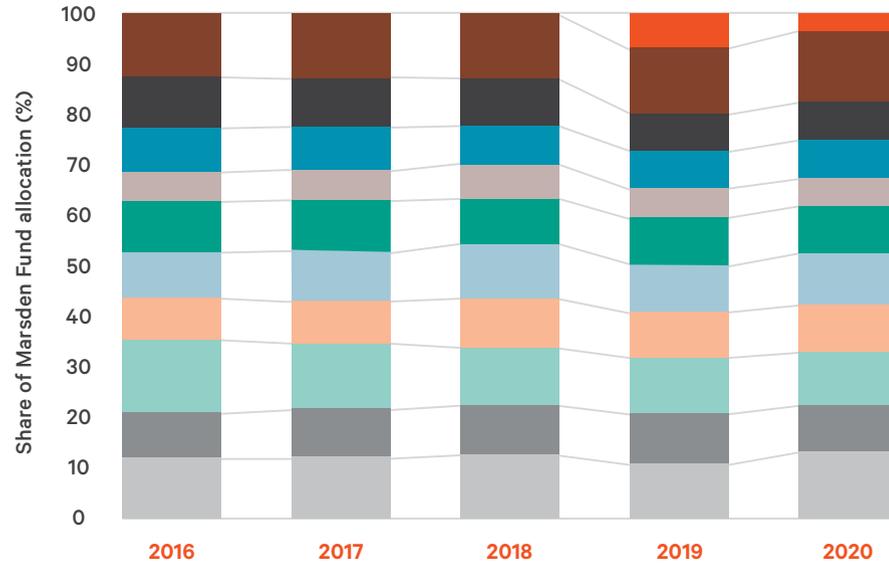
	2016	2017	2018	2019	2020
■	14.7	14.7	15.9	14.7	17.7
■	50.545	69.895	69.74	62.97	64.051
■	0	0	0	6	3

FIGURE 2 | Value of Fast Start, Standard and Marsden Council Fund Awards made, 2016-2020

■ MFC Awards
 ■ Standard
 ■ Fast-Start

Figure 3 shows the share of funding awarded through each assessment panel over the last five years. This is an indication of the mix of disciplines covered by research under the Fund. In reality, a given research contract may span several disciplines.

FIGURE 3 | Share of investment by assessment panel, 2016-2020



Pātohu Key

MFC	Marsden Fund Council Award
SOC	Social Sciences
PCB	Physics, Chemistry and Biochemistry
MIS	Mathematical and Information Sciences
HUM	Humanities
ESA	Earth Sciences and Astronomy
EIS	Engineering and Interdisciplinary Sciences
EHB	Economics and Human & Behavioural Sciences
EEB	Ecology, Evolution and Behaviour
CMP	Cellular, Molecular and Physiological Biology
BMS	Biomedical Sciences

Āheinga Pūtea

Funding opportunities

Funding rounds

An annual call for applications will normally be made in Whiringa-ā-rangi November and the initial closing date for applications will normally be late Huitānguru February. Fast-Start and Standard proposals are reviewed in a two-stage process:

1. Eligible researchers submit an Expression of Interest to one of the discipline-based assessment panels.
2. Selected applicants are then invited to submit a full proposal.

Applicants for Marsden Fund Council Awards submit a full proposal in a one-stage process to coincide with the Expression of Interest stage for Fast-Start and Standard proposals.

Award categories

TABLE 1 | Maximum value and duration of awards

	Maximum amount per year (ex. GST)	Te roanga Duration
Fast-Start	\$120,000	Up to 3 years
Standard	Varies by panel – see Table 2	Up to 3 years
Marsden Fund Council	\$1 million	Up to 3 years

Size of awards

The Council sets caps on the maximum annual value of Standard Awards based on the relative cost of research in different disciplines and a trade-off between goals:

- Grants should provide resource for a significant portion of a Principal Investigator's time and a post-doctoral researcher in those disciplines that need them.
- Funding as many excellent research proposals as possible and stimulating creativity across the full range of research fields.

Current caps are shown in Table 1. These caps were increased by 10% following the 2016 round. The Council undertakes regular benchmarking exercises to ensure these levels remain appropriate and will publish the results of these exercises in future.

Applications need to justify the funding requested and this will be scrutinised during the application process to check that the research proposed presents good value. The value of grant awarded may be less than the amount applied for.

TABLE 2 | Maximum annual value of Standard Awards by panel

Paewhiri Panel	Maximum award amount per year (excl. GST)
Biomedical Sciences (BMS)	\$320k
Cellular, Molecular and Physiological Biology (CMP)	\$320k
Economics and Human & Behavioural Sciences (EHB)	\$290k
Engineering and Interdisciplinary Sciences (EIS)	\$320k
Ecology, Evolution and Behaviour (EEB)	\$320k
Earth Sciences and Astronomy (ESA)	\$320k
Humanities (HUM)	\$220k
Mathematical and Information Sciences (MIS)	\$240k
Physics, Chemistry and Biochemistry (PCB)	\$320k
Social Sciences (SOC)	\$290k

The Council recognises that Standard Awards may be insufficient to support the most ambitious research proposals, particularly in interdisciplinary fields. This is why it has introduced the Marsden Fund Council Awards.

Types and numbers of awards offered each year

Figure 4 shows the dollars invested in awards, by category, in the 2020 award round, as well as approximate projections for the 2021-2024 rounds⁴.

There is a slight drop in projected investment in the 2022 round. This is because slightly higher annual investment in earlier rounds commits the Fund to supporting three-year contracts, which reduces funding available for new contracts in later years from the total available from government. The actual annual investment may vary from this projection.

The split of funding between Fast-Start and Standard Awards is not determined in advance, but arises from relative quality of the application pools each round.

In the 2020 round, the Council made 59 Fast-Start Awards and 74 Standard Awards and 1 Marsden Fund Council Award.

**Annual dollar investment in awards (million excl. GST)
Historic and projected**

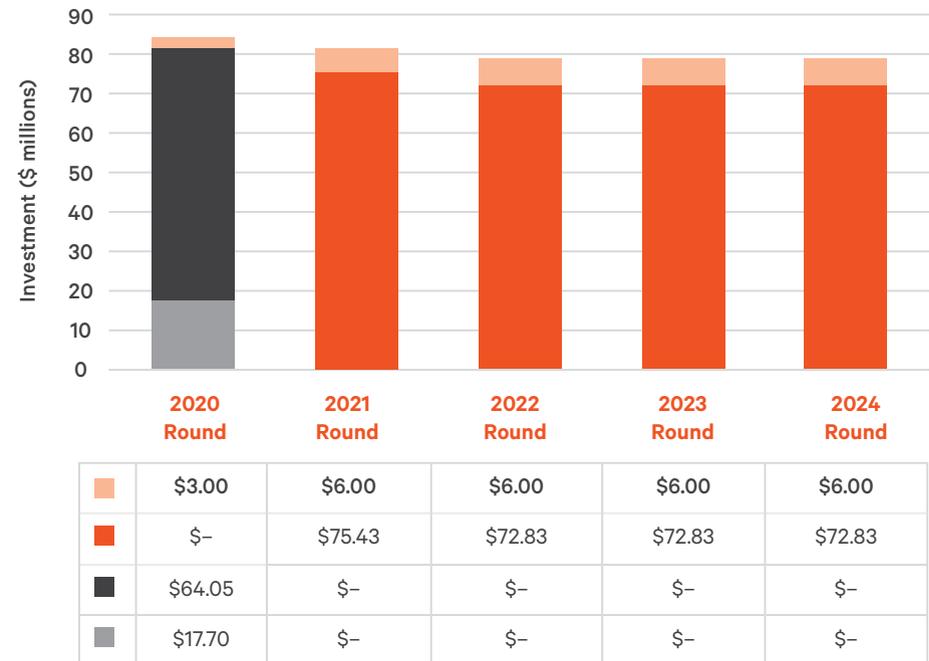


FIGURE 4 | Historic annual dollar investment in awards in 2020 and projected value of awards from 2021-2024

- MFC Award
- Fast-Start + Standard
- Standard
- Fast-Start

⁴ These amounts do not match the annual amounts that appear for the Marsden Fund in the 2020 Estimates of Appropriations. This is because the Estimates show the annual outlay (i.e. on a cash basis) for research under the Fund, whereas Figure 4 is the value of new three-year contracts entered into in each Marsden funding round.

Ngā otinga e matapaehia ana o te Mahere Haumi

Expected outcomes from the Investment Plan

Research

Investigator-led research leading to scholarly impact is an explicit outcome of the Fund. The Council seeks high scholarly impact by supporting researchers to work on their best and boldest ideas. This will develop future research leaders and experts who can help New Zealand meet future challenges. High scholarly impact is the first step on the pathway to significant societal, economic, cultural, environmental and other impacts for New Zealand over the long-term.

Impact

The Council wants researchers to be ambitious and take risks in search of new knowledge. The bold nature of research means individual Marsden grants will vary widely in their actual scholarly impact. The Council will measure impact at the Fund level to champion excellence in research and scholarship and showcase the difference this has made to New Zealand in the long-term.

Connectivity

The Marsden Fund Council Award helps to stimulate creativity and take advantage of global knowledge by allowing much greater cross-discipline, institutional and international collaboration and connectivity.

The Council assesses the performance of the Fund with systematic monitoring and reporting to ensure that best practice is being followed. Data and indicators are published in the Fund Performance Framework.

The Marsden Fund Te Pūtea
Rangahau a Marsden supports
excellence in leading-edge
research in New Zealand.

E whakahaerehia ana te Pūtea
Marsden e Te Apārangi mō te taha
ki te kāwanatanga.

Whakapā mai | [Contact us](#)

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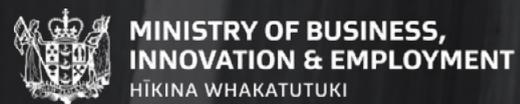
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