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# The FTSE Shariah Developed Minimum Variance Index



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- The contemporary Islamic banking and finance industry has grown rapidly over the last 30 years, comprising now over **US\$1 trillion dollars of AUM**.
  - This growth has been accompanied by a requirement for appropriate asset management tools, including benchmark equity indices that are Shariah-compliant.
  - FTSE's Shariah-compliant index offering is acceptable to a **broad constituency of Islamic end users** and allows investors to use the indices in the development of suitably aligned investment products.
    - One of the main historic issues with Shariah-compliant products has been their **relatively high cost structure**, which has typically been associated with the time, resources and analysis required to derive the appropriate screening at a global level.
    - However, the availability of widely accepted and transparent indices, may encourage the introduction of **lower cost investment products** with well defined exposures.
  - **FTSE Shariah equity indices** include a business screening, where companies involved in ineligible activities are excluded, as well as a financial screening.

- The [FTSE Shariah Developed Minimum Variance Index](#) aims to reduce volatility through ethical and financial screening, as well as a quantitative construction process by:
  - Overweighting stocks that reduce index volatility.
  - Underweighting stocks that increase index volatility.*Both resulting in the creation of a more balanced risk profile.*
- Constraints are a necessary part of the process as they guard against excessive concentration, whilst maintaining diversification that helps create a more stable covariance matrix.
- The [methodology](#) is a design-first in the Shariah finance world delivering a two-fold approach:
  - Shariah investment principles, and
  - Advanced quantitative risk management techniques.
- The index is [certified Shariah-compliant](#) by independent consultants Yassar Ltd. and is specifically designed to meet the needs of the Shariah market globally.



Business Activity  
Screening



Dividend  
Purification



Financial  
Screening

- Areas of **business activity** excluded:
  - Conventional finance (non-Islamic banking, finance, insurance etc.)
  - Alcohol
  - Pork-related products and non-halal food production, packaging and processing
  - Tobacco
  - Weapons, arms and defence manufacturing
  - Entertainment (casinos, gambling and pornography)
- Whilst initial index design aims to absolutely exclude from any of these prohibited activities, **recent methodology** has tended to employ a 5% of total revenue based cut-off using these categories:
  - FTSE/Yasaar's screening methodology is based on total sector exclusion, but inclusion of stocks in other sectors where, in aggregate, the proportion of non-compliant revenue is not more than 5% of the total.



The diagram illustrates the Shariah Screening Process as a three-step flow. It consists of three rounded rectangular boxes arranged horizontally. The first box on the left is dark blue with white text and is labeled 'Business Activity Screening'. The middle box is grey with dark blue text and is labeled 'Dividend Purification'. The third box on the right is dark blue with white text and is labeled 'Financial Screening'. There are no arrows or connecting lines visible between the boxes, suggesting a sequential process.

Business Activity  
Screening

Dividend  
Purification

Financial  
Screening

- **Dividend purification** is applied to mitigate the impact from the inclusion of income from either interest income or prohibited activities.
- This is designed to **allow investors** to deduct from their dividend income the appropriate amount that should be given to charity.
- The percentage of the total index **distributed dividend** that is derived from Islamically-inappropriate sources is calculated by Yasaar and made available to the index end users.
- Dividend cleansing adjustments are not made within the Total Return Index.

Business Activity  
Screening

Dividend  
Purification

Financial  
Screening

- The aim is to address the issue of companies having **excessive leverage** or where a significant portion of income is from interest receipts, using a number of different ratios.
- Using market capitalisation can lead to a more volatile screening process, even when a 12-month average is used, whilst total assets bear a greater relationship to the underlying balance sheet criteria being analysed.
- **FTSE uses total assets** when considering the financial screenings for companies and applies a 33% cap on the threshold for factors such as:
  - Total debt relative to total assets.
  - Cash and interest bearing securities over total assets.
- The threshold for the sum of a company's accounts receivable and cash over total assets is set at being less than 50%.
  - Total interest and non compliant activities income should not exceed 5% of total revenue.

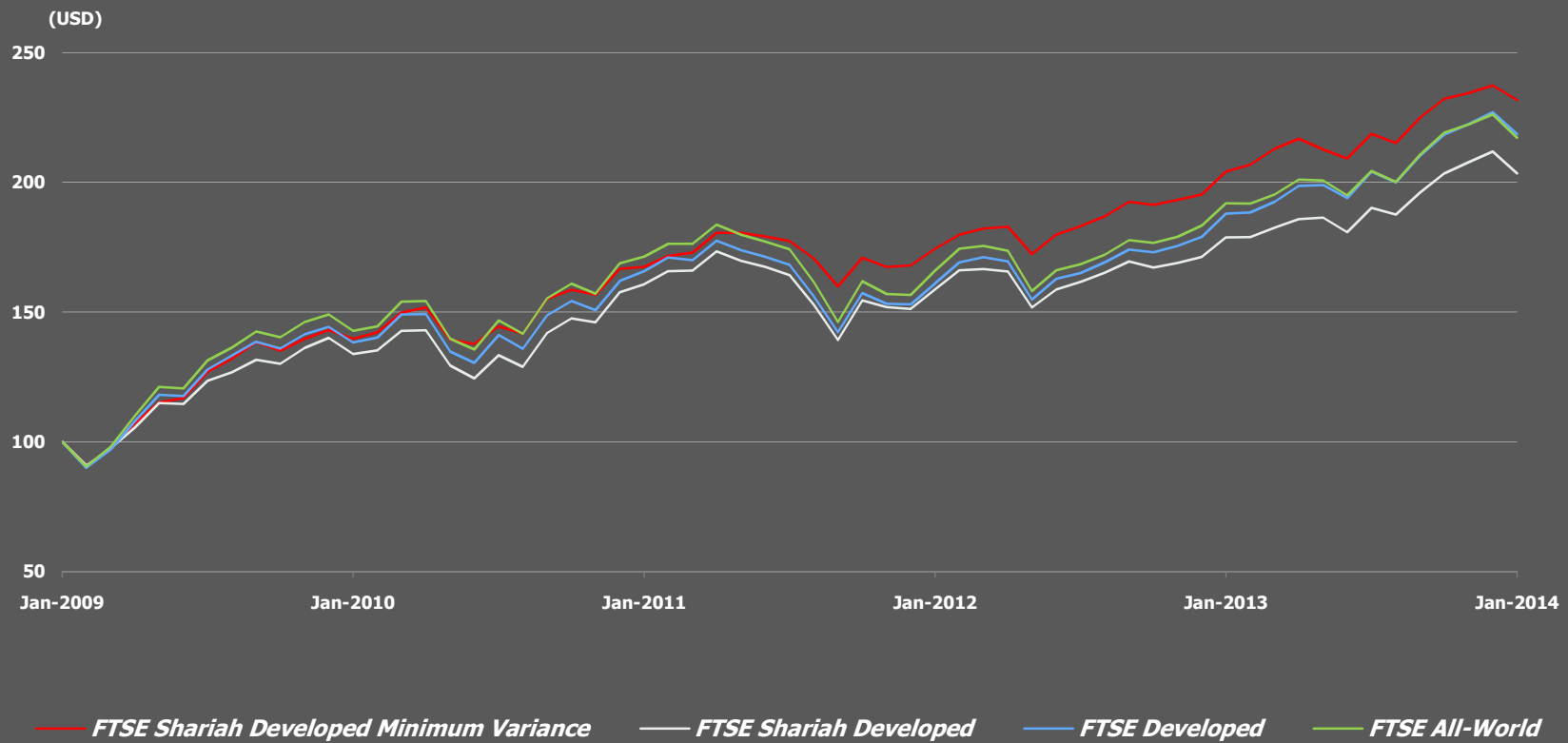
# Advantages of a Minimum Variance Approach

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- Minimum variance indices target a more efficient investment portfolio through reduced volatility and offer a potential improvement in respect to risk-adjusted returns.
  - The methodology requires only historic volatility and correlations:
    - Expected returns play no role – an appealing characteristic as expected returns are notoriously difficult to forecast and index outcomes are sensitive to errors in forecasts of expected returns.
    - Conversely outcomes are relatively insensitive to errors in estimates of the covariance matrix.
  - Overall the benefits of this methodology have been highlighted through significant academic evidence that supports the existence of a low volatility effect.

# Performance & Index Characteristics

## 5-Year Index Performance (Total Return)

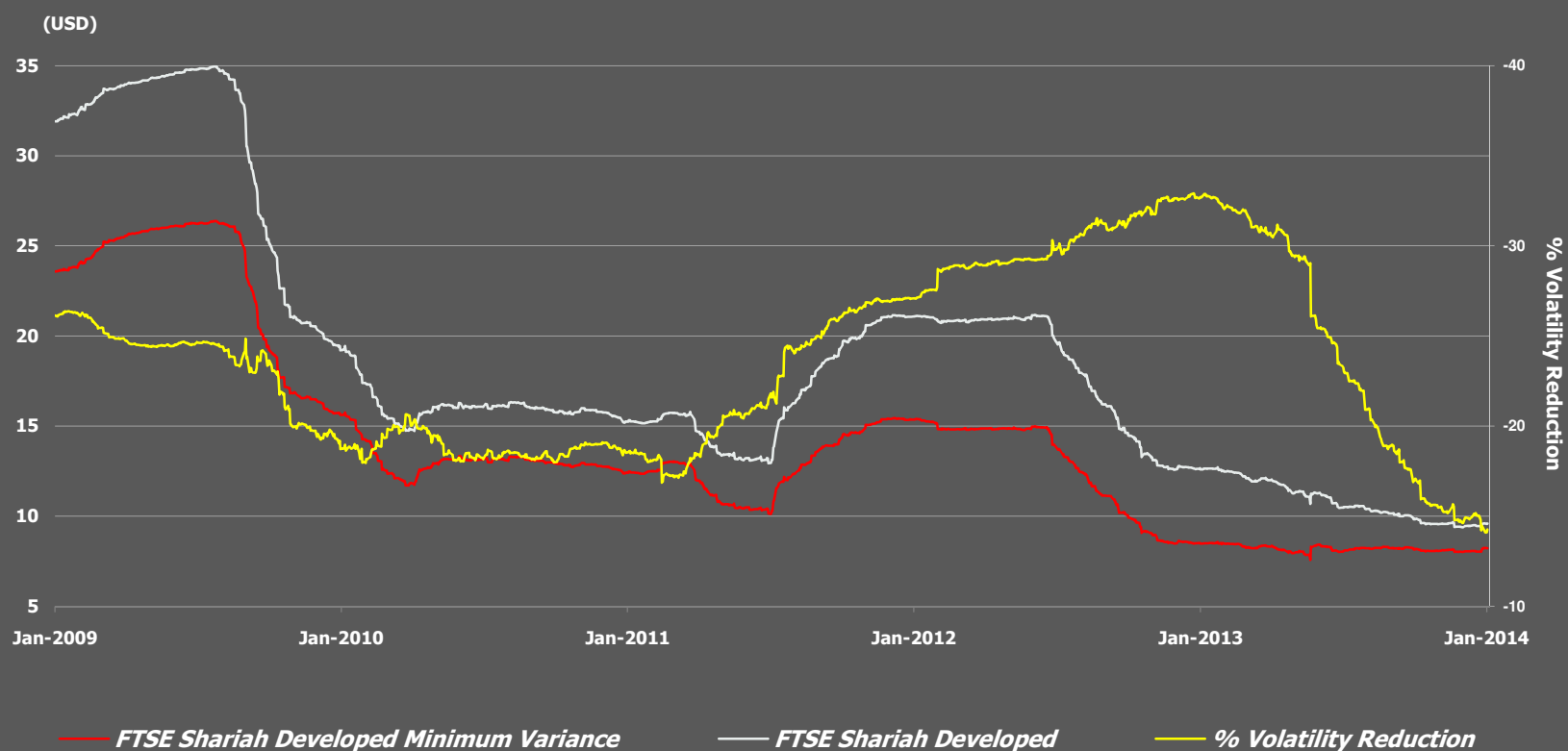
FTSE



Source: FTSE / Data as at 31 January 2014

# Annualised Rolling 252 day Volatility (Total Return) – FTSE Shariah Developed Minimum Variance VS FTSE Shariah Developed

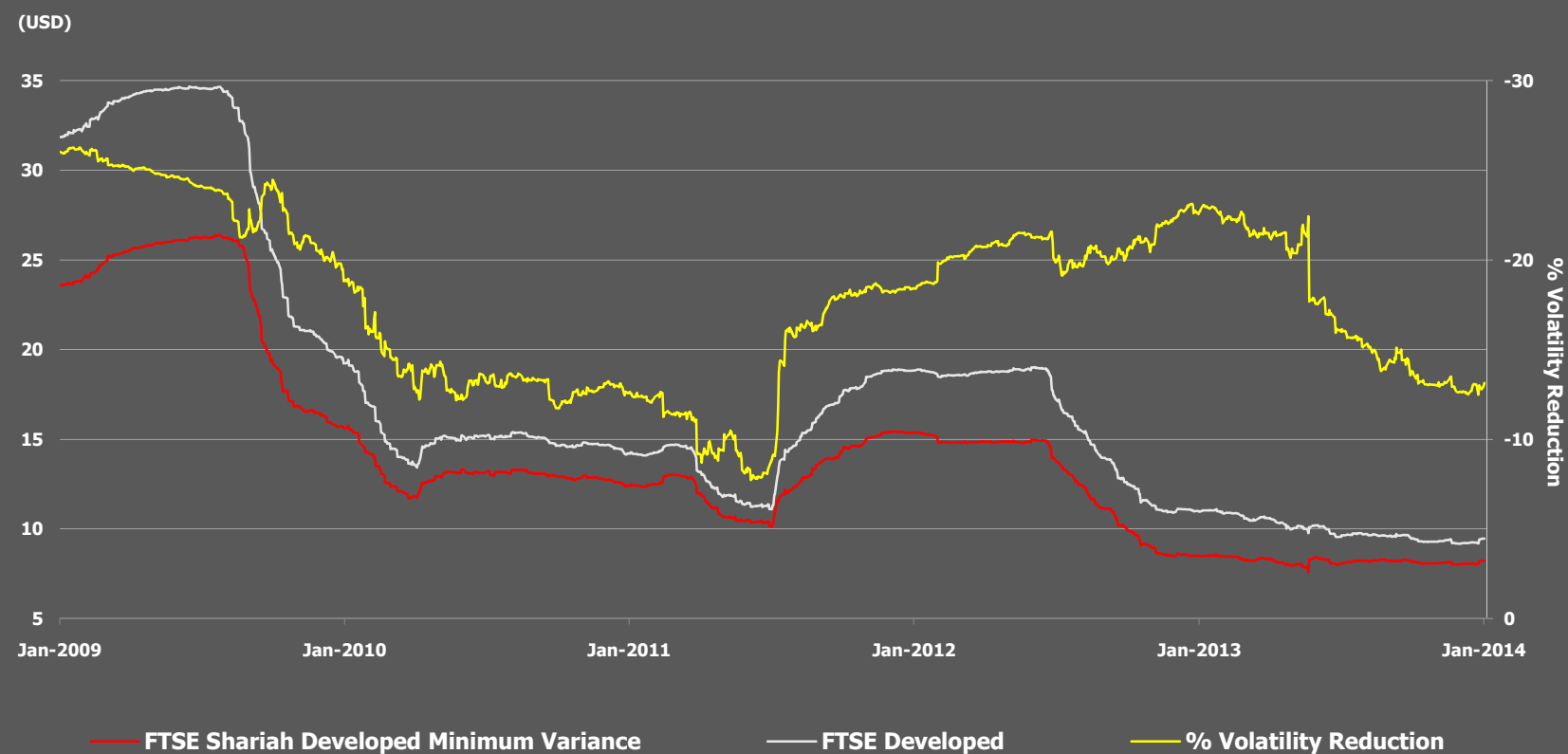
FTSE



Source: FTSE / Data as at 31 January 2014

# Annualised Rolling 252 day Volatility (Total Return) – FTSE Shariah Developed Minimum Variance VS FTSE Developed

FTSE



Source: FTSE / Data as at 31 January 2014

## Index Characteristics

# FTSE

Attributes	FTSE Shariah Developed Minimum Variance	FTSE Shariah Developed	FTSE Developed	FTSE All-World
Number of Constituents	605	959	2033	2881
Dividend Yield %	2.22	2.46	2.44	2.49
Constituent (Wgt %)				
Average	0.17	0.10	0.05	0.03
Largest	0.47	3.03	1.42	1.30
Median	0.14	0.04	0.02	0.01
Top 10 Holdings (Wgt %)	4.28	16.60	9.06	8.27

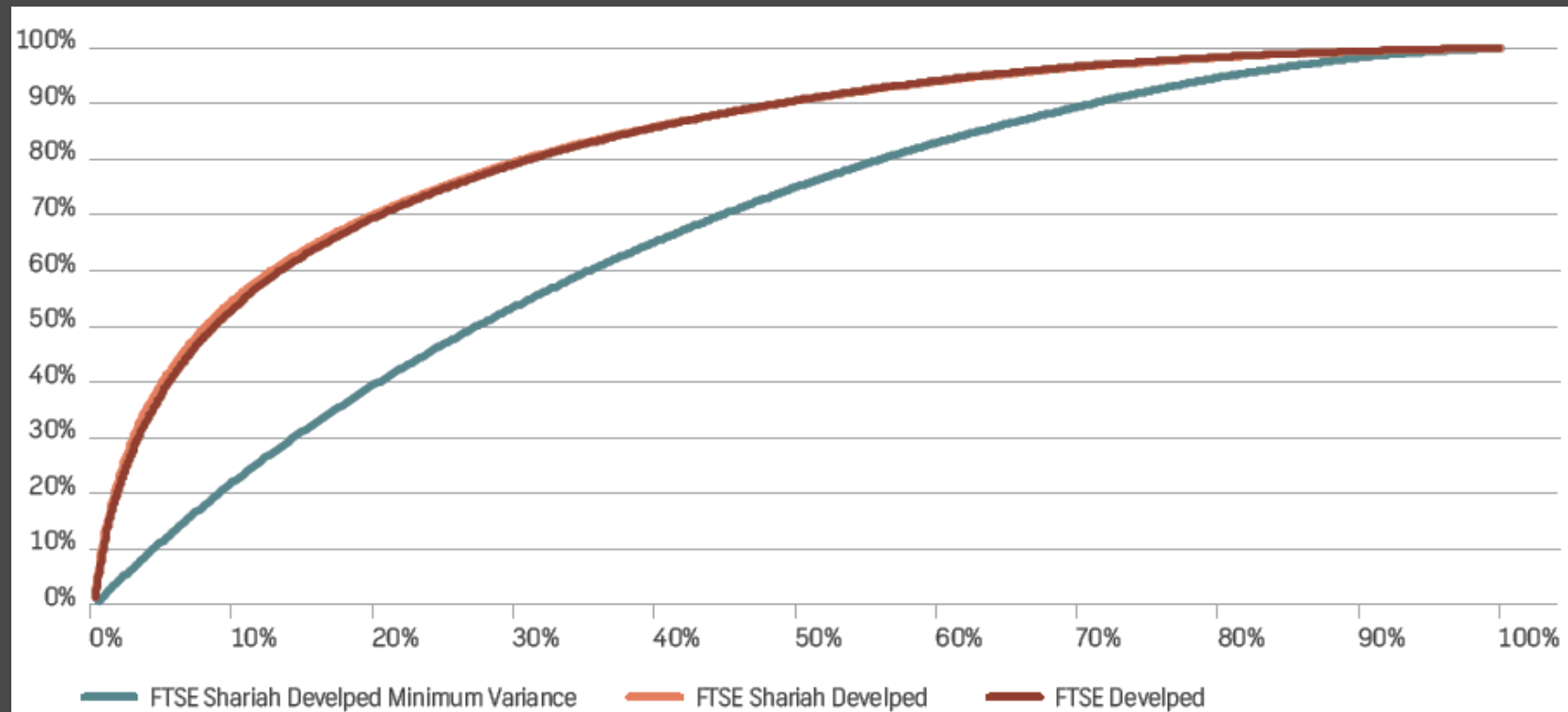
Source: FTSE / Data as at 31 January 2014

# Comparison of Index Diversification

FTSE

The Minimum Variance methodology reduces the number of stocks and significantly increases the index diversification, through the constraints applied during the optimisation process:

- The Lorenz curves show differences in the cumulative distribution of stock weights.
- The flatter the curve, the more evenly distributed the weights.



Source: FTSE / Data as at September 2013

# Country Breakdown

FTSE

	FTSE Shariah Developed Minimum Variance			FTSE Shariah Developed			FTSE Developed		
Country	No. of Cons	Net MCap (USDm)	Wgt %	No. of Cons	Net MCap (USDm)	Wgt %	No. of Cons	Net MCap (USDm)	Wgt %
Australia	32	573,011	3.97	44	333,050	2.24	102	980,970	3.10
Austria	1	9,916	0.07	5	17,149	0.12	10	38,322	0.12
Belgium & Lux.	3	79,276	0.55	5	32,135	0.22	11	147,618	0.47
Canada	25	479,310	3.32	38	460,071	3.09	77	1,160,009	3.67
Denmark	7	198,265	1.38	8	100,815	0.68	15	170,641	0.54
Finland	1	11,473	0.08	9	59,800	0.40	12	110,111	0.35
France	14	239,524	1.66	40	689,473	4.63	81	1,219,160	3.85
Germany	13	199,484	1.38	37	692,442	4.65	63	1,184,998	3.75
Greece	1	13,640	0.09	2	4,259	0.03	2	4,259	0.01
Hong Kong	27	777,557	5.39	29	88,742	0.60	88	455,113	1.44
Ireland	-	-	-	-	-	-	3	26,715	0.08
Israel	-	-	-	-	-	-	30	73,953	0.23
Italy	2	27,380	0.19	10	106,837	0.72	30	313,217	0.99
Japan	136	2,130,490	14.78	252	1,307,040	8.78	459	2,920,741	9.23
Korea	40	961,269	6.67	46	338,238	2.27	112	571,847	1.81
Netherlands	7	101,426	0.70	12	206,927	1.39	25	373,081	1.18
New Zealand	5	145,163	1.01	5	12,471	0.08	12	21,150	0.07
Norway	1	8,900	0.06	6	46,999	0.32	11	99,367	0.31
Portugal	1	17,481	0.12	2	5,812	0.04	6	21,575	0.07
Singapore	19	476,063	3.30	21	79,127	0.53	41	189,409	0.60
Spain	5	64,254	0.45	9	117,758	0.79	26	434,099	1.37
Sweden	5	39,898	0.28	22	221,457	1.49	36	414,237	1.31
Switzerland	16	484,002	3.36	26	638,175	4.29	43	1,176,469	3.72
UK	30	814,964	5.65	51	1,328,729	8.93	123	2,803,606	8.86
USA	214	6,566,170	45.54	280	7,997,405	53.73	615	16,720,565	52.86
<b>Totals</b>	<b>605</b>	<b>14,418,915</b>	<b>100.00</b>	<b>959</b>	<b>14,884,910</b>	<b>100.00</b>	<b>2033</b>	<b>31,631,231</b>	<b>100.00</b>

Source: FTSE / Data as at 31 January 2014

# ICB Supersector Breakdown

FTSE

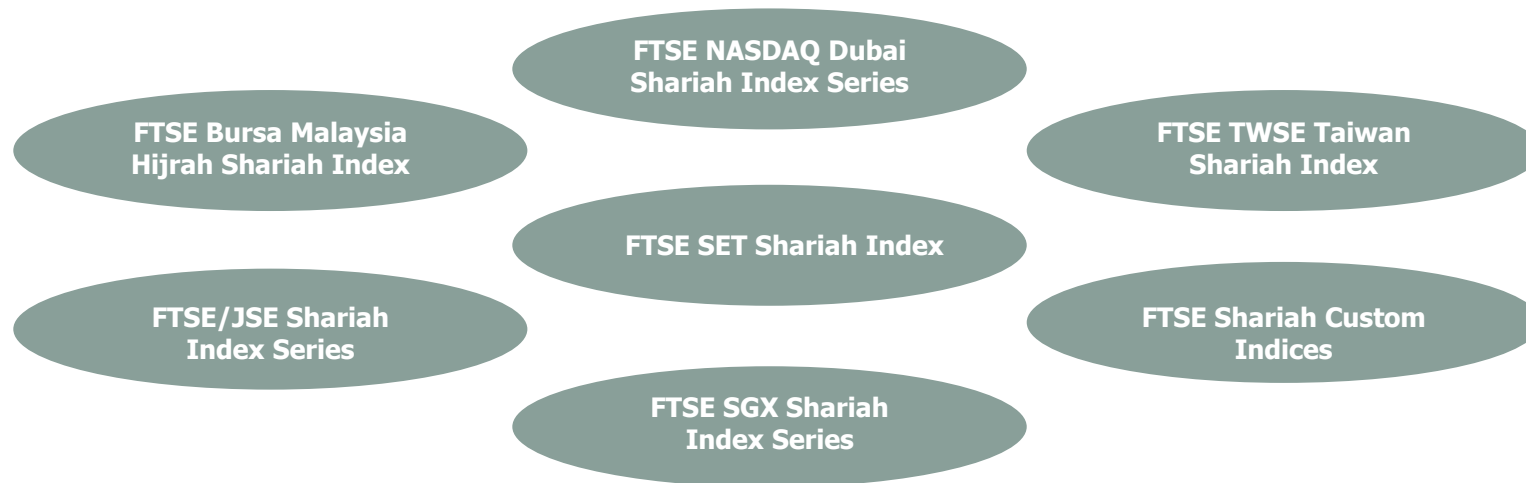
		FTSE Shariah Developed Minimum Variance			FTSE Shariah Developed			FTSE Developed		
ICB Code	ICB Supersector	No. of Cons	Net MCap (USDm)	Wgt %	No. of Cons	Net MCap (USDm)	Wgt %	No. of Cons	Net MCap (USDm)	Wgt %
0500	Oil & Gas	46	637,694	4.42	90	2,457,908	16.51	117	2,713,648	8.58
1300	Chemicals	37	514,636	3.57	70	879,057	5.91	87	988,763	3.13
1700	Basic Resources	20	274,023	1.90	67	631,157	4.24	92	782,965	2.48
2300	Construction & Materials	35	517,884	3.59	55	324,602	2.18	71	370,458	1.17
2700	Industrial Goods & Services	85	1,627,749	11.29	168	1,902,545	12.78	299	3,700,573	11.70
3300	Automobiles & Parts	11	221,839	1.54	50	430,414	2.89	67	998,544	3.16
3500	Food & Beverage	36	1,240,299	8.60	41	742,267	4.99	97	1,528,427	4.83
3700	Personal & Household Goods	58	1,384,047	9.60	81	1,012,111	6.80	111	1,683,996	5.32
4500	Health Care	82	2,532,889	17.57	86	2,557,427	17.18	118	3,340,346	10.56
5300	Retail	52	1,627,834	11.29	58	819,230	5.50	125	1,662,122	5.25
5500	Media	16	277,435	1.92	20	163,599	1.10	74	975,465	3.08
5700	Travel & Leisure	11	406,039	2.82	16	71,694	0.48	87	770,769	2.44
6500	Telecommunications	13	416,123	2.89	15	441,178	2.96	51	1,084,133	3.43
7500	Utilities	26	1,017,896	7.06	33	422,377	2.84	89	1,044,377	3.30
8300	Banks	-	-	-	-	-	-	133	3,340,172	10.56
8500	Insurance	-	-	-	-	-	-	94	1,542,325	4.88
8600	Real Estate	17	401,892	2.79	20	118,422	0.80	106	828,935	2.62
8700	Financial Services	4	89,513	0.62	7	40,844	0.27	88	1,119,305	3.54
9500	Technology	56	1,231,123	8.54	82	1,870,078	12.56	127	3,155,908	9.98
Totals		605	14,418,915	100.00	959	14,884,910	100.00	2033	31,631,231	100.00

Source: FTSE / Data as at 31 January 2014

# Summary

## Other FTSE Shariah Index Offerings

- The **FTSE Shariah Developed Minimum Variance Index** further expands FTSE's range of Shariah-compliant indices and strengthens its position as leading developer of innovative alternatively weighted indices.
- The FTSE Shariah index range covers all regions across both developed and emerging markets to create a comprehensive Shariah indexing solution, featuring FTSE's high standard of benchmark **index design and governance**.
- FTSE also works with exchange partners and asset class specialists to provide Shariah-compliant versions of headline indices:



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- The [FTSE Shariah Global Equity indices](#) have been created by partnering with Yasaar Ltd, an impartial consultancy and leading authority on Shariah, and have been fully certified as Shariah-compliant through the issue of a Fatwa (Islamic legal opinion) by Yassar's principals.
  - FTSE's Shariah Minimum Variance indices aim to [lower volatility](#) after the application of ethical and financial screening:
    - The indices are an extension of FTSE Shariah indices incorporating an alternative weighting methodology.
  - Historic results show that the index has [delivered substantial reductions](#) in volatility compared to the parent FTSE Shariah Index.

# FTSE Shariah Research White Paper

FTSE

## FTSE Shariah Research:

### Targeting Lower Volatility Through Ethical and Quantitative Screening – Minimum Volatility Shariah Index

[http://www.ftse.com/Research\\_and\\_Publications/2014Downloads/FTSE\\_Shariah\\_Research.pdf](http://www.ftse.com/Research_and_Publications/2014Downloads/FTSE_Shariah_Research.pdf)



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