

FTSE Global Minimum Variance Index Series

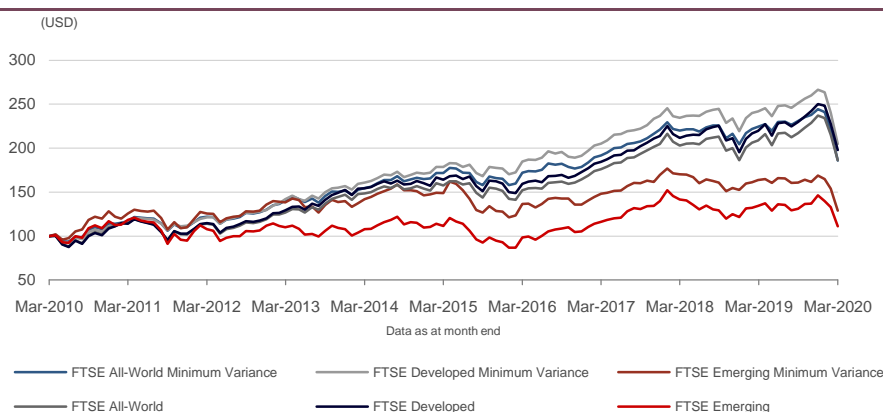
Data as at: 31 March 2020

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	-23.9	-19.5	-23.9	-17.1	-3.0	8.4	-1.0	1.6	19.5	15.0	13.0
FTSE Developed Minimum Variance	-23.2	-18.5	-23.2	-15.4	-0.2	14.6	-0.1	2.8	20.5	15.3	12.8
FTSE Emerging Minimum Variance	-23.6	-19.8	-23.6	-21.2	-12.8	-13.4	-4.5	-2.8	15.5	13.9	14.8
FTSE All-World	-21.3	-14.1	-21.3	-10.8	5.9	18.2	1.9	3.4	23.5	17.0	13.9
FTSE Developed	-21.0	-14.0	-21.0	-10.0	7.2	20.5	2.4	3.8	24.5	16.9	13.8
FTSE Emerging	-24.2	-15.2	-24.2	-17.2	-4.4	-0.5	-1.5	-0.1	20.3	19.1	17.6

* 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.

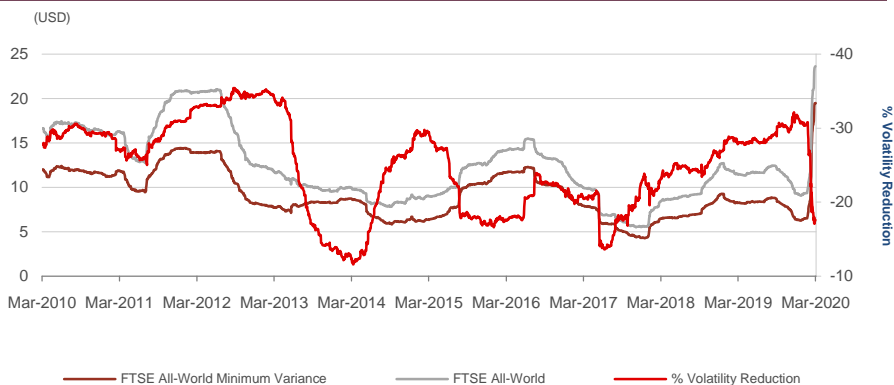
Industry Classification Benchmark

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)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
FTSE All-World Minimum Variance	19.7	-3.7	17.8	16.8	8.6	0.2	8.2	23.8	-7.6	19.7
FTSE Developed Minimum Variance	15.7	0.6	15.8	21.1	9.1	3.4	8.2	23.7	-7.4	21.5
FTSE Emerging Minimum Variance	33.1	-14.2	23.6	2.9	4.8	-12.6	6.3	24.8	-10.1	10.8
FTSE All-World	13.2	-7.3	17.1	23.3	4.8	-1.7	8.6	24.6	-9.1	27.2
FTSE Developed	12.3	-5.5	17.0	26.8	5.1	-0.3	8.2	23.9	-8.6	28.0
FTSE Emerging	19.8	-19.0	17.9	-3.5	1.6	-15.2	13.5	32.5	-13.0	20.6

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	-0.8	-0.1	0.1	0.5	-34.2	-34.2	-34.2	-34.2
FTSE Developed Minimum Variance	-0.7	-0.1	0.2	0.6	-34.4	-34.4	-34.4	-34.4
FTSE Emerging Minimum Variance	-1.3	-0.4	-0.2	0.2	-30.8	-33.4	-33.4	-33.4
FTSE All-World	-0.4	0.0	0.2	0.5	-33.7	-33.7	-33.7	-33.7
FTSE Developed	-0.4	0.1	0.3	0.5	-34.0	-34.0	-34.0	-34.0
FTSE Emerging	-0.8	-0.1	0.0	0.1	-33.4	-35.1	-35.1	-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 %
SG Micro (A) (SC SZ)	China	Technology Hardware & Equipment	0.20	0.00	0.20
Liaoning Cheng Da (A) (SC SH)	China	General Retailers	0.16	0.00	0.15
Tbea (A) (SC SH)	China	Electronic & Electrical Equipment	0.15	0.00	0.15
Citrix Systems	USA	Software & Computer Services	0.15	0.04	0.11
J M Smucker	USA	Food Producers	0.15	0.03	0.12
Newmont Corporation	USA	Mining	0.15	0.09	0.05
Hormel Foods	USA	Food Producers	0.14	0.03	0.11
Clorox	USA	Household Goods & Home Construction	0.14	0.05	0.09
General Mills	USA	Food Producers	0.14	0.08	0.06
Cabot Oil & Gas	USA	Oil & Gas Producers	0.13	0.02	0.12
Totals			1.51	0.34	

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	86	2.11	104	1.84	0.26
Austria	5	0.12	8	0.05	0.07
Belgium	8	0.25	14	0.26	-0.02
Brazil	64	0.94	91	0.64	0.30
Canada	39	1.19	55	2.51	-1.31
Chile	13	0.21	22	0.08	0.13
China	243	8.84	992	4.74	4.09
Colombia	8	0.12	11	0.04	0.08
Czech Rep.	4	0.10	4	0.01	0.09
Denmark	15	0.44	20	0.63	-0.20
Egypt	5	0.13	6	0.02	0.12
Finland	10	0.26	15	0.36	-0.09
France	54	1.16	85	2.99	-1.84
Germany	43	1.05	84	2.47	-1.42
Greece	5	0.11	9	0.03	0.09
Hong Kong	65	1.72	92	1.18	0.54
Hungary	3	0.06	4	0.03	0.03
India	132	3.60	153	0.99	2.61
Indonesia	19	0.35	32	0.17	0.18
Ireland	3	0.11	5	0.07	0.04
Israel	25	0.63	30	0.16	0.47
Italy	24	0.62	40	0.70	-0.08
Japan	450	14.91	509	8.13	6.78
Korea	61	1.27	136	1.40	-0.13
Kuwait	11	0.54	11	0.09	0.45
Malaysia	44	1.76	45	0.27	1.49
Mexico	28	0.46	37	0.24	0.22
Netherlands	11	0.34	30	1.16	-0.82
New Zealand	12	0.40	12	0.10	0.30
Norway	6	0.16	16	0.17	-0.01
Pakistan	4	0.07	4	0.00	0.07
Peru	1	0.04	1	0.00	0.04
Philippines	25	0.96	25	0.11	0.85
Poland	6	0.10	14	0.08	0.02
Portugal	4	0.11	4	0.06	0.06
Qatar	16	0.70	18	0.12	0.57
Russia	27	0.58	32	0.39	0.19
Saudi Arabia	43	1.67	45	0.29	1.38
Singapore	35	0.89	38	0.37	0.52
South Africa	8	0.26	67	0.45	-0.19
Spain	20	0.52	26	0.75	-0.23
Sweden	16	0.35	48	0.83	-0.48
Switzerland	32	0.93	49	3.07	-2.13
Taiwan	80	2.38	95	1.47	0.91
Thailand	44	1.27	47	0.29	0.98
Turkey	17	0.31	26	0.06	0.24
UAE	14	0.42	15	0.08	0.34
UK	75	1.81	131	4.58	-2.77
USA	600	42.67	607	55.46	-12.79
Totals	2563	100.00	3964	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	109	2.95	150	3.81	-0.86
1300	Chemicals	83	2.68	159	2.06	0.63
1700	Basic Resources	81	2.81	192	1.68	1.13
2300	Construction & Materials	103	2.95	147	1.33	1.62
2700	Industrial Goods & Services	351	12.92	598	10.56	2.36
3300	Automobiles & Parts	77	2.22	132	1.82	0.39
3500	Food & Beverage	153	7.13	197	4.09	3.04
3700	Personal & Household Goods	152	6.18	218	5.38	0.80
4500	Health Care	186	9.17	282	12.69	-3.52
5300	Retail	153	6.61	214	7.67	-1.06
5500	Media	67	2.78	88	2.20	0.58
5700	Travel & Leisure	111	4.29	150	2.07	2.22
6500	Telecommunications	81	3.28	95	2.89	0.39
7500	Utilities	162	7.77	190	3.52	4.25
8300	Banks	183	5.30	281	7.31	-2.02
8500	Insurance	98	3.61	131	4.31	-0.71
8600	Real Estate	155	6.06	239	3.11	2.95
8700	Financial Services	88	3.13	211	4.38	-1.25
9500	Technology	170	8.18	290	19.14	-10.97
Totals		2563	100.00	3964	100.00	

Index Characteristics

Attributes	FTSE All-World Minimum Variance	FTSE All-World
Number of constituents	2563	3964
Dividend Yield %	3.35	3.00
Constituent (Wgt %)		
Average	0.04	0.02
Largest	0.20	2.98
Median	0.03	0.01
Top 10 Holdings (Wgt %)	1.51	13.55

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