

WHAT'S (NOT) IN YOUR BENCHMARK?

A QUICK LOOK AT GLOBAL EQUITY INDICES AND INDEX-ORIENTED FUNDS USED BY NZ INVESTORS



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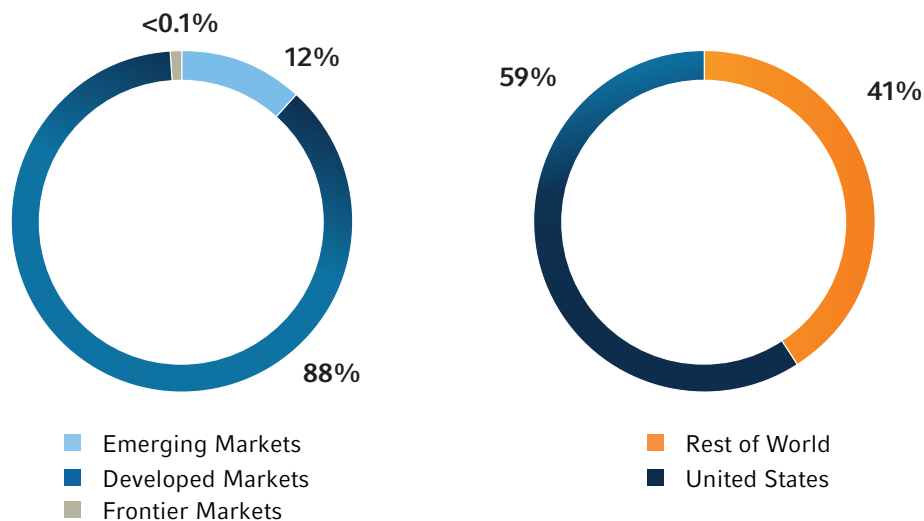
THE GLOBAL EQUITY OPPORTUNITY SET

The investable global equity market exceeds NZ\$100 trillion in market capitalisation across more than 70 countries and around 10,000 stocks¹. Countries are split into *Developed Markets*, *Emerging Markets* and *Frontier Markets*, depending on characteristics such as economic and capital markets development. Many New Zealand investors limit their international shares investments to developed markets only. **They miss out on a significant slice of the world's investment opportunities.**

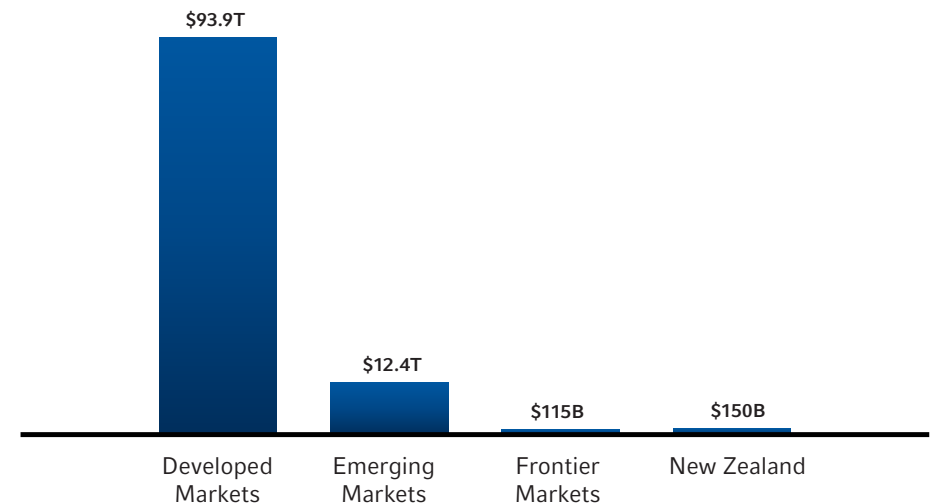
MSCI is a leading index provider offering a wide range of Developed, Emerging and Frontier market indices. The MSCI All Country World Index (ACWI) and the MSCI Frontier Markets Investable Market Index together capture about 99% of the global equity opportunity set.

Exhibit 1 - The Investable Universe

Region weights and US, Non-US weights (MSCI ACWI + MSCI Frontier Markets IMI) + market capitalisations (as of 31 Jan 2023)



Size of the opportunity



See page 9 for a summary of some popular index-oriented global equity funds available to NZ Investors.

¹ Source: MSCI, as of 31 Jan 2023. MSCI ACWI + Frontier Markets IMI in NZD.

THE GLOBAL EQUITY OPPORTUNITY SET – SECTOR BREAKDOWN

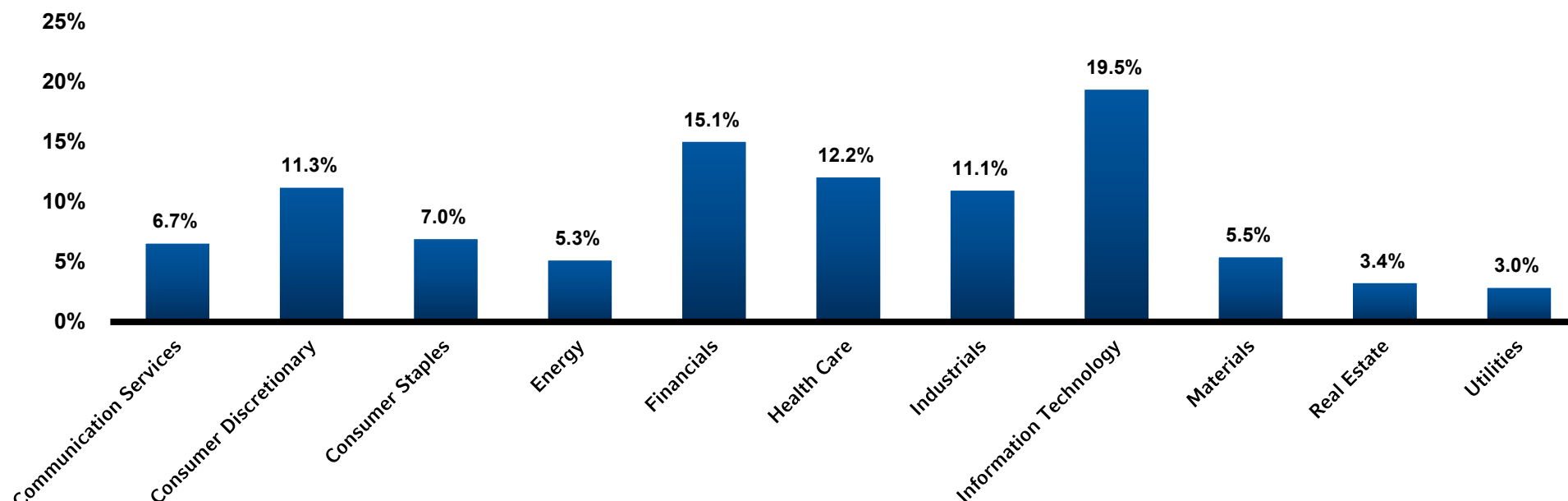
MSCI and S&P Dow Jones Indices developed the Global Industry Classification Standard (GICS) to capture and track the evolutions of market industry sectors. The classification system is based on four-tiers, the top level being the 'Sector' level, currently made up of 11 categories. Tiers below that are known as industry groups, industries, and sub-industries. Each company within the MSCI or S&P coverage universe is classified with a single GICS classification. Other index providers, e.g. FTSE Russell and Stoxx, use alternative sector classification systems, e.g. Industry Classification Benchmark (ICB).

The industry classification systems bring transparency to investment markets and provide a means for investors to identify investment opportunities, track and evaluate trends, compare companies across borders and construct portfolios based on consistent global definitions.

The chart below depicts the current sector breakdown of the global equity market. Note, on 17 March 2023, there was a reclassification of some companies within the Information Technology and Consumer Discretionary sectors. See MSCI.com for more details.

Exhibit 2

Sector weights (MSCI ACWI + Frontier Markets IMI)

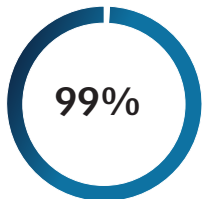
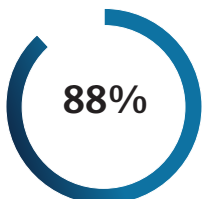
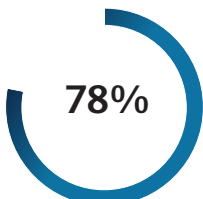



Source: MSCI as of 31 Jan 2023

HOW REPRESENTATIVE OF THE GLOBAL EQUITY OPPORTUNITY SET IS YOUR INDEX-BASED INVESTMENT?

The following indices (or ex-Australia variants) are used as benchmarks by popular index-oriented funds available to New Zealand investors. Depending on where the funds are domiciled, i.e. New Zealand, Australia, the US or Europe, there may be exclusions applied to the funds. The table below shows how representative the indices are of the investable universe and provides high level characteristics. Many NZ investors find themselves unintentionally ignoring a large part of the opportunity set due to their fund and benchmark selection, e.g. Emerging Markets, Small & Mid Cap, thereby missing out on return opportunities and diversification benefits.

Exhibit 3

Key index facts	FTSE Global All Cap	MSCI ACWI	MSCI World	S&P Global 100
% of investable universe covered	 99%	 88%	 78%	 25%
Markets covered	Developed and emerging	Developed and emerging	Developed only	Developed only
# of stocks	9,427	2,882	1,508	102
Top 10 (%)	12%	14%	16%	48%
Giant cap (%)*	42%	48%	47%	81%
US allocation (%)	58%	60%	67%	71%
Emerging Markets allocation (%)	12%	11%	-	-

Source: MSCI, FTSE Russell, S&P Dow Jones Indices, Morningstar Direct as of 31 Jan 2023

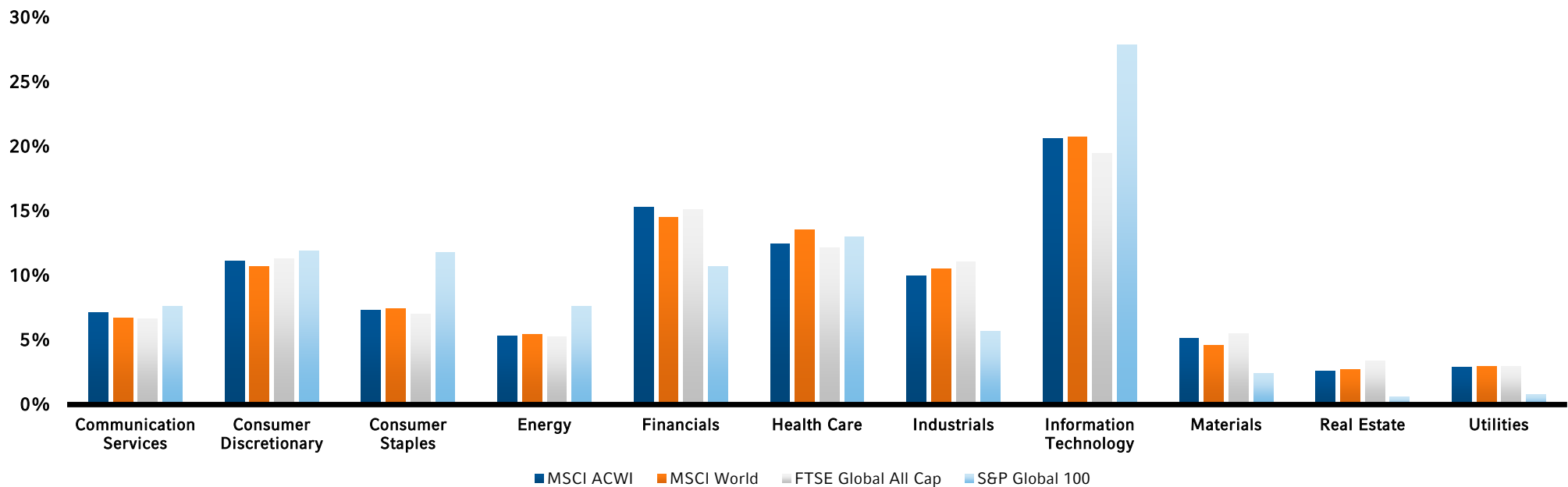
*Giant-cap stocks are defined as those that account for the top 40% of the capitalisation of each stylezone (region), e.g. Europe, Latin America, Asia ex Japan, etc. Refer to morningstar.com for more details

ARE THE INDICES REFLECTIVE OF THE BROAD SECTOR OPPORTUNITIES?

The chart below depicts the sector weights of the popular indices. With the exception of the concentrated S&P Global 100, the indices share broadly similar characteristics. New Zealand domiciled index-oriented funds often apply exclusions, e.g. tobacco and controversial weapons, whereas index funds in other markets tracking the broad indices may not. Many investors that buy feeder funds, i.e. funds that invest in offshore ETFs or index funds, inadvertently find themselves owning companies involved in controversial weapons, tobacco, thermal coal, etc. This is a major drawback of the feeder fund structure for equities and partly explains the decline in popularity of this replication approach in NZ.

Exhibit 4

Sector weights comparison



Source: MSCI, FTSE Russell, S&P Dow Jones Indices as of 31st Jan 2023
 FTSE Global All Cap approximated by the MSCI ACWI + FM IMI, due to FTSE's use of ICB sector classification.

HOW HAVE THE INDICES PERFORMED OVER TIME?

The tables below depict the trailing and calendar year performance of the indices under consideration. The strong out-performance of developed markets and large caps over the last decade is clear. Could emerging markets be poised for superior returns over the next decade. Investors holding all country global equity funds, i.e. those that invest in developed and emerging markets, will have an allocation to these markets within their core equity exposure.

As we have communicated for many years, we believe emerging markets are an essential component of modern global multi-asset portfolios. Many local managers do not have the capability to access emerging markets efficiently, and thus their clients are limited to developed markets only offerings, or access via inefficient feeder fund structures, or potentially tax-inefficient offshore funds.

Exhibit 5

Trailing performance in NZD to 31 Jan 2023

	1 Year	3 Years	5 Years	10 Years	15 Years
MSCI ACWI (NR)	-6.50%	6.88%	8.43%	11.12%	7.30%
MSCI World (NR)	-5.95%	7.63%	9.43%	11.96%	7.82%
FTSE Global All Cap (NR)	-6.10%	6.86%	8.25%	11.06%	8.19%*
S&P Global 100 (NR)	-6.76%	10.28%	12.56%	13.41%	8.80%

Exhibit 6

Calendar year performance in NZD (2008 – 2022)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
MSCI ACWI (NR)	-23.9%	8.1%	4.9%	-7.2%	9.8%	23.1%	9.7%	11.5%	5.9%	21.5%	-3.9%	25.8%	8.9%	24.7%	-11.6%
MSCI World (NR)	-21.9%	4.4%	4.1%	-5.4%	9.5%	27.0%	10.5%	13.2%	5.6%	20.0%	-3.2%	26.9%	8.6%	28.1%	-11.4%
FTSE Global All Cap (NR)	-23.9%*	10.4%*	6.9%*	-7.5%*	10.8%*	23.5%	9.5%	11.7%	6.4%	21.3%	-4.6%	25.6%	8.9%	24.2%	-11.5%
S&P Global 100 (NR)	-16.3%	1.8%	-1.5%	-3.0%	7.3%	25.6%	8.6%	12.5%	7.3%	21.7%	0.1%	29.6%	11.9%	33.0%	-8.9%

Source: MSCI, FTSE Russell, S&P Dow Jones Indices, Morningstar Direct. Performance in NZD. Past performance is no guarantee of future results.

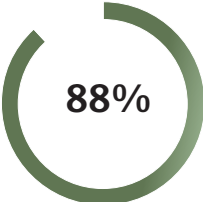


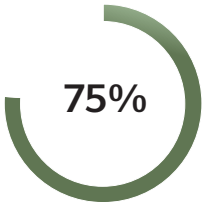
*FTSE Global All Cap TR (this index is used due to the unavailability of the NR version prior to 2013).

HOW DIFFERENT ARE SOME COMMON ESG INDICES?

The following indices are used as benchmarks by index-oriented funds adopting ESG strategies. We show the impact that various exclusions have on these indices, relative to the broad, global equity opportunity set. ESG oriented investors should be aware of the tracking and performance risks they introduce to their portfolios by adopting these highly constrained and restrictive indices. In contrast, the Russell Investments Sustainable Global Shares Fund (highlighted in the table on page 9) excludes only 2.5% of the universe and instead tilts the portfolio away from high carbon emitting sectors, and towards stocks with good ESG profiles. The result of this robust process is that ESG focused investors can gain reduced carbon exposure, and an improvement in ESG characteristics, without jeopardising long term relative returns or introducing significant tracking risk relative to the broad market.

Exhibit 7

Global ESG Indices

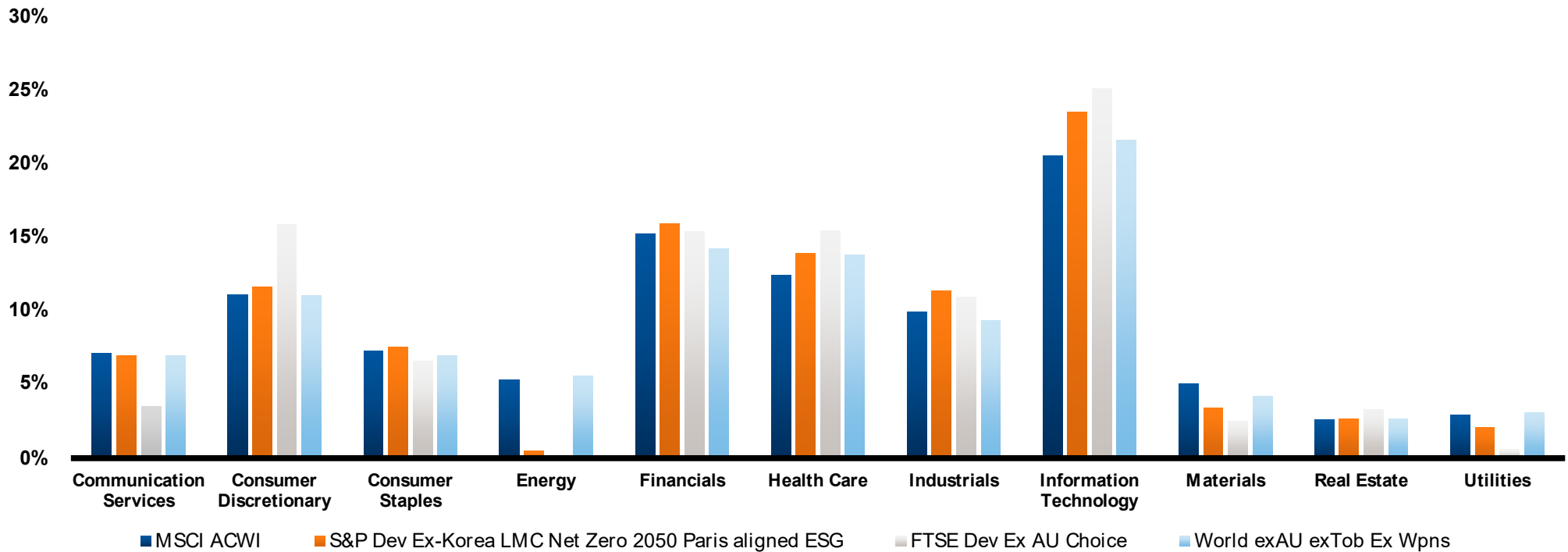
Key index facts	MSCI ACWI	S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Climate Transition ESG Index	FTSE Developed Ex-Aus Choice	MSCI World Ex-Aus, Controversial Weapons, Tobacco, Nuclear Weapons
% of investable universe covered	 88%	 52%	 61%	 75%
Markets covered	Developed and emerging	Developed only	Developed only	Developed only
ESG Criteria:	-	Aligned to the Paris agreement, and a 1.5 degree warming target.	Excludes companies in vice products, non-renewable energy and weapons.	Excludes companies involved in controversial weapons, nuclear weapons and tobacco
# of stocks	2,844	703	1,650	1,428
Top 10 (%)	14%	22%	20%	17%
Giant cap (%)*	48%	52%	48%	47%
US allocation (%)	60%	67%	69%	69%
Emerging Markets allocation (%)	11%	-	-	-
5 year tracking error vs MSCI ACWI	-	-	2.3%	1.5%

Source: MSCI, FTSE Russell, S&P Dow Jones Indices, Morningstar Direct as of 31 Jan 2023.

*Giant-cap stocks are defined as those that account for the top 40% of the capitalisation of each stylezone (region), e.g. Europe, Latin America, Asia ex Japan, etc. Refer to morningstar.com for more details

HOW DO THE ESG EXCLUSIONS IMPACT SECTOR WEIGHTS.

The chart below depicts the sector weights of some ESG indices. As a result of restrictions within indices, some significant deviation from the market is evident. 2022 highlighted this, where indices that excluded energy stocks significantly underperformed the broad market indices. Investors should always be aware of the sector divergence present in their portfolios as a result of investing in funds/strategies that adopt heavily modified ESG benchmarks.



Source: MSCI, FTSE Russell, S&P Dow Jones Indices as of 31 Jan 2023

HOW HAVE THE ESG INDICES PERFORMED OVER TIME?

The tables below depict the trailing and calendar year performance of the indices under consideration. The relative weakness of the ex-Energy ESG indices is evident from the significant underperformance during 2022. Investors holding funds tracking these indices should expect significant tracking risk relative to the broad market.

Exhibit 9

Trailing performance in NZD to 31 Jan 2023

	1 Year	3 Years	5 Years	10 Years	15 Years
MSCI ACWI (NR)	-6.50%	6.88%	8.43%	11.12%	7.30%
MSCI World ex Aus, Tobacco, Controversial Weapons, Nuclear Weapons (NR)	-6.04%	8.23%	10.09%	12.70%	8.46%
FTSE Dev Ex Aus Choice (NR)	-9.68%	7.01%	9.45%	-	-
S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Climate Transition ESG Index (NR)	-8.91%	-	-	-	-

Exhibit 10

Calendar year performance in NZD (2008 – 2022)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
MSCI ACWI (NR)	-23.9%	8.1%	4.9%	-7.2%	9.8%	23.1%	9.7%	11.5%	5.9%	21.5%	-3.9%	25.8%	8.9%	24.7%	-11.6%
MSCI World ex Aus, Tobacco, Controversial Weapons, Nuclear Weapons (NR)	-21.0%	3.9%	4.6%	-4.7%	10.0%	28.5%	11.3%	14.1%	6.1%	20.5%	-2.6%	27.9%	9.6%	29.0%	-11.4%
FTSE Dev Ex Aus Choice (NR)	-	-	-	-	-	-	-	-	4.0%	21.9%	-2.4%	28.1%	13.1%	28.2%	-16.7%
S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Climate Transition ESG Index (NR)	-	-	-	-	-	-	-	-	-	-	-	-	-	30.4%	-16.4%

Source: MSCI, FTSE Russell, S&P Dow Jones Indices. Performance in NZD. Past performance is no guarantee of future results.

WHAT'S IN, OR NOT IN, YOUR FUND?

The table below provides a broad overview of popular index-oriented funds used by NZ investors. The limitations of those equity funds that adopt a feeder fund structure are clear, resulting in investors holding stocks in sectors that most NZ investors now avoid. Additionally, feeder fund structures often introduce significant tax inefficiencies for local investors. The directly-implemented and locally-domiciled, Russell Investments Sustainable Global Shares Fund offers broad market exposure, whilst targeting reduced carbon emissions and an improved ESG profile. It only excludes ~2.5% of the investable universe, meaning it is a true reflection of the global equity opportunity set. Russell Investments is one of the few local firms that has the investment capability and global platform to efficiently manage true global equity index-oriented portfolios.

Exhibit 11

	Russell Investments Sustainable Global Shares Fund	Vanguard Ethically Conscious International Shares Index Fund	Vanguard International Shares Exclusions Index Fund	Foundation Series Total World Fund	Kernel S&P Global 100 Fund	Mercer All Country Global Shares Index Fund	Kernel Global ESG Fund	Smartshares Total World
PIE Fund (with directly held securities)	✓	✗	✗	✗	✓	✓	✓	✗
Inception Date	15/12/2021	25/10/2018	13/12/2016	7/11/2022	15/7/2020	1/12/2017	-	29/7/2015
Domicile	New Zealand	Australia	Australia	New Zealand	New Zealand	New Zealand	New Zealand	New Zealand
Benchmark	MSCI ACWI (NR)	FTSE Developed Ex-Australia Choice (NR)	MSCI World ex Aus ex Tobacco, Controversial Weapons, Nuclear Weapons (NR)	Morningstar Global All Cap Target Market Exposure (NR)*	S&P Global 100 (NR)	MSCI ACWI ex Tobacco (NR)	S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Climate Transition ESG Index (NR)	FTSE Global All Cap (NR)
Approx holdings	1,500	1,600	1,400	1	100	n/a	700	1
Total Cost Ratio (Prospective)	0.32	0.26	0.20	0.07**	0.25***	0.42	0.25***	0.40
Feeder Fund	✗	✗	✗	✓	✗	✗	✗	✓
Hedge and unhedged versions (NZD)	✓	✓	✓	✗	✓	✗	✓	✓
Includes Emerging Markets	✓	✗	✗	✓	✗	✓	✗	✓
Decarbonisation strategy	✓	✗	✗	✗	✗	✗	✓	✗
Invests in:****								
Tobacco	✗	✗	✗	✓	✓	✗	✗	✓
Controversial Weapons	✗	✗	✗	✓	✗	✓	✗	✓
Thermal Coal	✗	✗	✗	✓	✓	✓	✗	✓
Nuclear Weapons	✗	✗	✗	✓	✗	✓	✗	✓
Fossil Fuels	✓	✗	✗	✓	✓	✓	✗	✓
RIAA Certified	✓	✓	✗	✗	✗	✗	✗	✗

*The underlying ETF, Vanguard Total World Stock ETF, tracks the FTSE Global All Cap

**Customers are charged a 0.5% transaction fee.

***Customers with over \$25,000 invested are charged a member fee

****Based on a review of index rules, fund factsheets, SIPOs and portfolio holdings. For illustrative purposes only.

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