

FTSE Global Minimum Variance Index Series

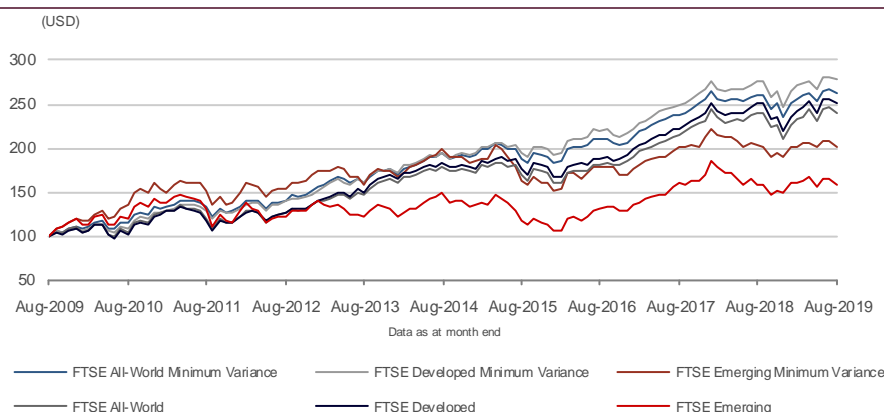
Data as at: 30 August 2019

The FTSE Global Minimum Variance Index Series aims to deliver reduced index volatility based on historical return information, thereby offering potential improvements to the risk reward trade-off, whilst maintaining full allocation to the relevant equity market.

Reduced volatility is achieved by applying a transparent rules-based approach which minimizes historical variance subject to additional constraints on the weight of individual stocks within an index, and, at aggregate level on the weight of countries and industries represented in the index.

The FTSE Global Minimum Variance Index Series offers global, regional and country indices. Minimum Variance versions of selected Shariah, ESG and Domestic indices are also available. Constituents are selected from the corresponding underlying universe at the time of the review and aspects such as index reviews and company classification are governed by the corresponding Ground Rules of the universe index.

10-Year Performance - Total Return



Performance and Volatility - Total Return

Index (USD)	Return %						Return pa %*		Volatility %**		
	3M	6M	YTD	12M	3YR	5YR	3YR	5YR	1YR	3YR	5YR
FTSE All-World Minimum Variance	3.2	2.1	10.9	0.3	25.0	34.8	7.7	6.2	8.7	8.6	9.7
FTSE Developed Minimum Variance	4.0	2.5	12.2	0.9	26.8	42.1	8.2	7.3	9.0	8.7	9.6
FTSE Emerging Minimum Variance	0.0	-0.5	5.3	-1.3	11.9	1.1	3.8	0.2	8.3	9.6	12.2
FTSE All-World	4.4	3.0	14.0	0.1	31.9	34.3	9.7	6.1	12.2	10.7	11.8
FTSE Developed	4.8	3.6	14.9	0.3	33.3	37.7	10.0	6.6	12.5	10.6	11.7
FTSE Emerging	0.4	-2.1	6.5	-0.6	20.5	6.0	6.4	1.2	13.5	14.5	15.5

* Compound annual returns measured over 3 and 5 years respectively

** Volatility – 1YR based on 12 months daily data. 3YR based on weekly data (Wednesday to Wednesday). 5YR based on monthly data

FEATURES

Methodology

The approach applies a rules-based strategy to minimise volatility. Some constraints are applied, for example, to avoid over concentration in any particular stock, sector or country.

Objective

The indices are designed for the creation of index tracking funds, derivatives and as a performance benchmark.

Investability

Stocks in the underlying universe are free-float weighted to ensure that only the investable opportunity set is included.

Liquidity

Stocks in the underlying universe are screened to ensure that the indices are tradable.

Transparency

Index rules are freely available on the FTSE website.

Availability

The indices are calculated based on price and total return methodologies, available end-of-day and in some cases real-time.

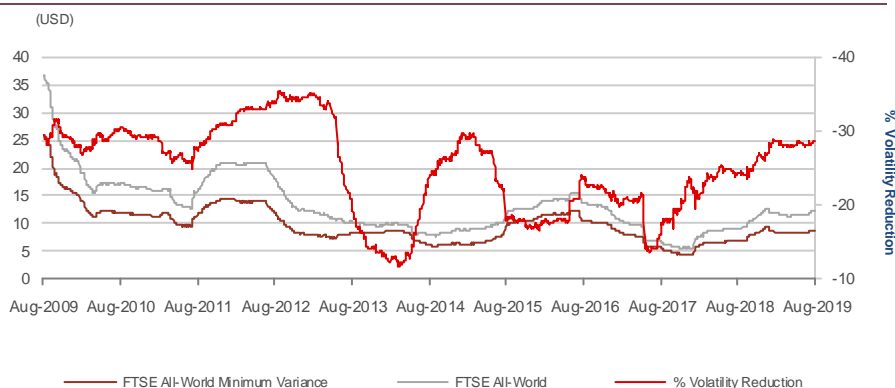
Industry Classification Benchmark

Index constituents are categorized in accordance with the Industry Classification Benchmark (ICB), the global standard for industry sector analysis.

Year-on-Year Performance - Total Return

Index % (USD)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
FTSE All-World Minimum Variance	41.2	19.7	-3.7	17.8	16.8	8.6	0.2	8.2	23.8	-7.6
FTSE Developed Minimum Variance	32.8	15.7	0.6	15.8	21.1	9.1	3.4	8.2	23.7	-7.4
FTSE Emerging Minimum Variance	80.3	33.1	-14.2	23.6	2.9	4.8	-12.6	6.3	24.8	-10.1
FTSE All-World	36.2	13.2	-7.3	17.1	23.3	4.8	-1.7	8.6	24.6	-9.1
FTSE Developed	31.4	12.3	-5.5	17.0	26.8	5.1	-0.3	8.2	23.9	-8.6
FTSE Emerging	82.6	19.8	-19.0	17.9	-3.5	1.6	-15.2	13.5	32.5	-13.0

Annualised Rolling 252 Day Volatility - Total Return



Return/Risk Ratio and Drawdown - Total Return

Index (USD)	Return/Risk Ratio				Drawdown (%)			
	1YR	3YR	5YR	10YR	1YR	3YR	5YR	10YR
FTSE All-World Minimum Variance	0.0	0.9	0.6	0.9	-13.3	-15.5	-16.5	-16.5
FTSE Developed Minimum Variance	0.1	0.9	0.8	1.0	-14.2	-15.2	-15.2	-15.2
FTSE Emerging Minimum Variance	-0.2	0.3	0.0	0.5	-8.4	-16.7	-30.0	-30.0
FTSE All-World	0.0	0.9	0.5	0.7	-17.0	-19.0	-19.0	-23.0
FTSE Developed	0.0	0.9	0.6	0.7	-17.9	-18.5	-18.5	-22.3
FTSE Emerging	-0.1	0.4	0.1	0.3	-10.3	-24.2	-35.7	-35.7

Return/Risk Ratio – based on compound annual returns and volatility in Performance and Volatility table
 Drawdown - based on daily data

Top 10 Constituents - FTSE All-World Minimum Variance Index

Constituent	Country	ICB Sector	FTSE All-World Minimum Variance (Wgt %)	FTSE All-World (Wgt %)	Diff %
Newmont Goldcorp	USA	Mining	0.30	0.07	0.23
L3Harris Technologies	USA	Technology Hardware & Equipment	0.27	0.10	0.17
Disney (Walt) Company	USA	Media	0.23	0.52	-0.29
Hershey Company	USA	Food Producers	0.22	0.05	0.17
WEC Energy Group	USA	Gas Water & Multiutilities	0.22	0.07	0.16
Evergy	USA	Electricity	0.22	0.03	0.19
Southern Co	USA	Electricity	0.22	0.13	0.09
Fidelity Natl Information Services	USA	Support Services	0.22	0.18	0.03
Public Storage	USA	Real Estate Investment Trusts	0.21	0.09	0.13
XCEL Energy	USA	Electricity	0.21	0.07	0.14
Totals			2.32	1.31	

INFORMATION

Index Universe

FTSE All-World Index

Index Launch

July 2012 & May 2013

Base Date

15 June 2012

Base Value

100

Investability Screen

Actual free float applied and liquidity screened

Index Calculation

Real time (selected indices) and end of day

End-of-Day Distribution

Via FTP and email

Currency

USD, EUR, GBP, JPY, AUD

Review Dates

March and September

Country Breakdown

Country	FTSE All-World Minimum Variance		FTSE All-World		Diff %
	No. of Cons	Wgt %	No. of Cons	Wgt %	
Australia	61	2.30	97	2.24	0.07
Austria	3	0.09	8	0.07	0.02
Belgium	7	0.22	12	0.31	-0.09
Brazil	24	0.71	76	0.90	-0.19
Canada	35	1.70	57	2.80	-1.10
Chile	9	0.17	21	0.11	0.06
China	109	2.94	958	3.39	-0.45
Colombia	6	0.12	9	0.05	0.07
Czech Rep.	5	0.18	5	0.02	0.16
Denmark	13	0.54	22	0.54	0.01
Egypt	6	0.22	7	0.02	0.20
Finland	9	0.27	15	0.36	-0.09
France	38	1.11	86	3.25	-2.15
Germany	36	1.08	81	2.59	-1.51
Greece	6	0.20	9	0.04	0.16
Hong Kong	66	2.47	91	1.17	1.30
Hungary	2	0.04	4	0.04	0.01
India	110	4.37	148	1.11	3.26
Indonesia	20	0.70	31	0.24	0.46
Ireland	5	0.15	5	0.07	0.08
Israel	19	0.74	26	0.15	0.59
Italy	18	0.50	37	0.76	-0.26
Japan	346	12.44	512	7.79	4.64
Korea	48	1.13	137	1.32	-0.19
Kuwait	9	0.82	9	0.10	0.72
Malaysia	43	2.21	47	0.29	1.91
Mexico	20	0.52	39	0.31	0.21
Netherlands	13	0.42	27	1.06	-0.63
New Zealand	11	0.65	12	0.09	0.56
Norway	6	0.23	17	0.21	0.01
Pakistan	4	0.07	5	0.00	0.07
Peru	1	0.07	1	0.01	0.06
Philippines	25	1.45	25	0.14	1.30
Poland	1	0.04	14	0.10	-0.06
Portugal	3	0.13	4	0.05	0.09
Qatar	19	1.15	21	0.13	1.02
Russia	22	0.70	32	0.46	0.23
Saudi Arabia	-	-	43	0.17	-0.17
Singapore	33	1.22	37	0.41	0.82
South Africa	5	0.37	75	0.68	-0.31
Spain	17	0.53	30	0.87	-0.34
Sweden	12	0.29	45	0.77	-0.49
Switzerland	25	1.04	49	2.84	-1.80
Taiwan	72	2.56	91	1.27	1.28
Thailand	40	2.02	44	0.38	1.64
Turkey	6	0.12	31	0.07	0.05
UAE	14	0.67	17	0.11	0.55
UK	77	2.56	132	4.99	-2.43
USA	567	45.76	617	55.14	-9.37
Totals	2046	100.00	3918	100.00	

ICB Supersector Breakdown

ICB Code	ICB Supersector	FTSE All-World Minimum Variance		FTSE All-World		Diff %
		No. of Cons	Wgt %	No. of Cons	Wgt %	
0500	Oil & Gas	81	3.02	152	5.39	-2.37
1300	Chemicals	65	2.14	163	2.24	-0.10
1700	Basic Resources	51	2.54	191	1.79	0.76
2300	Construction & Materials	72	2.44	146	1.36	1.08
2700	Industrial Goods & Services	262	11.55	603	11.55	0.00
3300	Automobiles & Parts	66	2.01	136	1.97	0.05
3500	Food & Beverage	134	7.94	194	4.21	3.73
3700	Personal & Household Goods	133	6.31	219	5.21	1.11
4500	Health Care	134	6.98	277	10.92	-3.94
5300	Retail	134	7.03	215	7.01	0.01
5500	Media	62	2.99	90	2.06	0.93
5700	Travel & Leisure	103	5.14	148	2.62	2.52
6500	Telecommunications	72	3.67	91	2.89	0.77
7500	Utilities	143	10.41	189	3.42	7.00
8300	Banks	130	5.24	277	8.63	-3.39
8500	Insurance	89	4.33	132	4.60	-0.27
8600	Real Estate	128	7.89	228	3.30	4.59
8700	Financial Services	71	2.77	203	4.58	-1.81
9500	Technology	116	5.59	264	16.25	-10.66
Totals		2046	100.00	3918	100.00	

Index Characteristics

Attributes	FTSE All-World Minimum Variance	FTSE All-World
Number of constituents	2046	3918
Dividend Yield %	2.77	2.55
Constituent (Wgt %)		
Average	0.05	0.03
Largest	0.30	2.27
Median	0.04	0.01
Top 10 Holdings (Wgt %)	2.32	11.43

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Data definitions available from
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