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Introduction – The Global Choice family

The FTSE Global Choice Index Series is a market-capitalization-weighted index series employing a transparent rules-based methodology. The series is designed to help investors align their investment choices with their values by applying screens in three Product categories and two Conduct categories related to how companies affect society and the environment (Exhibit 1).

Individual indexes within the FTSE Global Choice Index Series may use only a subset of the screening categories. The result is a framework that enables investors to apply robust and customizable values-based exclusions to a broad market index.

While the exclusions can have significant impact on industries or countries heavily involved in related activity, the overall effect on index performance is minor and the Global Choice indexes behave very similarly to their underlying benchmark. This means that the Global Choice indexes are close substitutes for the underlying benchmarks in making asset allocation decisions.

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Index construction

Companies in the underlying index universes are researched annually for eligibility against the screens based on publicly reported information. The screens can be broken into five groups, which fall under the broad categories of Product and Conduct screens, as illustrated below.

Exhibit 1. Global Choice screening categories

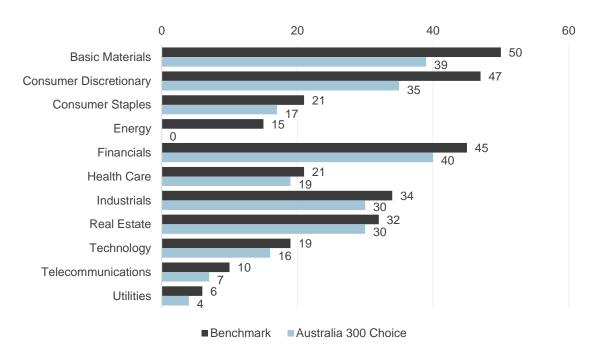
Product categories			Conduct categories		
Non-renewable Energy	Vice Products	Weapons	Controversies	Diversity	
Fossil fuels Nuclear power	Adult entertainment Alcohol Gambling Tobacco	Chemical & biological weapons Cluster munitions Anti-personnel landmines Nuclear Weapons Conventional military weapons Firearms	Anti-corruption Environment Human rights Labor	Board diversity Equal opportunities practices	

The indexes are reviewed quarterly (in March, June, September and December). A stock that fails any of the screens is excluded from the Global Choice Index, and the remaining stocks are market- capitalization weighted. In this way, benchmark weightings of industries and countries closely engaged in the screened activities can be reduced, while those with fewer exclusions can see a small increase. Notably, however, these deviations have minimal impact on the characteristics of the index, as shown in the case studies that follow.

Case #1: FTSE Australia 300 Choice Index

The FTSE Australia 300 Choice Index uses the FTSE Australia 300 Index as the starting universe. While the screening process varies across the Global Choice series, the FTSE Australia 300 Choice Index excludes stocks using all the product- and conduct-related screens except those for Diversity. The impact of these exclusions as of March 2021 is shown in Chart 1, which compares the number of stocks for each industry in the benchmark before (black bars) and after exclusion (blue bars), which resulted in a total reduction from 300 stocks to 237.

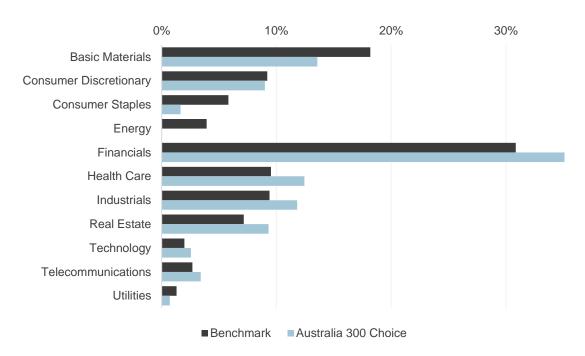
Chart 1. Number of stocks – FTSE Australia 300 benchmark vs FTSE Australia Choice Index



Source: FTSE Russell. Data as of March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

Chart 2 compares the benchmark weights with the final weights of the Choice index. The FTSE Australia 300 Choice Index has the additional guideline that prevents industry weights from deviating more than 5% from those of the underlying benchmark at each quarterly rebalance. The result is that industry weightings of the FTSE Australia 300 Choice index were fairly similar to those of the underlying benchmark.

Chart 2. Industry weights – FTSE Australia 300 benchmark vs FTSE Australia 300 Choice Index



As expected, the biggest reductions were in industries most closely related to the excluded products. For example, all 15 Energy stocks were excluded, so the Energy industry ended up with no weight. This occurred because all of the stocks in the industry were in the Oil, Gas and Coal sector, while the benchmark had no stocks in the Alternative Energy sector.

Although the Energy industry was eliminated by the screening, it started with a fairly small weight of 3.9% in the benchmark. Two other industries that were affected significantly by the screen process were Basic Materials and Financials. In the FTSE Australia 300 benchmark, Basic Materials was dominated by the Industrial Metals and Mining sector, which accounted for almost 15% of the approximately 18% of the benchmark weight in that industry. The Choice screening removed 10 of the 32 stocks in this sector. Notably, those stocks tended to be large, including BHP Group, Rio Tinto Ltd. and South32, exclusion of which naturally led to a large underweight in Basic Materials.

Table 1. Weights and number of stocks – Basic Materials sectors, before and after exclusions

	Weights			Stocks	
Sector	Benchmark	Australia 300 Choice	Active Weight	Benchmark	Australia 300 Choice
Chemicals	0.7%	1.2%	0.5%	3	3
Industrial materials	0.0%	0.0%	0.0%	0	0
Industrial metals and mining	14.8%	7.9%	-6.9%	32	22
Precious metals and mining	2.7%	4.5%	1.8%	15	14

Conversely, the screening process excluded only five companies from the rather large Financials industry, but they were relatively small stocks. As a result, after index weight renormalization, the Financials industry had a higher weight than the benchmark. As noted earlier, the FTSE Global Choice Ground Rules constrain the FTSE Australia Choice 300 index from having industry weights that deviate from benchmark weights by more than 5% when they are rebalanced quarterly. This ensures that no matter what happens with the industrial composition of the benchmark or exclusion patterns, industry deviation from the benchmark will be controlled.

Performance

How have these exclusions affected performance? Over the period from April 2015 through March 2021, the FTSE Australia 300 Choice index slightly underperformed the underlying benchmark's annualized gain of 6.75% by 10 basis points, with comparable volatility. The tracking error over this period was 2.45%.

Table 2. Performance statistics – April 2015 to March 2021 (AUD)

	Benchmark	Australia 300 Choice
Average return (annualized)	6.75%	6.65%
Volatility	14.77%	14.69%
Return/Volatility ratio	0.46	0.45
Excess return		-0.10%
Tracking error		2.45%
Information ratio		-0.04

Source: FTSE Russell. Data based on monthly returns from April 1, 2015, through March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

While any deviation from the benchmark weight will generate tracking error, we are also interested in how closely the FTSE Australia 300 Choice index moves with the underlying benchmark over time. As illustrated below, both correlation and beta have been high over the past six-year period.

Table 3. Correlation and beta – April 2015 to March 2021 (AUD)

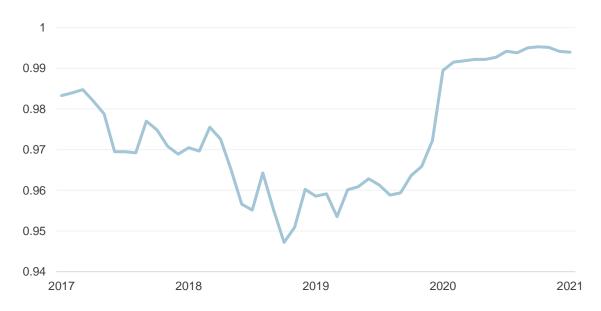
	Correlation	Beta
FTSE Australia 300 Choice	0.986	0.981

Source: FTSE Russell. Data based on monthly returns from April 1, 2015, through March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

How FTSE Australia 300 Choice moves along with (or co-moves with) the underlying benchmark is an important issue for investors interested in using the Choice index as a substitute for the underlying benchmark. If the composition and characteristics of the two indexes differ too significantly, so may their performance patterns, which would make FTSE Australia 300 Choice an unsuitable substitute.

While the correlation of 0.986 indicates close co-movement of the two indexes, it was calculated over the entire period. For a better sense of the stability of co-movement, we calculated correlations over a rolling 24-month period. As shown below, the correlation briefly dropped in the early period and even dipped below 0.95 in the middle of the period, but it has stabilized above 0.99 more recently.

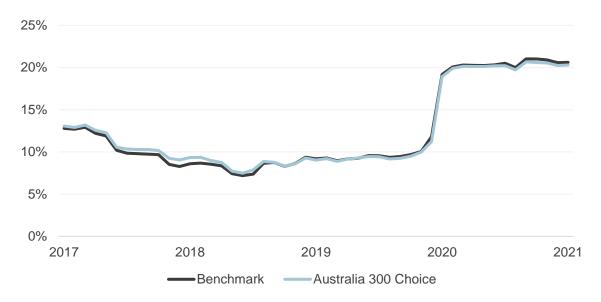
Chart 3. Correlation – FTSE Australia 300 Choice Index to FTSE Australia 300 benchmark (24-month-rolling window)



Source: FTSE Russell. Data through March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

The chart below plots the annualized volatility of the FTSE Australia 300 Choice index and the underlying benchmark calculated over a 24-month window. As shown, the characteristics of the two indexes are similar enough that the volatility of the FTSE Australia 300 Choice index has tightly matched that of the benchmark over time. Again, this suggests that the Choice index is a close substitute for the underlying benchmark.

Chart 4. Annualized volatility – FTSE Australia 300 Choice Index and FTSE Australia 300 benchmark (24-month-rolling window)

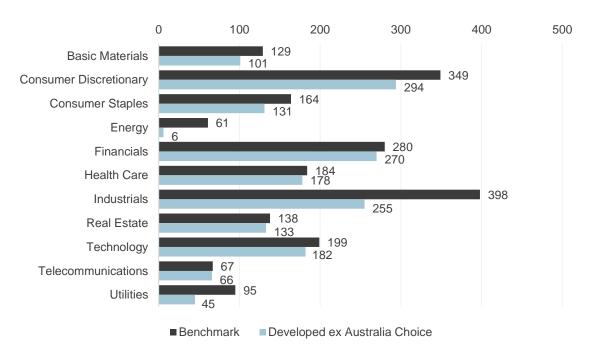


Case #2: FTSE Developed ex Australia Choice Index

In this section, we discuss the characteristics of the FTSE Developed ex Australia Choice Index, which introduces the complication of including stocks from many companies globally. Again, we are primarily interested in understanding how the Global Choice screening process alters index composition and performance profiles to understand whether the FTSE Developed ex Australia Choice Index can serve as an appropriate substitute for the underlying benchmark.

The methodology for the FTSE Developed ex Australia Choice index is the same as that for the FTSE Australia 300 Choice Index in that it excludes stocks based on all product- and conduct-related screens except those for Diversity. The impact of exclusions can be seen in Chart 5, which shows the number of stocks for each industry before (black bars) and after exclusion (blue bars). In this case, the Global Choice process screened out approximately 400 stocks from the 2,064-stock benchmark, with the largest reduction coming in the Industrials industry.

Chart 5. Number of stocks, by industry – FTSE Developed ex Australia benchmark vs FTSE Developed ex Australia Choice Index



While the Energy industry was reduced from 61 stocks to six stocks, those six were in the Alternative Energy sector, while the Oil, Gas, and Coal sector was completely excised. The reduction of the Energy weight was similar to that of the FTSE Australia 300 Choice example, but a very small weight was retained in the FTSE Developed ex Australia Choice Index.

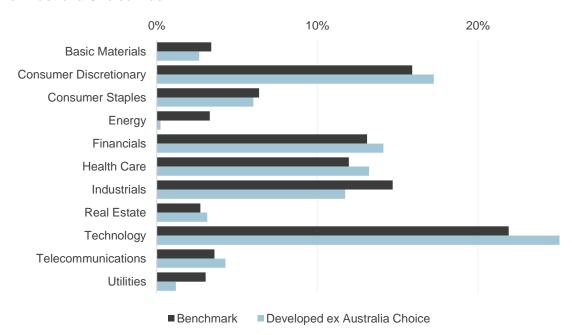
Table 4. Weights and number of stocks - Energy sectors, before and after exclusions

	Weights			Stocks	
Sector	Benchmark	Developed ex Australia Choice		Benchmark	Developed ex Australia Choice
Alternative energy	0.21%	0.24%	0.03%	7	6
Oil, gas and coal	3.09%	0.00%	-3.09%	54	0

Source: FTSE Russell. Data as of March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

Chart 6 compares the benchmark with the final industry weights to assess how similar the FTSE Developed ex Australia Choice index is to the underlying benchmark. One obvious difference from the FTSE Australia 300 Choice example is that the Basic Materials industry was not affected as much by the screens. This is because the FTSE Developed ex Australia benchmark does not have the same concentration in that industry. While the Financials weight increased, it was not as significant as that of Technology, which is much larger than in the FTSE Australia 300 benchmark.

Chart 6. Industry weights – FTSE Developed ex Australia benchmark vs FTSE Developed ex Australia Choice Index



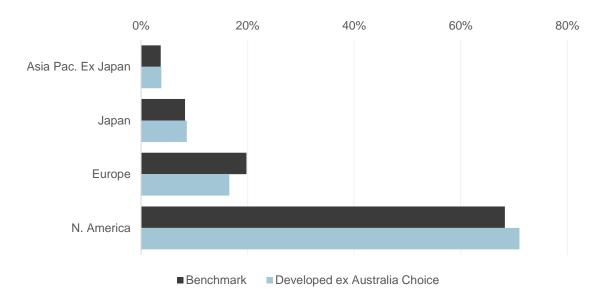
Since this is an international index, we can also look at how the exclusions changed its geographic distribution. As a summary, Chart 7 compares the number of stocks in each region before and after exclusions, and Chart 8 features the final regional weights. As shown, the exclusions resulted in a modest shift out of Europe and into North America, with both Japan and Asia Pacific ex Japan exhibiting very little weight change.

Chart 7. Number of stocks, by region – FTSE Developed ex Australia benchmark vs FTSE Developed ex Australia Choice Index



Source: FTSE Russell. Data as of March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

Chart 8. Regional weights – FTSE Developed ex Australia benchmark vs FTSE Developed ex Australia Choice Index



To add a bit more insight into these changes, the table below shows the five countries with the largest magnitude of weight changes. The UK, France, and Germany all had modest reductions in weights, which nearly offset the increase in the US weight.

Table 5. Weights and number of stocks - select countries, before and after exclusions

	Weights				Stocks
Country	Benchmark	Developed ex Australia Choice	Active Weight	Benchmark	Developed ex Australia Choice
US	65.4%	68.3%	2.9%	607	500
UK	4.7%	3.6%	-1.1%	120	90
France	3.2%	2.1%	-1.1%	83	58
Japan	8.3%	8.6%	0.3%	507	428
Germany	2.9%	2.7%	-0.3%	81	69

Source: FTSE Russell. Data as of March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

Turning to performance, we can see that despite the industry and geographical variations discussed above, the performance of the indexes was quite similar. Over this period, the Choice index outperformed the benchmark by 98 basis points annually, with slightly lower volatility.

Table 6. Performance statistics - April 2015 to March 2021 (AUD)

	Benchmark	Developed ex Australia Choice
Average return (annualized)	11.15%	12.13%
Volatility	11.23%	11.11%
Return/Volatility ratio	0.99	1.09
Excess Return		0.98%
Tracking Error		1.24%
Information Ratio		0.79

Source: FTSE Russell. Data based on monthly returns from April 1, 2015, through March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

While the tracking error was a reasonably low 1.24%, we were also interested in making a more detailed assessment of the co-movement of the Choice index with the underlying benchmark. Table 7 shows that the overall correlation was quite high at 0.994, with a beta of 0.983.

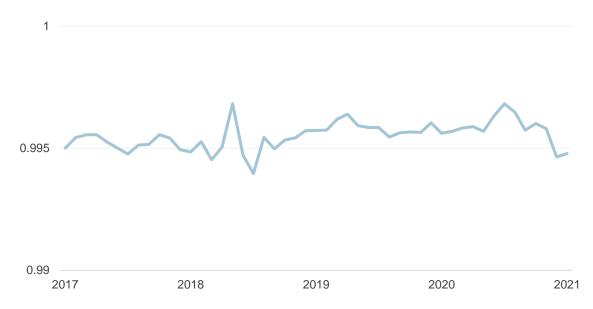
Table 7. Correlation and beta – April 2015 to March 2021 (AUD)

	Correlation	Beta
Developed ex Australia Choice	0.994	0.983

Source: FTSE Russell. Data based on monthly returns from April 1, 2015 through March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

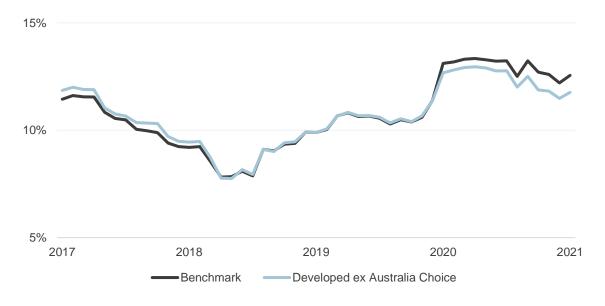
Rolling 24-month correlations of the FTSE Developed ex Australia Choice Index were higher and more stable than those of the FTSE Australia 300 Choice index, reflecting the lower tracking error, with the correlation generally staying above 0.995.

Chart 9. Correlations – FTSE Developed ex Australia Choice Index to FTSE Developed ex Australia benchmark (24-month-rolling window)



The time-series of annualized volatilities of the two indexes show patterns similar to the FTSE Australia 300 example. As the volatility of the benchmark has shifted over time, so has that of the Choice index. The Choice index volatility was slightly higher than the benchmark's early in the period, and then lower at the end of the period with the outbreak of the Covid-19 crisis and the collapse in oil prices in early 2020. The exclusion of stocks closely tied to the oil industry likely contributed to lower volatility of the Choice index during this later period.

Chart 10. Annualized volatility – FTSE Developed ex Australia Choice Index and FTSE Developed ex Australia benchmark (24-month-rolling window)



Source: FTSE Russell. Data through March 31, 2021. Past performance is no guarantee of future results. Please see end for important legal disclosures.

Summary and conclusions

The Global Choice framework allows investors to align their investment choices with their values by enabling them to invest in companies that are carefully screened for product- and conduct-related issues. Once the stock universe is screened for undesirable characteristics, the index is constructed transparently using market-capitalization weights.

This document focused on the FTSE Australia 300 Choice Index and the FTSE Developed ex Australia Choice Index to illustrate the effects of the screening. The FTSE Australia 300 Choice Index is an interesting case because the exclusions resulted in a large underweight to the Basic Materials industry and a compensating overweight to the Financials industry. For this Choice index, at each quarterly rebalance, industry weights are constrained to be within 5% of their benchmark weights. For the Developed ex Australia index, we show that even though more than 400 stocks are excluded, the industry and country weights are similar to those of the underlying index, with the notable exception of the Energy industry.

For both Choice indexes, the underweight to Energy likely explains much of the divergence in volatility toward the end of the six-year period examined. The overall correlations between the Global Choice indexes and their underlying benchmarks finished the period high, with the 24-month correlations for both Choice indexes above 0.99.

These high correlations, even during periods of very high market turbulence, offer investors the confidence that the Global Choice indexes can serve as close substitutes for the underlying benchmarks, while allowing them to express their ESG values in their investment choices.

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