

GCC US Dollar Sukuk: A Primer (4th Edition)

Investment Characteristics of US Dollar-Denominated Sukuk Originating from the Gulf Cooperation Council



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We are delighted to release the fourth edition of the *GCC US Dollar Sukuk Primer*. This white paper examines the investment landscape and characteristics of *sukuk*, otherwise known as Islamic-compliant investment certificates.

Our focus is on US dollar *sukuk* issued from the countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE). Together, these six countries form the Gulf Cooperation Council (GCC), which has consistently led other countries and regions in the issuance of US dollar-denominated *sukuk*. Reference the “What is the GCC?” subsection on page 5 for more details.

The emerging market fixed-income markets of the GCC region are notable for their performance, relative stability, and rapid development of their capital markets. According to the International Monetary Fund (IMF) the population of the GCC for the year ending 2025 is projected to reach 61 million, representing just 0.8% of the global population. For the same projected period, the countries of the GCC generate 2.0% of global gross domestic product (GDP).

While the region’s population and contribution to global GDP may have a small footprint the region’s vast capital buffers and hydrocarbon reserves set it apart. With sovereign wealth funds collectively managing nearly \$6.0 trillion in assets¹ and nearly one-third of the world’s proven oil reserves the GCC imparts significant influence on the global stage.

Key Takeaways

- 1 GCC US dollar *sukuk* have evolved into a sizable, mature asset class with over 300 billion dollars outstanding and sustained double digit growth yet remain under-researched and under-owned by global investors.
- 2 The GCC combines a small population with vast sovereign wealth (around 6 trillion US dollars) and large proven hydrocarbon reserves, creating strong capital buffers, low indebtedness, and high investment grade sovereign ratings that rival or exceed many developed markets.
- 3 Saudi Arabia’s Vision 2030 and parallel diversification programs across the GCC have shifted the region from a petro state model toward capital market-driven funding, making Saudi Arabia the largest US dollar debt issuer in emerging markets ex China and cementing the GCC’s dominance in US dollar *sukuk* issuance.
- 4 Empirical evidence shows that US dollar *sukuk* deliver among the highest risk adjusted returns in global fixed income benchmarks with significantly lower volatility than major bond and equity indices, while also exhibiting weak correlation to oil prices and lower correlation to global equities than traditional EM debt indices.
- 5 Structural features of *sukuk* (asset tied, risk sharing, AAOIFI tangibility standards) and the GCC’s US dollar pegs help insulate investors from currency and commodity shocks, supporting stable performance through geopolitical events and reinforcing *sukuk*’s role as a defensive, diversifying core fixed income allocation.

GCC Sukuk: An Undiscovered Market

To this day, there remains little, if any, published research on the investment attributes of the US dollar *sukuk* market. Yet, we find it noteworthy that US dollar *sukuk* demonstrate among the **highest risk-adjusted returns among developed and emerging market fixed-income benchmarks**. In addition to providing investors competitive returns, our research continues to demonstrate that US dollar *sukuk* exhibit significantly lower volatility when compared to widely recognized US fixed-income benchmarks such as the Bloomberg Barclays US Treasury Index and the Bloomberg Barclays US Aggregate. While we recognize that the *sukuk* market is a niche market operating largely in a geography that is off most investors' radar and nuanced by an interwoven alignment of cultural values and Islamic faith, it merits serious attention.

Scope

In this fourth edition, we reexamine the risk and return characteristics of the US dollar *sukuk* market relative to widely recognized fixed-income benchmarks used by investors across developed and emerging market regions. This edition encompasses the period through yearend of 2025. We expand upon previously employed risk metrics, such as standard deviation, to also include Bloomberg's 90-day volatilityⁱ, a measure of annualized standard deviation based on the 90 most recent trading days, index credit rating profiles, and each benchmark's yield-to-worst (YTW) and duration as expressed as ratio. By expanding our research to include an array of risk metrics, we provide a more comprehensive picture of the US dollar *sukuk* for investors.

Additionally, this fourth edition reexamines common misperceptions regarding the perceived drivers of US dollar *sukuk* performance. This includes an examination of correlation metrics across a range of financial benchmarks, including the oil markets, which are often perceived to influence the *sukuk* market. We have also expanded the white paper to address frequently asked questions, such as whether regional conflicts adversely affect financial stability in the GCC region.

We also encourage our readers to review a companion white paper, "Behind the Scenes: A Closer Look at the Amana Participation Fund Investment Process, 3rd Edition." This paper addresses frequently asked questions about our investment process and explores important nuances and characteristics of the US dollar *sukuk* market. Among the commonly addressed questions are:

- How does the type of *sukuk* structure affect its credit rating?
- What is the default history of the US dollar *sukuk* market?
- In what ways are *sukuk* similar to US municipal appropriation bonds?

If you have outstanding questions or additional inquiries, we welcome you to reach out to us. Please send inquiries to info@saturna.com.

i. Bloomberg's 90-volatility function: Bloomberg defines this metric as the measure of the risk of price movements for a security calculated from the standard deviation of day-to-day logarithmic historical price changes. The 90-day price volatility equals the annualized standard deviation of the relative price change for the 90 most recent trading days closing price, expressed as a percentage.

Sections:

The *GCC US Dollar Sukuk Primer* is an extensive research report detailing the US dollar-denominated *sukuk* market. This report is divided into eight sections and three subsections to provide readers with a comprehensive overview of this emerging asset class.

Primary Sections include:

1. **A Maturing Transformation:** Introduction Section
2. **Market Issuance & Trends:** *Sukuk* Issuance Trends from 2010 to 2025
3. **History of GCC's Entry into the Fixed-Income Markets**
4. **What's the Appeal for Investors?** What makes GCC fixed-income securities appealing to foreign investors. We characteristically coin this section as "***plenty in the bank, plenty in the tank***" to relay the region's substantively robust financial metrics and high investment-grade credit ratings of most issuers.
5. **The Price of Oil and the Sukuk Market:** **Understanding the Relationship** - Understanding the relationship of price movements of oil and the *sukuk* market. This section includes details on the unique structuring of Islamic-compliant securities relative to conventional fixed-income bonds.
6. **Correlation characteristics of *sukuk* relative to other asset classes**
7. **Putting a Pin in Relative Risk and Return:** A detailed analysis of the risk and return characteristics of US dollar-denominated *sukuk*.
8. **Expanding Upon Risk:** Comparative Context

The three Subsections address:

- i. **What is the GCC?** What is the Gulf Cooperation Council (GCC)
- ii. **A Short History of Commercial Oil Production in Saudi Arabia:** The "Prosperity Well"
- iii. **J.P. Morgan's Inclusion of the GCC in its emerging market benchmarks; adoption and acceptance of an emerging region**



The Dawn of the Golden Era: From Vision to Transformation

A Maturing Transformation

Since the third edition of the *GCC US Dollar Sukuk Primer* was published in March 2024, the region has entered a decisive phase of economic transformation. The period of 2016 through 2023 was largely characterized by Saudi Arabia's Vision 2030 initiative – a national blueprint for economic diversification that captured global imagination with its promise of a new era of prosperity. By 2024 and 2025, this narrative has matured. What began as aspirational statements about a “golden era” has evolved into a calibrated, pragmatic execution phase marked by fiscal discipline, realistic timelines, and selective capital deployment. This transition reflects not a retreat from the region's ambitions, but rather a fundamental shift toward sustainable, economically sound development.

Saudi Arabia's Vision 2030 has become the archetypal diversification model for the Gulf Cooperation Council. Launched on April 25, 2016, Vision 2030 pioneered a comprehensive framework to reduce the region's dependence on hydrocarbon revenues by developing non-oil sectors including tourism, entertainment, technology, and manufacturing.² This vision was so influential that it catalyzed parallel initiatives across the broader GCC: the UAE's Vision 2030, Qatar's National Vision 2030, Oman's Vision 2040, and similar programs in Bahrain and Kuwait have all adopted Vision 2035's core principles of economic diversification and fiscal optimization.³

Scaling Back With Purpose: The NEOM Recalibration

No single project exemplifies this transition better than NEOM. Originally envisioned as a \$1.5 trillion megacity spanning 170 kilometers of desert along the Red Sea coast, NEOM's flagship component, “The Line,” was initially projected to house 1.5 million residents by 2030.⁴ In 2024 and 2025, Saudi Arabia fundamentally reframed NEOM's ambitions. By April 2024, the government revised The Line's planned footprint from 105 miles to approximately 1.5 miles

(2.4 kilometers), with resident projections downscaled to fewer than 300,000 by 2030.⁵ By July 2025, the Public Investment Fund initiated a comprehensive strategic review of The Line's feasibility and long-term viability, signaling further recalibration.⁶

These adjustments are not failures; they represent mature capital allocation. Rising project costs, the impact of fluctuating oil revenues, and the economic constraints imposed by lower oil prices have prompted a fundamental rethinking. As one industry consultant noted, “They are finally beginning to make financially prudent decisions.”⁷ A 20% reduction in annual NEOM spending, the indefinite postponement of NEOM's airline venture, and a shift in prioritization toward near-term, revenue-generating projects – such as those supporting the 2034 Asian Games and major sporting venues – reflect strategic selectivity rather than economic retrenchment.⁸

The Deepening Need for Foreign Direct Investment

Despite this moderation, the region continues to face an enormous financing gap. As of the third quarter of 2025, the GCC's pipeline of pre-execution construction projects totaled approximately \$1.78 trillion. Saudi Arabia alone accounts for nearly 50% of this pipeline at \$887 billion.⁹ With oil prices averaging \$64.85 per barrel in 2025 – down from \$75.82 in 2024 and well below the \$90+ per barrel typically needed to balance government budgets – the region's dependence on capital markets and foreign direct investment (FDI) has never been more pronounced.

This dependency has transformed the region's capital markets into critical conduits for economic diversification. The GCC can no longer rely on hydrocarbon revenues alone to fund its ambitious infrastructure and diversification programs. Instead, the region must attract and deploy foreign capital at unprecedented scale. This structural shift

has become the defining characteristic of the current era: a circuitous cycle interwoven with oil revenues, diversification funding needs, foreign direct investment, and capital market issuance.

Saudi Arabia: Emerging Markets' Largest Debt Issuer

As a direct result of its financing needs and disciplined capital markets access, Saudi Arabia has achieved a remarkable distinction. In 2024, Saudi Arabia became the largest dollar-denominated debt issuer in emerging markets, excluding China.^{10,11} This milestone – achieved despite oil prices remaining depressed – underscores both the Kingdom's credibility in global capital markets and the urgency of its economic transition. By the first half of 2025, Saudi Arabia accounted for 18.9% of the \$250 billion in US dollar debt issuance from all emerging markets ex-China, while simultaneously maintaining its position as the global leader in *sukuk* issuance.¹²

The Kingdom's capacity to access markets at scale reflects several structural advantages: strong investment-grade credit ratings (affirmed at 'A+' by Fitch as of year-end 2025), exceptionally low debt-to-GDP ratios relative to developed economies, and substantial sovereign wealth fund reserves. Yet it also reflects the region's strategic pivot toward capital market dependency. The GCC has transformed from a petro-state model, where government budgets were dominated by oil revenues, to an emerging market borrower that must continuously access international capital to fund its development agenda.

A Region at an Inflection Point

The GCC in 2025 stands at a critical inflection point. The golden era narrative – characterized by seemingly unlimited spending and expansive ambitions – has given way to a more disciplined, selective approach. Infrastructure projects are prioritized based on feasibility and near-term returns rather than grandiose timelines. Government budgets are calibrated toward sustainable deficits rather than the pre-2014 surpluses. And the region's vast sovereign wealth – nearly \$6.0 trillion collectively across GCC sovereign wealth funds – is being deployed as strategic capital, not merely as a cushion against low oil prices.

Within this context, the GCC *sukuk* market has matured as an emerging asset class into a core component of global fixed-income markets. As this fourth edition will demonstrate, US dollar *sukuk* from the GCC exhibit among the highest risk-adjusted returns in global fixed-income benchmarks, operate with exceptional stability relative to oil price volatility, and provide institutional investors with meaningful yield enhancement relative to developed market sovereigns. The region's fiscal challenges have been transformed into capital market opportunities – a testament to the resilience and sophistication of GCC capital markets and the enduring appeal of Islamic-compliant securities to a global investor base.

What is the GCC?

The Gulf Cooperation Council (GCC) is a political and economic alliance comprising six countries on the Arabian Peninsula: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE). Established in 1981, the GCC was created to promote security and stability among its members.¹³ According to the IMF projections for year-end 2025, the GCC's estimated total GDP will reach \$2.37 trillion, representing approximately 7.7% of United States GDP.¹⁴



Market Issuance & Trends

The worldwide *sukuk* market has continued to build momentum and adoption. According to the International Islamic Financial Market's (IIFM) latest Sukuk Report, 14th edition, for the year ending 2024, total *sukuk* issuance from 2001 through 2024 exceeded \$2.2 trillion.¹⁵ Over this period, 59.1% of worldwide *sukuk* issuance originated from Asian countries, while the GCC and the broader Middle East accounted for 26.8% of total issuance. Malaysia, Saudi Arabia, and Indonesia were the largest issuers, with market shares of 45.7%, 14.3%, and 9.5%, respectively.¹⁶

As of this writing, *sukuk* have been issued in 32 different currencies around the world.¹⁷ By year-end 2025, the total volume of outstanding global *sukuk* was over \$1.07 trillion, reflecting a 14.7% year-over-year increase and above its three-year compound annual growth rate (CAGR) of 11.9%. It is interesting to note that the size of the global *sukuk* market exceeds the size of the Eurodollar high-yield bond market by \$400 billion, with the latter reported at more than \$600 billion outstanding.

Year	Total Sukuk Outstanding (\$bn)	% Chg in Market	USD Outstanding (\$bn)	USD as % of Outstanding
YE 2017	444.25	16.8%	122.28	27.5%
YE 2018	481.63	8.4%	128.74	26.7%
YE 2019	544.47	13.0%	142.09	26.1%
YE 2020	630.13	15.7%	165.84	26.3%
YE 2021	711.17	12.9%	183.36	25.8%
YE 2022	765.42	7.6%	183.96	24.0%
YE 2023	848.46	10.8%	211.96	25.0%
FY 2024	933.52	10.0%	244.39	26.2%
FY 2025	1,071.16	14.7%	301.75	28.2%

Worldwide Sukuk Outstanding by Currency (FY 2025)

	Currency	\$ Amt (bn)	
		1,071.16	% of total \$
Malaysia	MYR	348.70	32.6%
US dollar	USD	301.75	28.2%
Saudi riyal	SAR	220.34	20.6%
Indonesia rupee	IDR	106.91	10.0%
Pakistan	PAK	24.62	2.3%
Türkiye	TRY	23.05	2.2%
Qatar	QAR	16.03	1.5%
UAE	AED	10.01	0.9%
Totals		1,051.42	98.2%

Malaysian ringgit held the largest share of the market, representing 32.6%, otherwise more than \$348 billion, of outstanding *sukuk* at year-end 2025. US dollar-denominated *sukuk* were the next largest group, representing 28.2% of global issuance (more than \$300 billion), followed by Saudi Arabian riyal-denominated *sukuk* at 20.6% which exceeded \$220 billion. The Indonesian rupiah ranked fourth at 10.0%. Collectively, these four currencies represented over 91% of total *sukuk* outstanding. Details are provided in the accompanying table.

US Dollar Issuance Trends – Introducing GCC’s Dominance

As in prior reports, GCC and supranational issuers continued to dominate US dollar *sukuk* issuance. Their combined contribution at year-end 2025 was 84.1%, an increase from 76.1% in the prior year. The combined issuance of GCC issuers and supranationals for the trailing three-year period ending 2025 was 80.6%, higher than the 78.7% recorded for the trailing three-year period ending 2023.

At year-end 2025, 60.4% of total US dollar *sukuk* issuance originated from GCC issuers, up from 53.9% in the prior year, followed by Islamic supranationals such as the Islamic Development Bank (IsDB) and the International Islamic Liquidity Management Corporation (IILM), which accounted for 23.6%, up from 22.2% in 2024. For the trailing three-year period ending 2025, GCC issuers represented 56.6% of total issuance, up from 42.2% for the trailing three-year period ending 2023. Over the trailing three-year period ending 2025, supranationals represented 24.1% of total issuance, down from 36.4% in the prior trailing three-year period.

While Malaysia remained the largest *sukuk* issuer in 2025, with more than \$49 billion of issuance across multiple currencies and issuer types – including sovereign, government-related entities, and corporates – its share of US dollar-denominated *sukuk* was only 1.4%, at just over \$1.6 billion, down from 5.2% in 2024 when issuance totaled \$3.9 billion.

Outside the universe of GCC issuers, Indonesia retained its top-ranking position as the largest issuer of US dollar *sukuk* representing 6.6% of total issuance (more than \$7.6 billion), down from the prior year when it represented 10.3% of total issuance at slightly above \$7.7 billion.

Among GCC issuers, Saudi Arabia remained the largest *sukuk* issuer across all categories – including sovereign, government-related entities, and corporates – by year-end 2025, with more than \$36 billion issued and a 31.2% share of total annual issuance, up from 28.4% (more than \$21 billion) in the prior year. The UAE ranked second, issuing more than \$19 billion and accounting for 16.7% of 2025 total issuance, up from 11.1% (over \$8 billion) in the previous year. *Sukuk* issuance from UAE domiciled issuers rose 131.4% over the year, while Saudi Arabia recorded a 69.2% annual increase. Their respective three year compound annual growth rates (CAGR) were 68.9% and 102.0%.

A table showing US dollar-denominated *sukuk* issuance across all issuer types by country of risk for the period 2015–2025 is provided.

Regional Trends of US Dollar-Denominated Sukuk											
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GCC	28.5%	35.1%	49.5%	50.2%	52.8%	48.8%	42.9%	28.3%	55.4%	53.9%	60.4%
Supranational	38.4%	35.3%	33.7%	33.2%	32.4%	36.9%	38.2%	44.8%	26.3%	22.2%	23.6%
Asia (Includes Pakistan, India, & Maldives)	31.4%	23.5%	13.2%	12.3%	6.7%	6.6%	12.1%	12.1%	8.1%	15.5%	8.1%
MENA excluding GCC members	1.2%	5.7%	3.5%	1.5%	5.8%	5.5%	6.2%	14.7%	8.3%	4.9%	6.1%
Europe	0.0%	0.3%	0.0%	0.0%	0.2%	0.2%	0.0%	0.1%	0.5%	0.4%	0.4%
Other	0.5%	0.0%	0.0%	1.2%	0.0%	0.1%	0.0%	0.1%	1.3%	2.4%	1.4%
GCC & Supranational (only)	66.9%	70.4%	83.3%	83.4%	85.1%	85.7%	81.1%	73.1%	81.8%	76.1%	84.1%

US Dollar Sukuk Issuance Trends (2015 - 2025)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Islamic Issuance (\$ bn)	21,093	32,435	38,783	33,846	38,724	45,291	49,439	37,349	59,694	75,564	116,141
Change in %	-26.1%	53.8%	19.6%	-12.7%	14.4%	17.0%	9.2%	-24.5%	59.8%	26.6%	53.7%

Region of Issuance	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GCC Issues	28.5%	35.1%	49.5%	50.2%	52.8%	48.8%	42.9%	28.3%	55.4%	53.9%	60.4%
Supranationals	38.4%	35.3%	33.7%	33.2%	32.4%	36.9%	38.2%	44.8%	26.3%	22.2%	23.6%
Indonesia	9.5%	7.7%	7.7%	9.2%	5.4%	5.5%	6.1%	9.4%	3.6%	10.3%	6.6%
Turkey	1.2%	5.7%	3.5%	1.5%	5.8%	5.5%	6.2%	14.7%	5.8%	4.9%	3.9%
Egypt	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	2.2%
Malaysia	17.2%	11.5%	0.3%	3.2%	1.3%	1.1%	5.1%	0.0%	2.8%	5.2%	1.4%
Cayman Islands	0.5%	0.0%	0.0%	1.2%	0.0%	0.1%	0.0%	0.1%	0.3%	2.4%	0.9%
United States	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.5%
France	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%	0.4%	0.2%	0.2%
Luxembourg	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	0.2%	0.1%
Australia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Switzerland	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
United Kingdom	0.0%	0.0%	0.0%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Hong Kong	4.7%	1.2%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	0.0%	0.0%	0.0%	0.9%	2.1%	2.0%	0.5%	0.0%	0.0%	0.7%	0.0%
Jersey	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
India	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Maldives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%
Philippines	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%
Pakistan	0.0%	3.1%	2.6%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%
South Africa	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

History of GCC's Entry into the Fixed-Income Markets

Broadly speaking, the six member states of the GCC were not active issuers of debt or *sukuk* before 2016. When oil prices collapsed from 2014 through 2016, the GCC turned to the capital markets to supplement shortfalls in government funding. The price of oil declined from a high of \$107.26 per barrel on June 20, 2014, to a low of \$26.21 on February 11, 2015 – a 75.6% decrease! It took another 15 months before the price of oil rose above \$50.00 per barrel, on October 6, 2016.

The rapid decline in hydrocarbon revenues placed each of the GCC members in a difficult fiscal position. They began drawing on their regional pools of savings, including sovereign wealth funds, to offset fiscal shortfalls. In 2015, Saudi Arabia withdrew an estimated \$115 billion from its sovereign wealth fund's reserves, leaving a projected balance of \$600 billion in early 2016. Had oil remained below \$40 per barrel in 2017, Saudi Arabia would have had to draw down additional \$150 to \$200 billion.¹⁸ It was entirely plausible that Saudi Arabia could exhaust its entire sovereign wealth fund in a matter of a few years.

In April of 2016, Abu Dhabi issued a \$5 billion bond to help offset a projected \$10 billion deficit. It was the UAE's first bond sale in seven years since issuing a \$1.5 billion note in April 2009.^{19,20} The high investment-grade bond was in such strong demand that investors submitted over 600 orders for it, exceeding \$17 billion.²¹ Other GCC members took notice of Abu Dhabi's success and recognized that external investors could indeed help offset budgetary shortfalls. The GCC began to consider these investors as a primary source to fund other capital development and infrastructure projects; later, regional banks and non-financial corporate issuers came to the market for funding.

When GCC members entered the market, their timing proved fortuitous for market participants, particularly those seeking Islamic-compliant securities. Malaysia's central bank, Bank Negara Malaysia, stopped issuing US dollar-denominated *sukuk* in summer 2015, and *sukuk* issuance declined by -42.5% in the second half of the year.²²

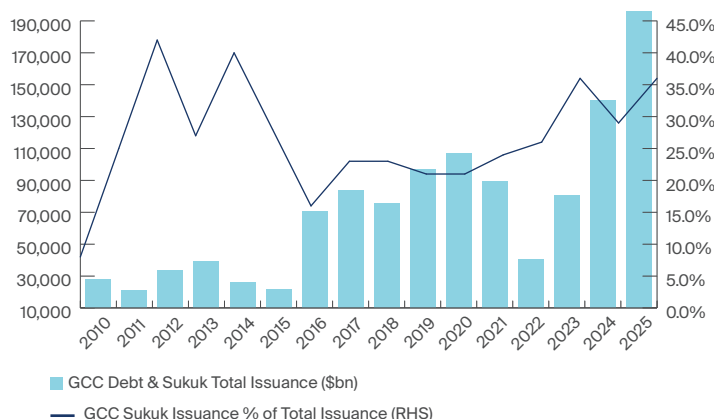
Issuance Data as of Yearend 2025

The GCC region, including supranationals, is an active issuer of both conventional debt and *sukuk*. For the full 2025 calendar year, issuers from the GCC raised \$223.3 billion in US dollar-denominated conventional debt and

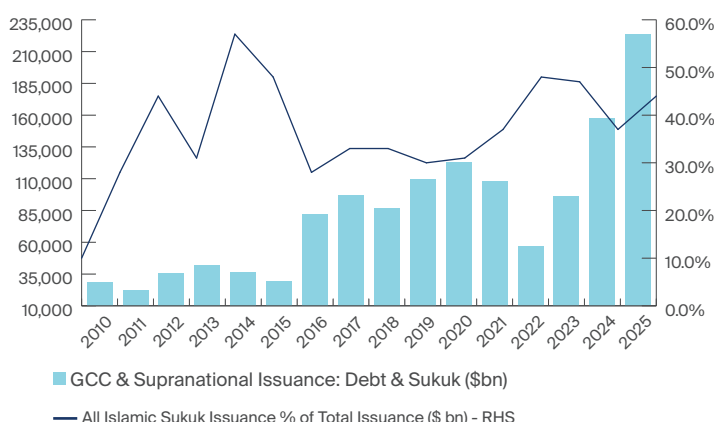
sukuk, an increase of 42.1% over the year from \$157.1 billion issued in 2024, and a three-year compound annual growth rate (CAGR) of 57.6%. In 2025 alone, GCC issuers and supranationals brought to the market \$97.6 billion in US dollar-denominated *sukuk*, a staggering 69.8% year-over-year increase, above their three-year CAGR of 53.1%. Supranationals represented 28.1% of US dollar-denominated *sukuk* in 2025, below its three-year average of 30.8%.

For the same period, Islamic-compliant securities represented 43.7% of total fixed-income issuance (conventional debt and *sukuk*) from the GCC region and supranationals, above the three year average of 42.6%. Excluding Islamic-compliant supranationals, US dollar-denominated *sukuk* issued from the GCC accounted for 35.8% of total fixed income security issuance in 2025, also above its three year average of 33.6%. From year end 2009 through year end 2025, total GCC issuance of conventional bonds and *sukuk* reached \$1.3 trillion.

Issuance of GCC Conventional Debt and Sukuk: Excludes Supranationals: 2010-2025

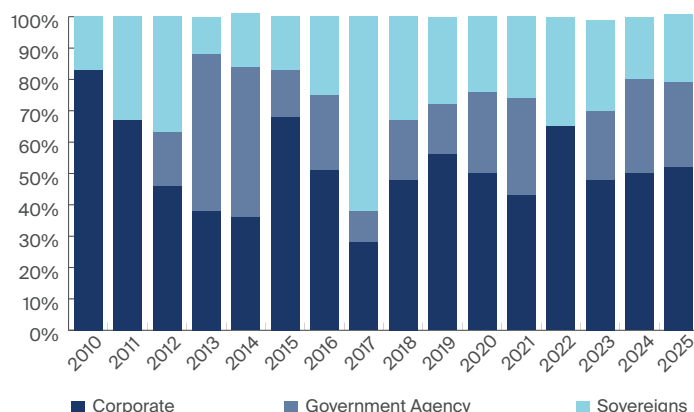


Issuance of GCC and Supranational: Conventional Debt and Sukuk: 2010-2025



Excluding supranationals when examining GCC US dollar-denominated *sukuk* issuance trends, issuer types include sovereigns, government agencies, and corporates. Sovereign *sukuk* represented 21.8% of securities issued in 2025, reflecting a 90.8% year-over-year increase, and coming in at \$15.3 billion. Corporate issuers were the standout for the year, with issuance rising 76.0% over the year to \$36.2 billion and representing 51.5% of 2025's *sukuk* issuance. *Sukuk* issued by government agencies comprised 26.7% of 2025 issuance and coming in at \$18.7 billion, up 53.7% when compared to the prior year. For the year ending 2025, the three-year average issuance distribution for sovereign, corporate, and government agency issuers was 23.5%, 50.1%, and 26.5%, respectively.

Distribution of Type
GCC Issuer Type (2010 - 2025)



Qualified Proceeds Sukuk: A Growing Subset

Qualified proceeds-use *sukuk*, or ESG *sukuk*, are gaining traction among investors. Qualified proceeds use fixed-income instruments are self-identified by issuers to achieve targeted outcomes. Green *sukuk* are primarily used to support specific climate-related or environmental projects. Social *sukuk* raise funds to address or mitigate a specific social issue and/or achieve positive social outcomes. Sustainable *sukuk* generally have a wider scope that simultaneously addresses environmental and social objectives.

Since ESG *sukuk* were first issued in 2017, the market has experienced pronounced growth. By year-end 2025, total ESG *sukuk* outstanding across all currencies and qualified proceeds types exceeded \$58 billion, reflecting a 62.5%

year-over-year increase and exceeding its three-year compound annual growth rate (CAGR) of 15.5%. As of year-end 2025, 66.2% of all ESG *sukuk* issued were US dollar-denominated, followed by the Malaysian ringgit at 25.8% of outstanding issuance and the Indonesian rupiah at 5.9%. ESG *sukuk* have been issued in seven different currencies, with the US dollar, Malaysian ringgit, and Indonesian rupiah representing nearly 98% of all outstanding issues.

As of year-end 2025, Malaysia held the top ranking as the largest issuer with over \$16.3 billion issued, representing 28% of total issuance across all currencies. ESG *sukuk* originating from Malaysia have been issued in both their local currency and in US dollars. Saudi Arabia ranked second with \$15.2 billion, representing 26.1% of total ESG *sukuk* issued. The UAE ranked third with over \$11.7 billion issued, representing 20.3% of the outstanding market.

It is noteworthy that US dollar ESG *sukuk* issued from the GCC has been the dominant issuer over the past few years. For the year ending 2025, the GCC represented 59.5% of all ESG *sukuk*, down from 2024 when the region represented 75.7% of total issuance. On a three-year average basis, the region has represented 66.2% of total issuance of ESG *sukuk*.

The distribution of qualified proceeds use ESG *sukuk* has evolved over the years, with sustainable *sukuk* representing an increasing share of issuance.

Evolution of Qualified Proceeds Types

ESG Sukuk Issuance by Qualified Proceeds Use (All Currencies Expressed in USD)					
	Green	Sustainable	Social	Total (%)	Total (in \$ Billions)
2025	48.3%	42.2%	9.5%	100.0%	\$17.55
2024	12.8%	85.6%	1.6%	100.0%	\$10.79
2023	57.4%	41.3%	1.3%	100.0%	\$10.52
2022	42.5%	57.2%	0.3%	100.0%	\$11.40
2021	16.6%	83.4%	0.0%	100.0%	\$5.49
2020	100.0%	0.0%	0.0%	100.0%	\$0.79
2019	97.0%	3.0%	0.0%	100.0%	\$1.46
2018	100.0%	0.0%	0.0%	100.0%	\$0.04
2017	100.0%	0.0%	0.0%	100.0%	\$0.15
Total Issuance					\$58.19

Source: Bloomberg

US Dollar ESG Sukuk Market

As noted earlier, the US dollar represents the issuers' preferred currency, representing nearly two-thirds of total issuance at just over \$38.5 billion. This market has also experienced rapid growth, although at a slower pace compared to the ESG *sukuk* market across all currencies when compared to the prior year. As of year-end 2025, the US dollar ESG *sukuk* market experienced a 29.5% year-over-year increase, above its prior year's annual growth rate of 20.1% and below its three-year compound annual growth rate (CAGR) of 38.9%.

Indonesia issued the first sovereign green US dollar *sukuk* in March 2018 at \$1.25 billion.²³ In 2019, Majid al Futtaim issued the first corporate US dollar-denominated green *sukuk* with a \$600 million offering.²⁴

Saudi Arabia is the largest issuer of US dollar *sukuk*, representing 39.4% of outstanding issuance, in excess of \$15.1 billion, followed by the UAE, which has issued more than \$11.4 billion. Combined, the Kingdom and the UAE represent nearly 70% of total market issuance. The Financial Services industry represents the largest issuer type at 61.6% of outstanding issuance, followed by government issuers at 22.7% and the utility sector at 11.8%. The remaining balance of 3.9% has originated from the industrial sector.

The distribution of US dollar qualified proceeds use ESG *sukuk* shares a similar pattern with that of the "all currencies" table, where green issuance dominates in one year followed by sustainable *sukuk*. Details are provided in the accompanying table.

ESG Sukuk Issuance by Qualified Proceeds Use (US Dollar Issuance)					
	Green	Sustainable	Social	Total (%)	Total (in \$ Billions)
2025	60.1%	31.2%	8.8%	100.0%	\$11.39
2024	14.1%	85.8%	0.1%	100.0%	\$8.80
2023	70.9%	29.1%	0.0%	100.0%	\$7.33
2022	47.1%	52.9%	0.0%	100.0%	\$4.25
2021	15.3%	84.7%	0.0%	100.0%	\$4.90
2020	100.0%	0.0%	0.0%	100.0%	\$0.65
2019	100.0%	0.0%	0.0%	100.0%	\$1.20
				Total Issuance	\$38.50

Source: Bloomberg

Issuance Patterns: Seasonality

As the Islamic fixed income market has evolved, so have its issuance trends and behaviors. An analysis of data from 2021 through 2025 reveals that the three-month window from September through November has emerged as the preferred period for new issuance. As detailed in the accompanying table, this quarter alone has accounted for over one-third of total issuance since 2023.

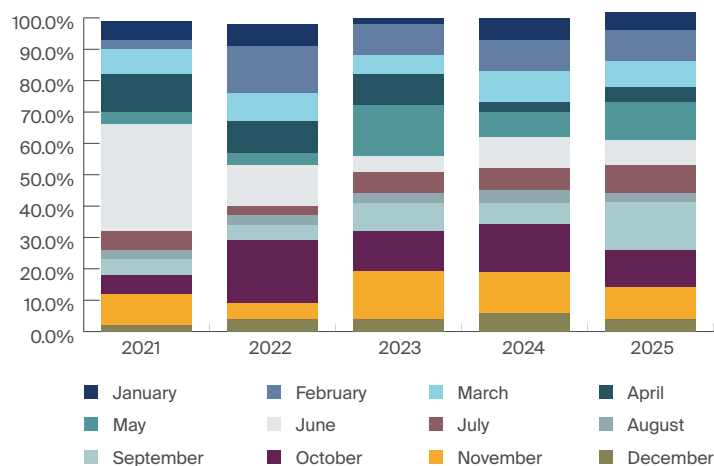
The second most active period is May through July. Collectively, these two windows – September through November and May through July – now typically represent nearly two-thirds of total annual issuance.

This seasonality can be explained, in part, by the timing of Ramadan occurring in the earlier part of the year, alongside the influence of corporate and government budgeting cycles during the latter half of the year.

These issuance patterns prompt further inquiry into how spreads behave surrounding the announcement of new deals – particularly large sovereign issuances like those from Saudi Arabia. To investigate this, we examined the spreads associated with two separate Saudi issuances: a \$5.0 billion transaction in June 2024 and a \$5.5 billion transaction in September 2025.

Islamic Instruments:

Issuance Distribution by Month (2021 -2025)



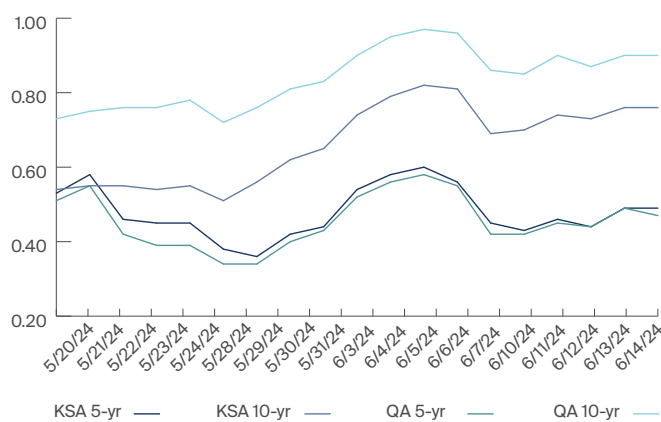
Issuance Distribution by Month					
	2021	2022	2023	2024	2025
December	2.2%	4.5%	4.1%	5.9%	3.8%
November	10.2%	5.2%	14.7%	12.8%	10.1%
October	6.1%	20.3%	13.1%	14.8%	12.1%
September	4.6%	5.0%	9.3%	7.1%	14.9%
August	2.9%	2.8%	2.5%	3.5%	3.1%
July	6.4%	3.3%	7.1%	7.2%	9.1%
June	34.4%	12.8%	4.9%	10.3%	7.7%
May	4.3%	4.0%	15.6%	7.8%	11.6%
April	11.7%	10.1%	10.4%	3.2%	4.6%
March	8.2%	9.2%	6.4%	10.3%	7.7%
February	2.8%	15.4%	9.7%	10.1%	9.7%
January	6.2%	7.4%	2.1%	6.9%	5.7%
Concentrated Issuance Distribution by Month					
Sept - Nov	20.9%	30.5%	37.1%	34.6%	37.1%
May - July	45.1%	20.1%	27.6%	25.4%	28.4%
Total	66.0%	50.7%	64.7%	60.0%	65.5%

Ramadan		
Year	Starts	Ends
2020	4/23/20	5/23/20
2021	4/12/21	5/11/21
2022	4/2/22	5/1/22
2023	3/23/23	4/20/23
2024	3/10/24	4/8/24
2025	2/28/25	3/30/25
2026	2/17/26	3/19/26
2027	2/8/27	3/8/27

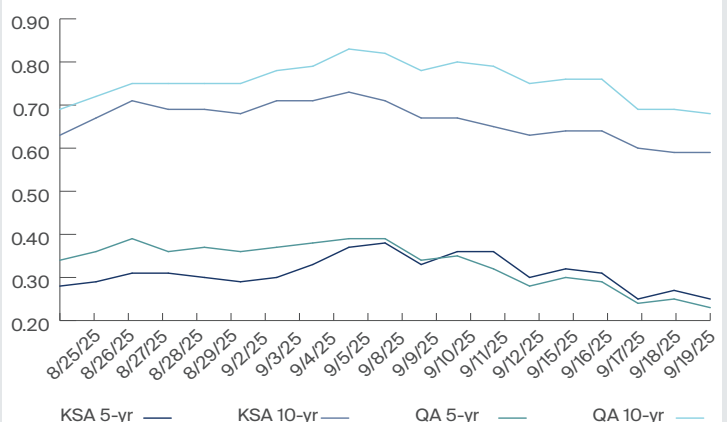
As shown in the accompanying illustration, spreads on both Saudi Arabia’s 5-year and 10-year sovereigns widened following the pricing dates. Peak widening occurred on June 5, 2024 – six business days following the May 28 pricing. The Saudi 5-year sovereign widened by 30 basis points (bps), while the 10-year widened by 25 bps. Notably, Qatar sovereigns exhibited a similar, though less pronounced, widening trajectory during this window, despite the government of Qatar not issuing any *sukuk* or conventional notes at the time.

A similar pattern emerged in 2025, albeit with significantly narrower widening. On September 2, 2025, Saudi Arabia priced a \$5.5 billion *sukuk* package (\$2.25 billion in 5-year and \$3.25 billion in 10-year securities) with a settlement date of September 9. This time, the peak spread widening occurred just three days post-pricing, with the 5-year sovereign widening by only 5 bps and the 10-year by 3 bps. Consistent with the 2024 data, Qatar’s securities experienced minimal contagion widening compared to the previous year.

Saudi Arabian and Qatar Sovereign 5-year & 10-year Spreads Relative to US Treasuries (May 20th - June 14th, 2024)



Saudi Arabian and Qatar Sovereign 5-year & 10-year Spreads Relative to US Treasuries (Aug. 25th - Sept. 19th, 2025)



Issuance Summary	
Issued	6/4/24
Priced	5/28/24
3-yr	\$1.25 bn
6-yr	\$1.50 bn
10-yr	\$2.25 bn
Total Issued	\$5.0 bn

Issuance Summary	
Issued	9/9/25
Priced	9/2/25
5-yr	\$2.25 bn
10-yr	\$3.25 bn
Total Issued	\$5.50 bn

Sukuk Issuance Trends in 2025: A Year of Sovereign Dominance and Real Estate Innovation

The year 2025 marked a pivotal period for the *sukuk* market. Total worldwide *sukuk* outstanding exceeded the milestone of \$1.0 trillion with US dollar *sukuk* outstanding exceeded \$300 billion.

The close of 2025 highlighted a *sukuk* market that had gained scale, size, and depth – a contrast to 2023, which, as noted in the previous publication, the *GCC US Dollar Sukuk Primer, 3rd Edition*, was characterized primarily by the emergence of new entrants. At year-end 2023, notable new issuers included sovereign *sukuk* from the governments of Egypt and the Philippines, as well as the inaugural US-based corporate *sukuk* from airplane leasing firm Air Lease.

By year-end 2025, sovereign issuers from the GCC and Indonesia had raised over \$55 billion in US dollar-denominated conventional debt and *sukuk*, reflecting a 37.6% year-over-year increase from \$40.2 billion in the prior year and a 96.3% increase over the \$28.2 billion raised at year-end 2023. While US dollar conventional debt remains the preferred choice among market buyers – particularly developed-economy investors familiar with traditional bond structures – US dollar *sukuk* continue to exhibit higher growth rates, given that they are expanding from a lower base. At year-end 2025, US dollar sovereign *sukuk* issued by the GCC and Indonesia totaled more than \$19.4 billion, a 48.6% year-over-year increase from \$13.1 billion in 2024 and nearly double the 2022 issuance of \$10.5 billion. *Sukuk* accounted for 35.2% of sovereign issues from the GCC and Indonesia in 2025, in line with the three-year average of 35.0%.

The increase in sovereign issuance can largely be attributed to lower oil prices, which reduced government revenues at the same time that these countries were pursuing large spending initiatives to diversify their economies away from hydrocarbons. The average price of oil in 2025, as measured by West Texas Intermediate (WTI), was \$64.85, down from the average price of \$75.82 in 2024 and significantly below the 2022 average of \$94.68. Typically, the region is less active in issuing external debt and *sukuk* during periods of higher oil prices.

The region's need for external funding is driven by the financing requirements of large infrastructure and diversification programs during periods of depressed

oil revenues. As of 3Q 2025, the GCC's pipeline of pre-execution construction projects totaled approximately \$1.78 trillion. According to MEED Projects, Saudi Arabia accounted for approximately \$887 billion, or nearly 50% of the GCC's upcoming pre-execution projects, while the UAE ranked second with \$434.0 billion, representing 24.4% of the GCC's total upcoming contracts.²⁵

Beyond sovereign issuance, 2025 was a transformative year for corporate US dollar *sukuk*, particularly among real estate developers in the United Arab Emirates, who capitalized on Dubai's sustained property boom to access Islamic capital markets at an unprecedented scale. Several new entrants emerged among luxury and mid-tier developers, reflecting strong confidence in sector fundamentals and the appeal of Islamic-compliant financing structures. Notable examples include:

- Bingham Holdings completed two landmark US dollar *sukuk* issuances in 2025: a \$500 million five-year *sukuk* in July priced at 8.125%, which was oversubscribed five times with orders exceeding \$2.5 billion,²⁶ followed by a \$500 million green *sukuk* in October priced at 7.75%, oversubscribed 4.3 times with total orders of \$2.15 billion.²⁷
- Arada Development, the Sharjah-based developer, issued a \$450 million five-year US dollar *sukuk* in July 2025 priced at 7.150%, attracting over \$2 billion in orders – more than four times oversubscription – and achieving the tightest reoffer yield in the company's history.²⁸
- Sobha Realty priced a benchmark \$500 million US dollar *sukuk* in May 2025 at 8.0% per annum, with the order book reaching \$1.54 billion and oversubscribed three times,²⁹ followed by an inaugural \$750 million green *sukuk* in November 2025 priced at 7.125% and oversubscribed 2.8 times with orders of \$2.1 billion, representing the largest green *sukuk* ever issued by a real estate developer globally.³⁰
- Omniyat Holdings debuted in the US dollar *sukuk* market with a \$500 million three-year green *sukuk* in April 2025 priced at 8.375%, oversubscribed 3.6 times with orders exceeding \$1.8 billion,³¹ followed by a second \$400 million issuance in September 2025, bringing its total 2025 US dollar *sukuk* financing to \$900 million and underscoring strong investor appetite for premium real estate exposure through Islamic-compliant instruments.³²

What’s the Appeal for Investors?

The GCC region offers investors unique investment attributes and characteristics that are typically uncommon in most emerging and developing world fixed-income markets – namely, favorable risk-adjusted returns and stability. In fact, the GCC region provides investors among the highest risk-adjusted returns when compared to developed, developing and emerging fixed-income markets.

In general terms, there are six primary factors that can help explain the regions’ favorable risk-adjusted returns and overall stability: (1) favorable yield enhancement relative to developed economies, (2) strong credit ratings, (3) low debt metrics, (4) a fixed currency peg to the US dollar, (5) robust capital buffers, and (6) enormous hydrocarbon reserves. To simplify, we often characterized the region’s investment attributes with the following tagline, “**plenty in the bank and plenty in the tank**,” which is explained in greater detail later in the report.

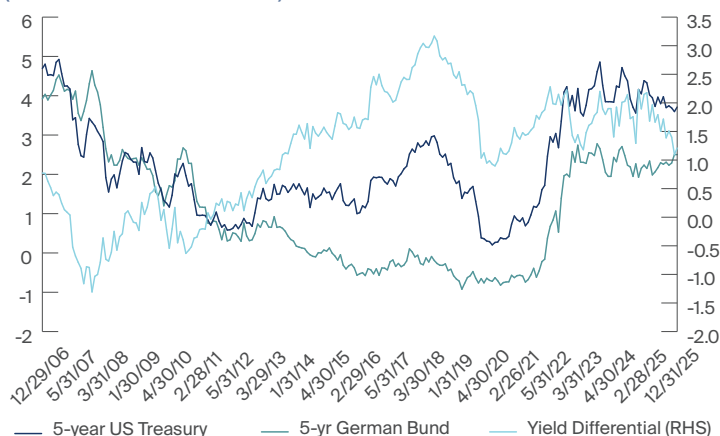
Although the onset of the Global Financial Crisis (GFC) occurred more than a decade ago, the GCC’s entry into global capital markets marked a mutually beneficial period for both issuers and investors. GCC issuers were able to temporarily offset rising fiscal deficits, while investors in developed markets obtained yield enhancement relative to the low – and in some cases negative – yields offered by highly rated sovereign issuers. The post GFC period ushered in a prolonged low-interest rate environment that proved challenging for institutions with long term funding obligations, such as pension funds, a period sometimes referred to as the “yield famine.”

In the graph “Five-Year US Treasurys & German Bund Yield (Dec 2006–Dec 2025),” note the movement of yields after September 15, 2008 – the pivotal date marking the escalation of the GFC, when the US government allowed Lehman Brothers to fail.^{33,34} In January 2015, the yield on the five year German Bund fell into negative territory at 0.048%, later declining to 0.923% by the end of August 2019, while the five year US Treasury yield reached a low of 0.205% in July 2020.

For institutional investors seeking issues with high investment-grade credit ratings, the GCC offered a solution, in part, to the low-yield environment. As shown in “Selected Five-Year Yields Compared to the US Treasury,” Abu Dhabi, Qatar, and the Kingdom of Saudi Arabia provided favorable yields above the five-year US Treasury. Yield spreads

materially compressed in recent years. By year-end of 2025, Qatar’s yield spread between compressed by 60% relative to year-end of 2018, while the Emirate of Abu Dhabi’s spread tightened nearly 50%.

5-year US Treasurys & German Bund Yield (Dec 2006 - Dec 2025)



Average Yield Enhancement Above 5-year US Treasury			
Year	KSA	Qatar	Abu Dhabi
2025	0.716	0.351	0.278
2024	0.747	0.370	0.395
2023	0.691	0.409	0.298
2022	0.636	0.535	0.325
2021	0.764	0.601	0.368
2020	1.433	1.198	0.980
2019	0.948	0.777	0.564
2018	1.095	1.026	0.748
2024 - 2025	0.73	0.36	0.34
2022 - 2023	0.66	0.47	0.31
2020 - 2021	1.10	0.90	0.67
2018 - 2019	1.02	0.90	0.66

Yield Compression From 2018-2019			
	KSA	Qatar	Abu Dhabi
to: 2022-2023	35.1%	47.6%	52.5%
to: 2024-2025	28.4%	60.0%	48.6%

For the two-year period ended 2019, Saudi Arabia, Qatar, and Abu Dhabi offered average yield enhancements of 102-basis points (bps), 90-bps, and 66-bps above the five-year US Treasury, respectively. The marked tightening in yield spreads is evident over the two-year period ended 2023. Saudi Arabia, Qatar, and Abu Dhabi posted average yield enhancement of 66-bps, 47-bps, and 31-bps above the five-year US Treasury, respectively.

Since 2022, Saudi Arabia's favorable fiscal metrics have begun to reverse: after posting a fiscal surplus of 2.2% of GDP – the first in nine years – the Kingdom recorded a fiscal deficit of 1.8% in 2023, accompanied by a widening in sovereign spreads to the US Treasury. In contrast, investors have continued to reward Qatar and Abu Dhabi's improving fiscal metrics with tighter spreads.

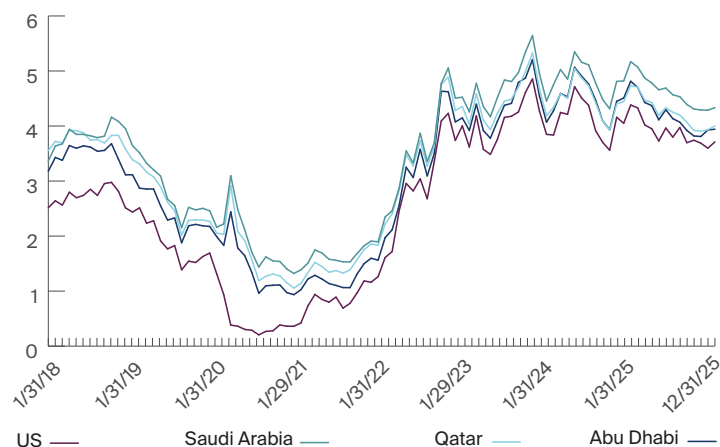
Overall, tighter spreads can be attributed to strong sovereign fiscal metrics, stable high grade credit ratings, and elevated hydrocarbon prices. These countries have also worked to build favorable rapport with institutional investors, which has helped support stability over time.

Evaluating GCC Markets Relative to Commonly Referenced Fixed Income Benchmarks

The following collection of graphs allows readers to compare and assess selected GCC market rates against commonly referenced fixed income benchmarks.

The yields of the benchmark indices – the Bloomberg US Corporate High Yield Index, Bloomberg Emerging Market Hard Currency Index, Bloomberg US Aggregate Corporate Investment Grade Index, and Bloomberg GCC USD Credit Statistics Index – reflect both sovereign and corporate issuers. These indices show competitively low yield to worst (YTW) levels relative to fixed income benchmarks commonly

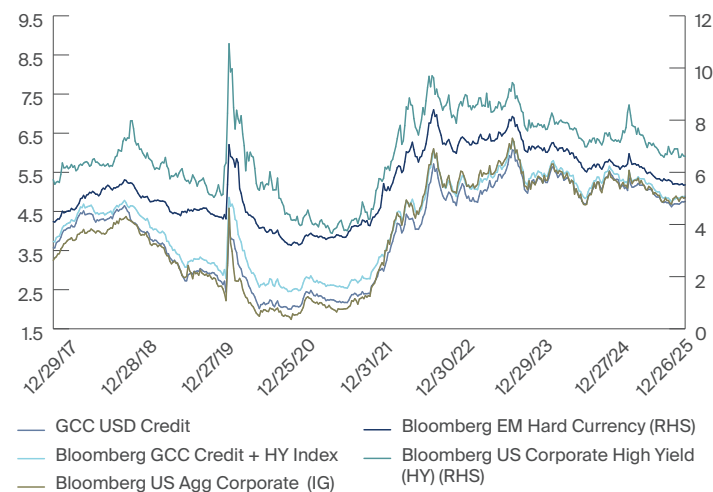
Selected 5-year Yields Compared to US Treasury



used by US investors, signaling investor confidence in the region and strong demand that has compressed reported YTW.

Historical Yield-to-Worst of Selected US, Global, and GCC Fixed Income Benchmarks

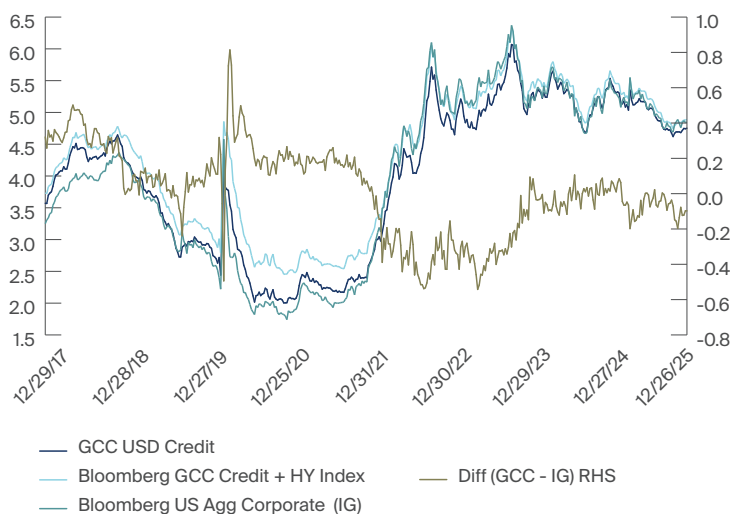
(Weekly: 2018 - 2025)



In the accompanying illustration, readers will observe that the GCC fixed-income benchmark, the Bloomberg GCC USD Credit Statistics Index (GCC Credit) – a composite of conventional debt and sukuk originating from the GCC – trades at a yield-to-worst below that of US investment-grade credit, as represented by the Bloomberg US Aggregate Corporate Index (US IG Index).

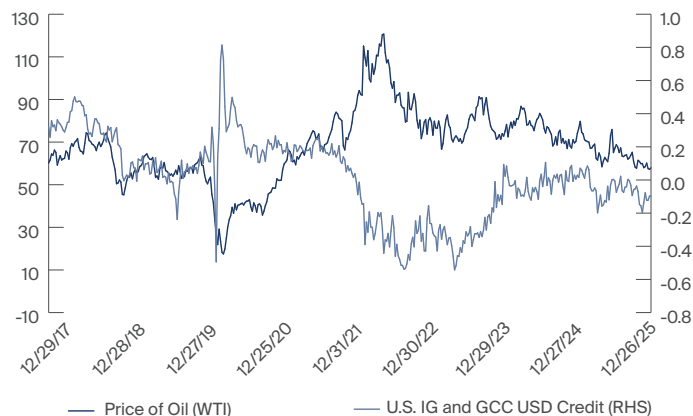
Historical Yield-to-Worst of Selected US and GCC Fixed Income Benchmarks

(Weekly: 2018 - 2025)



The following graph illustrates the yield differential between the GCC Credit Index and the US IG Index. As shown, the GCC Credit Index has traded at yields below those of the US IG Index since early 2022, indicated by the white line remaining below zero. These lower yields have persisted in recent years despite the price of oil falling from its high of \$120.69 per barrel on June 10, 2022.

Difference Between US IG and GCC USD Credit and Price of Oil (WTI)



GCC’s Credit Ratings: Mirroring Developed World Economies

Investors are also attracted to the GCC region because of the high investment-grade ratings of sovereign debt. Many of the member-states of the GCC retained credit ratings that are typically awarded only to developed countries.

Since the *GCC US Dollar Sukuk Primer, 3rd Edition’s* publication at yearend of 2023, the regional member states have experienced an upward improvement in their credit ratings with the exception of Bahrain that was downgraded by S&P Global from B+ to B on November 21, 2025, due to its deteriorating fiscal and debt metrics.³⁵ This broad based credit improvement has occurred despite oil (West Texas Intermediate) declining over the past two years by 52.1% from its high of \$86.91 on April 4, 2024, to \$57.13 on May 5, 2025. By yearend of 2025, Abu Dhabi and Qatar sovereign credit ratings of AA with Saudi Arabia rated A+ by Fitch.

In contrast by yearend of 2025, the United States became downgraded by all the major credit ratings in May 2025 when Moody downgraded the country from Aaa to Aa1 citing rising debt and interest payment “that are significantly higher than similarly rated sovereigns.”³⁶ This is the first time in history that all three major rating agencies have rated United

States debt below AAA.³⁷ The United States downward credit rating trajectory first began in 2011 with S&P downgrading debt from AAA to AA+ citing ‘political gridlock and concerns over the nation’s ability to manage its rising debt.’³⁸ Fitch’s downgrade reflected the deteriorating sustainability of the US fiscal and debt profile in conjunction with its contentious political landscape when compared to other AAA issuers.³⁹ Coinciding with US’ downgrade in 2025 by Moody’s, Fitch downgraded China from A+ to A- due to continued weakening of its public finances and rapidly rising debt trajectory.⁴⁰

While selected members of the GCC have achieved investment-grade credit ratings, the overall stability of their credit ratings over time are also worth examining.

Overall Stability of Credit Ratings Over Time			
	Fitch	Moody’s	S&P
Saudi Arabia			
2025	A+, Stable	Aa3, Stable	A+, Stable
2024	A+, Stable	Aa3, Stable	A+, Stable
2023	A+, Stable	A1, Positive	A, Stable
2022			A-, Positive
2021	A, Stable	A1, Stable	
2020	A, Negative	A1, Negative	
2019	A, Stable	A1, Stable	
2018	A+, Stable	A1, Stable	
Qatar			
2025	AA, Stable	Aa2, Stable	AA, NR
2024	AA, Stable	Aa2, Stable	A-, Stable
2023	AA-, Positive		A-, Stable
2022		Aa3, Stable	
2021	AA-, Stable		
2020	AA-, Stable	Aa3 Stable	NR
2019	AA, Negative	Aa3 Stable	AA-, NR
2018	AA, Stable	Aa3 Stable	
Abu Dhabi			
2025	AA-, Stable	Aa2, Stable	AA, NR
2024	AA-, Stable	Aa2, Stable	
2023	AA-, Stable	Aa2, Stable	
2022	AA-, Stable		
2021	AA-, Stable	Aa2, Stable	
2020	AA-, Stable		
2019	AA, Stable	Aa2, Stable	AA, Developing
2018	A, Stable		

The GCC region has largely demonstrated resilient and stable credit ratings despite the price of oil experiencing material volatility over the last five years.

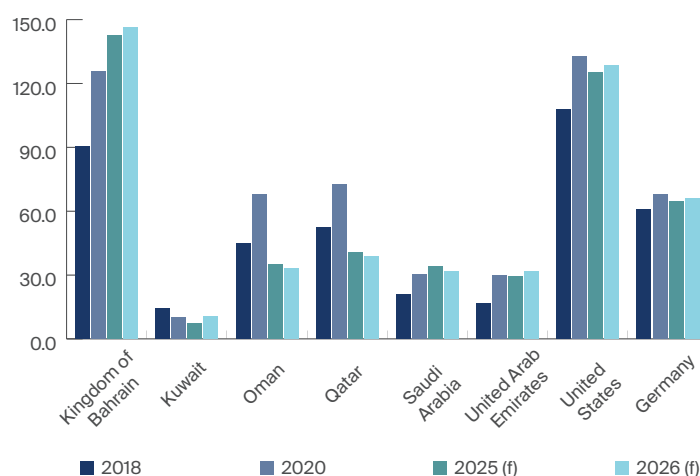
GCC's Indebtedness vs. the Developed World

When Abu Dhabi issued debt in April 2016, it was not just the attractive yields and favorable AA credit rating that attracted investors; it was also the emirate's low outstanding debt and substantial capital buffers, as measured by net foreign assets. For example, just prior to its inaugural sovereign issue, the credit rating agency Fitch affirmed Abu Dhabi at AA with a stable outlook. Fitch's rating rationale was supported by the emirate's strong credit metrics. In its February 2, 2016, report, Fitch stated: "Abu Dhabi's key credit strengths are its exceptionally strong fiscal and external metrics and high GDP per capita, balanced by high dependence on hydrocarbons, a relatively weak policy framework, and weak data availability compared with peers. Sovereign net foreign assets were an estimated 222% of GDP at end-2015, and debt was 1.7%, all of it external."⁴¹

The debt-to-GDP ratio for GCC countries (except Bahrain and previously for Oman, which retain below-investment-grade credit profiles) is extremely low.ⁱⁱ Low debt affords a country greater financial flexibility to meet its ongoing debt and *sukuk* obligations compared to a highly leveraged country. Abu Dhabi's resilient metrics strengthened developed market investors' confidence in investing in the new securities despite the weak governance framework at that time.

Some GCC members retained high credit ratings in addition to extremely low levels of debt when compared to substantially leveraged developed countries. The selected periods (2018, 2020, and forecasted periods ending in 2025 and 2026) reflect each country's debt burden and prior to the pandemic, during the pandemic, and post-pandemic, with year-end projections for 2025 and 2026.

Gross Debt to GDP



	Gross Debt to GDP				Fiscal Surplus (Deficit) as % of GDP			
	2018	2020	2025 (f)	2026 (f)	2018	2020	2025 (f)	2026 (f)
Bahrain	90.4	125.7	142.5	146.4	-11.3	-17.3	-10.7	-9.9
Kuwait	14.3	10.2	7.3	10.7	17.5	0.1	26.8	26.5
Oman	44.7	67.9	35.1	33.0	-6.7	-15.7	0.4	1.0
Qatar	52.2	72.6	40.6	38.8	2.3	-2.1	-0.3	1.3
Saudi Arabia	20.7	30.1	34.0	31.9	-5.2	-10.2	-3.7	-3.7
United Arab Emirates	16.8	29.7	29.2	31.8	3.7	-2.4	5.1	4.8
United States	107.6	132.5	125.1	128.7	-5.3	-14.1	-7.4	-7.9
Germany	60.8	68.0	64.4	66.0	1.9	-4.4	-2.5	-3.4

Source: IMF, October 2025

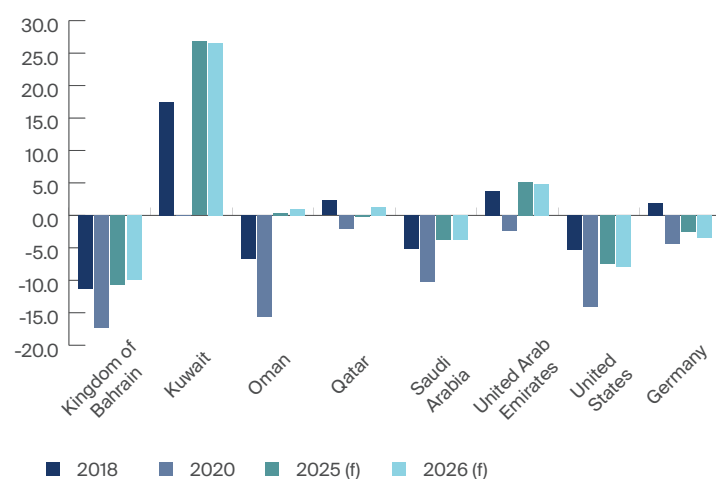
ii. At the time of this report, Bahrain's composite credit rating was B. S&P rated the country with a B rating, while Fitch posted a rating of B+. Oman was considered to have a split rating – that is, one credit rating identifying the issuer as investment grade and another as non-investment grade. Moody's rated Oman as investment grade at Baa3, while Fitch maintained a high-yield rating of BB+. The Bahrain security is BHRAIN 6¼ 07/07/33 Corp. (ISIN: XS3068594129), and the Oman certificate is OMANGS 4% 06/15/30 Corp. (ISIN: XS2351310482).

Since the *GCC US Dollar Sukuk Primer, 3rd Edition*, the region has largely been a story of fiscal reforms and consolidation for most member states, with the exception of Bahrain and Saudi Arabia. Among the notable improvements are those from the governments of Oman and Qatar, which have substantially reduced their debt burdens since 2022 by 48% and 44%, respectively, against IMF forecasts for year-end 2025. Under the government's fiscal reforms and the Oman Vision 2040 program, budgetary surpluses have been achieved, which have strengthened the country's credit rating. Oman attained investment-grade status on September 27, 2024, when S&P Ratings assigned a rating of BBB-.⁴²

After attaining a fiscal surplus in 2022 – the first in nine years – Saudi Arabia has taken a different path, characterized by increased borrowing and rising fiscal deficits.⁴³ The Kingdom's motivation is driven by its Vision 2030 program to diversify its economy away from its over-dependence on oil. The government has shown meaningful progress, as the non-oil private sector accounted for 56% of Saudi Arabia's nominal GDP for the year ending 2024, up from 47% at year-end 2022.⁴⁴ While the government has become more discerning in its infrastructure spending, it still has substantial financing needs, which have made the Kingdom one of the most active issuers in 2025. According to Fitch, in the first half of 2025, Saudi Arabia accounted for 18.9% of the \$250 billion in US dollar debt issuance in emerging markets excluding China.⁴⁵

Given these divergent paths, the investment-grade issuers of the GCC region collectively retain extremely low debt and favorable fiscal budgets when compared to developed country issuers, such as the United States.

Fiscal Surplus (Deficit) as a Percentage of GDP



Plenty in the Bank and in the Tank

Even though each member state in the GCC retains its own local currency, the region can be characterized as a US dollar-based economy. The origins of the US dollar's dominance and integration in the region can be traced, in part, to a signed agreement that took place on June 8, 1974, between Secretary of State Henry Kissinger and Saudi Prince Fahd. The agreement addressed economic and military cooperation between the two countries, and formalized two important points for the US. First, oil would be priced and invoiced in US dollars. Second, the proceeds from oil sales would be invested in US Treasuries or other dollar-denominated securities.⁴⁶ In June 1986, the Kingdom of Saudi Arabia pegged its local riyal to the US dollar at a fixed rate of 3.750.⁴⁷ This currency peg has remained in effect ever since.⁴⁸

Later, other GCC countries began to peg their currency to the US dollar. In 1997, the United Arab Emirates established a dollar-dirham peg of one US dollar to 3.6725 dirham.⁴⁹ Kuwait is the one outlier among GCC member states, employing a basket of currencies rather than peg their currency to the dollar. Even with this approach, Kuwait remains largely a US dollar-centric economy.⁵⁰

When a country has a US dollar-pegged currency, its government typically adjusts its monetary policies – such as its central bank's benchmark interest rate – in tandem with the US Federal Reserve's interest rate policies. If a country does not coordinate its monetary policy actions with the Federal Reserve, its fixed-rate currency peg may be adversely affected and depreciate relative to the US dollar. GCC assets, government receipts, liabilities, and fiscal budgets become US dollar-denominated proxies, which helps them avoid currency mismatches – a situation in which a country's assets are denominated in its local currency while having its liabilities and obligations are payable in another currency. Foreign investors often find this attractive, as it helps them potentially sidestep adverse currency devaluations on their investments.

Plenty in the Bank

In 1938, Saudi Arabia began commercial production from its first oil well, Damman No. 7, aptly nicknamed the “Prosperity Well.”⁵¹ Over the following eight decades, Saudi Arabia and its fellow GCC members became major suppliers of the world’s insatiable energy needs. By yearend 2022, the GCC member-states satisfied 23.3% of the world’s oil demand, with Saudi Arabia representing 12.9%, the UAE at 4.4% and Kuwait at 3.2%. Current data points to a decline in the GCC market share. By yearend of 2024, the GCC member-states provided 21.0% of the world’s oil demand, with Saudi Arabia representing 11.2%, the UAE at 4.1% and Kuwait at 2.8%. The decline in market share can be attributed, in part, the United States increasing its market share and oil production which has grown from 19.0% at yearend of 2022 to 20.8% by yearend of 2024.

While the GCC’s share of global oil production has declined, the region has maintained a large market position that has enabled its member states to amass enormous wealth since

the commercial production of their first oil wells. In no other region of the world is so much wealth concentrated among such a small population. Of the 16 largest sovereign wealth funds, GCC countries control 8, or half of the top-ranked funds, representing more than US \$5.0 trillion in assets, or about 40.2% of global sovereign wealth fund assets.

At year-end 2022, the population of the GCC region was estimated at 56.1 million. What makes the GCC region unique among other regions of the world is its unusually large foreign national population. According to the Gulf Labour Markets, Migration, and Population (GLMM) Programme, approximately 55% of the GCC population are foreign nationals, representing about 30.6 million people, while 45% are the native population, representing approximately 25.5 million persons.⁵² If this ratio is applied to the IMF’s projected population for year-end 2025 of 61 million, the GCC’s native population would be approximately 27.5 million. This analysis provides context for understanding the per capita wealth of GCC nationals relative to the region’s sovereign wealth assets, estimated at more than US\$5.0 trillion.

Rank	Ranking of Sovereign Wealth Funds (2024 - 2025)	(\$ billions)	Country	Region
1	Norway Government Pension Fund Global	\$2,044	Norway	Europe
2	China Investment Corporation (CIC)	\$1,332	China	Asia
3	Abu Dhabi Investment Authority (ADIA)	\$1,129	UAE	Middle East
4	China State Administration of Foreign Exchange (SAFE)	\$1,090	China	Asia
5	Kuwait Investment Authority (KIA)	\$1,029	Kuwait	Middle East
6	Public Investment Fund (PIF)	\$925	Saudi Arabia	Middle East
7	Badan Pengelola Investasi Daya Anagata Nusantara	\$900	Indonesia	Asia
8	GIC Private Limited. (GIC)	\$801	Singapore	Asia
9	Qatar Investment Authority (QIA)	\$557	Qatar	Middle East
10	Hong Kong Monetary Authority Investment Portfolio	\$526	Hong Kong	Asia
11	Saudi Arabia Monetary Authority (SAMA) Foreign Holdings	\$498	Saudi Arabia	Middle East
12	National Council for Social Security Fund	\$424	China	Asia
13	Investment Corporation of Dubai	\$353	UAE	Middle East
14	Mubadala Investment Company	\$330	UAE	Middle East
15	Temasek Holdings	\$288	Singapore	Asia
16	Abu Dhabi Developmental Holding Company (ADQ)	\$225	UAE	Middle East

Source: Sovereign Wealth Fund Institute and Caproasia

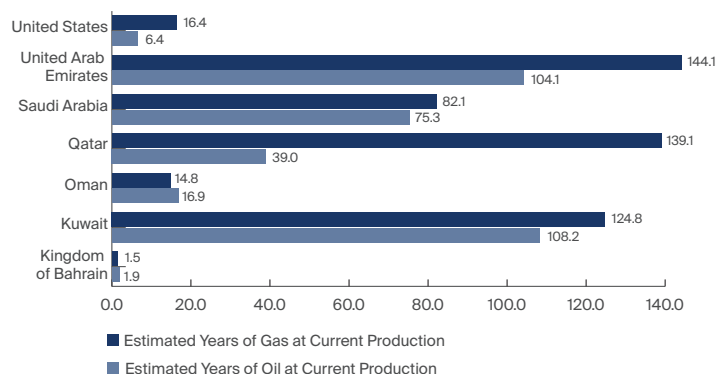
	AUM (\$)	AUM (%)	Count
Asia	\$5,466	43.5%	7
Middle East	\$5,046	40.2%	8
Europe	\$2,044	16.3%	1
	\$12,556	100.0%	16

Plenty in the Tank

While the transition toward a low hydrocarbon global economy remains a high priority, it will understandably take time, particularly given the resurgence of geopolitical risks and governments’ focus on energy security. Such policy tensions – seeking to balance national energy security interests with ambitions to transition toward a low carbon economy – were evident in October 2023, just one month before the United Nations Climate Change Conference (COP28) in Dubai in November and December 2023.

In October 2023, Italy, France, and the Netherlands each signed multi decade liquefied natural gas (LNG) contracts with Qatar extending through 2050.^{53, 54, 55} One of the goals of the European Green Deal is for the European Union to achieve carbon neutrality and net zero greenhouse gas emissions by 2050. These LNG agreements with Qatar may pose challenges to those objectives.

Estimated Remaining Years of Proven Hydrocarbon Reserves Based Upon 3-Year Average of Production Levels (2022-2024)



According to research from OPEC and the Energy Institute, which compile data on hydrocarbon reserves and production levels, the GCC region is rich in hydrocarbon reserves. Based on three-year average production rates from 2022 to 2024, the UAE, Qatar, and Kuwait each have well over 100 years of natural gas reserves – approximately 144, 139, and 125 years, respectively. For estimated proven oil reserves and three-year average production rates, both Kuwait and the UAE are projected to meet demand for more than 100 years, while Saudi Arabia has more than 75 years of reserves.

The GCC region’s role in supplying a large portion of the world’s energy needs is likely to continue through a combination of hydrocarbons and alternative energy solutions. Masdar, based in the UAE, is one of the world’s largest renewable energy and green hydrogen companies,

operating in more than 40 countries, having invested or committed to invest in projects with a total value of over US\$30 billion. The combined capacity of these projects is more than 20 gigawatts (GW) – enough to power 5.25 million homes. Altogether, these are expected to displace more than 30 million tonnes of carbon dioxide per year – equivalent to taking 6.5 million cars off the road.⁵⁶ By January 15, 2025, Masdar reported that it had successfully scaled its renewable energy capacity by 150%, reaching 50 GW and contributing to a significant reduction in greenhouse gas (GHG) emissions.⁵⁷

Masdar’s ambitions are significant; one of its goals is to achieve 100 gigawatts of renewable energy capacity and to produce one million tonnes of green hydrogen per year by 2030. Such a goal falls just below the electric production capacity in the UK by yearend of 2022 which was 112 GW.⁵⁸

In addition to their hydrocarbon reserves, the GCC region is still discovering vast energy deposits. In July of 2024, Kuwait Petroleum Corporation (KPC) said that it had made a “giant” oil discovery in the Al Nokhatha field east of Kuwaiti island of Failaka, with oil reserves estimated at 3.2 billion barrels.⁵⁹ In April of 2025, Saudi Aramco announced the discovery of 14 new oil and gas fields in the Eastern Region.⁶⁰

Sizing Up Risk and Returns of the US Dollar Sukuk Market

Investing introduces numerous risks. Understanding these risks is essential to ascertaining expected returns and their downside characteristics. In this section, we explore six commonly asked questions regarding the risks and returns associated with investing in the US dollar *sukuk* market.

- How do geopolitical risks, such as regional conflicts or wars in the Middle East, affect the stability of GCC’s financial markets?
- How do changes in oil prices impact the returns of the US dollar *sukuk* market?
- What are the correlation characteristics of the US dollar *sukuk* market relative to broad and widely recognized financial benchmarks?
- Given the risk characteristics of the US dollar *sukuk* market, what are the return profiles?
- What is the risk profile of the US dollar-denominated *sukuk* market?
- When compared to other broadly recognized conventional fixed-income benchmarks, how does the US dollar *sukuk* market compare?

History of Commercial Oil Production in Saudi Arabia: The “Prosperity Well”

Standard Oil of California (SoCal) negotiated a concession with the Saudi Government to explore for oil in the summer of 1933, and by that fall, the first geologic field expedition arrived. Max Steineke arrived in Saudi Arabia in 1934 to lead the oversight of exploration. The geology expedition experienced extreme conditions and difficulties during its multiyear exploration that nearly ended the venture. At one point, in November 1937, SoCal decided to shut down the entire operation; however, Max Steineke^{61, 62, 63} returned to California and convinced management to continue the expedition.

The fortunes of the geologists’ persistence changed in March 1938. At the well site named Dammam No. 7, the team achieved a breakthrough at a depth of approximately 1,440 meters. On March 4, 1938, the well produced 1,585 barrels per day. In three days this figure rose to 3,690 barrels. The well was located in a region called the Arab Zone. Saudi Aramco, formally known as the Arabian American Oil Company, later established its headquarters in the nearby seaside city of Dhahran. Dammam Well No. 7 later became known as the “Prosperity Well” or “al-Khair Well,” marking the first commercialization of oil production in the region.

Neither could the first Saudi and American drillers have imagined, even after they struck oil, that Dammam No. 7 would be capable of producing not for months or years but for several decades into the future, or that this one well would pour out more than 32 million barrels of oil.⁶⁴ Nearly 90 years after the initial discovery, Saudi Arabia’s state-owned hydrocarbon company, Aramco, produces millions of barrels per day, making it one of the world’s largest oil producers.

Investors typically categorize risk into two buckets: systematic and unsystematic risks. Systematic risk reflects the broad market risks associated with a given asset class. As a commonly referenced example, consider the equity benchmark the S&P 500 Index, which exposes investors to risks associated with the broad equity market. This includes equity returns, risks, and volatility associated with the broader US economy. Multiple factors influence and impact the S&P 500 Index, including fiscal and monetary policies, business cycles, aggregate earnings growth, and others.

For the US dollar *sukuk* market, systematic risk can be characterized as the broad market risks associated with the US dollar *sukuk* market. As observed later in this report, such factors include those that affect US aggregate bond indices, primarily given the US dollar *sukuk* market’s high correlation with these benchmarks. Influencing factors include changes in US bond markets, such as shifts in fiscal and monetary policies, and inflation trends. Additional systematic risks that can influence the US dollar *sukuk* market include changes in macroeconomic factors, such as fluctuations in oil prices or risk premiums associated with geopolitical conflicts.

Unsystematic risk reflects unique characteristics associated with a given issuer rather than the broad market. Examples include an issuer’s governance structure, leverage profile, and competitive strengths and weaknesses relative to its peers.

Assessing Market’s Response to Geopolitical Events

Middle East markets, such as those in the Gulf Cooperative Council (GCC), are often perceived by developed world investors as being fraught with risk and unpredictability due to long-standing regionalized conflicts. Such inquiries are understandable, as investors perceive that these conflicts are likely to influence the region’s stability and market performance.

However, the reality is that investors usually conflate what the market is actually pricing in with their own perception of what they believe the market is pricing in. This nuanced distinction is important to consider. More often than not, investors appear to overestimate market volatility surrounding geopolitical events related to regional conflicts, while underestimating volatility stemming from political events, such as an election, that can influence a sovereign government’s trajectory with respect to debt sustainability. What surprises most investors is that empirical evidence



of the market's response regarding geopolitical risks are centered and attuned to sovereign fiscal and debt stability than it is with regional conflicts.

To help understand this analysis of market's reactions following geopolitical events, investors can gain valuable insights into what markets may be pricing in. The exercise below illustrates this approach by measuring changes in key financial indices seven business days after major geopolitical events. The use of seven days is arbitrary and seeks to strike a balance where enough time after the event passes to permit key facts and information surrounding the episode are known and can be assessed but not too long where other market factors is likely to influence investors' positioning after an event. It also offers sufficient time where heightened emotions can settle as the period of time includes a period where the financial markets are closed for a weekend. Also, the 7-day business day period incorporates a sufficient period of time that reflects investors' 're-pricing' of financial assets after the event.

The analysis examines if market participants deemed the unexpected event as either a 'risk off' - meaning an unwelcomed response that led investors to sell risky assets, such as equities, and reallocate capital through the purchasing of safe assets, such as government bonds. The alternative outcome to a risk off event is that nothing materially happened to the financial markets.

In this exercise we will look at four key financial metrics to ascertain if a risk off event occurred. These financial metrics include: (1) changes in country's the stock market, (2) changes in the 2- and 10-year government bonds, (3) change in the country's currency, and (4) changes in country's credit default swap (CDS). A CDS is a financial derivative contract between two parties where the buyer makes periodic payments to the seller in exchange for protection against default of the issuer. In essence, it acts like an insurance policy against an issuer's failure to meet their debt obligations.

The associated table captures selected geopolitical events, the country, the event date, and changes in the key financial metrics. The table is also organized chronologically with the most recent geopolitical event at the top. A brief synopsis of a few selected geopolitical events is provided in an appendix at the end of this document to offer context of developments that led to market's response.

In concluding, empirical evidence reveals a fundamental disconnect between investor perceptions and actual market behavior, demonstrating that fiscal sustainability crises generate significantly more severe and persistent market volatility than geopolitical conflicts, despite the profound human suffering associated with regional warfare.

Geopolitical Event			Change in Financial Markets 7-Business Days after Event					
Country	Event	Event Date	Market Response	Stock Market	2-yr Yield	10-yr Yield	FX v USD	CDS
Israel	Operation Rising Lion. Iran retaliates	6/13/25	Risk off	6.77%	-4.15%	7.39%	-4.21%	13.06%
Saudi Arabia	Operation Rising Lion. Iran retaliates	6/13/25	No Impact	1.14%	1.21%	-1.28%	0.00%	-2.19%
United States	Liberation Day	4/2/25	Risk off	-4.79%	2.06%	7.72%	-3.99%	34.25%
Germany	Incoming Chancellor Friedrich Merz announces intention to lift Germany's 'debt brake' for defense spending	3/14/25	No Impact	2.40%	-2.02%	-2.00%	-0.56%	1.41%
United States	Presidential Election	11/5/24	Risk off	4.75%	4.32%	3.34%	2.06%	-23.85%
France	French Elections	6/9/24	Risk off	-6.23%	-3.46%	0.87%	-0.91%	69.32%
Germany	French Elections	6/9/24	Risk off	-2.99%	-10.5%	-9.89%	-0.91%	42.89%
Israel	Hamas led surprise attack on Israel	10/7/23	Risk off	-7.55%	-9.34%	-3.16%	-3.93%	182.17%
Saudi Arabia	Hamas led surprise attack on Israel	10/7/23	No Impact	-1.33%	1.04%	1.05%	0.00%	21.11%
United Kingdom	Liz Truss unveiled 'Mini-Budget'	9/23/22	Risk off	-1.78%	6.79%	6.92%	-8.90%	31.62%

Source: Bloomberg

The Price of Oil and the Sukuk Market: Understanding the Relationship

Often, there are questions and misconceptions surrounding the risk and return relationship of *sukuk* issued by hydrocarbon-dependent economies. While the performance of *sukuk* issued by hydrocarbon-dependent economies does not demonstrate a strong relationship to hydrocarbon commodity prices, performance is not entirely insulated from oil price movements.

However, several characteristics of *sukuk* can help insulate investors from short-term oil price shocks. These include the *sukuk* structure type, the behavior of *sukuk* relative to other asset classes, the issuer's underlying credit quality, and the *sukuk*' sector exposures. Over the intermediate to longer term, oil price movements can adversely affect an issuer's credit profile, particularly for issuers directly exposed to the energy sector.

The Importance of Structure

To be considered *halal*, *sukuk* must conform to Islamic investing principles. The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) specifies that the investment certificate must represent "undivided shares in ownership of tangible assets, usufruct and services or (in the ownership of) the assets of [a] particular project or special investment activity."⁶⁵ This requires the certificate's structure to reflect a legal transfer of ownership of the underlying assets from the issuer to the investor, or in some cases a beneficial ownership interest is transferred.⁶⁶ Payments to the certificate holders are based on the profits of the underlying assets. Furthermore, the issuer cannot guarantee the security's investment return, such as a coupon rate (often referred to as the Islamic-compliant profit rate) or establish a predetermined price or principal value at maturity, a hallmark of a true risk-return relationship. This relationship is an extremely important tenet of Islamic finance.

The core concepts of Islamic financial principles are to promote trade, commerce, fairness, and social justice.⁶⁷ Islamic finance "merges the ethical teachings of Islam with finance as a means to meet the needs of society and to encourage socioeconomic justice."⁶⁸ The term *halal* denotes practices, behaviors, and actions that comply with Islamic

principles. If such practices, behaviors, and actions comply with Islamic principles, then they are deemed *haram* – not in congruence with Islamic principles.

Islamic finance uses both a principles-based framework and an exclusionary process in investing. Islamic principles promote the concept of risk-sharing, where investors share in both the potential for profits and for losses. *Gharar*, or the sale of what is not yet present, is discouraged. This applies to gambling, short-term speculation, and excessive risk-taking. Islam prohibits giving or receiving interest payments, also known as *riba*. The respective sacred texts of the three Abrahamic religions (Judaism, Christianity, and Islam) all prohibited usury, or lending with interest, because it fostered economic inequality and social injustice.⁶⁹

Within Islamic finance, debt-related instruments are deemed *haram* due to their interest payments, lack of risk-sharing attributes, and their typical structure, which guarantees fiscal performance regardless of the issuer's circumstances. Debt obligations are viewed in Islamic finance as risk-transferring instruments rather than risk-sharing instruments. Bond-like instruments in Islamic finance do exist, but they have been structurally modified to incorporate risk-sharing attributes. These instruments are *sukuk* or *murabaha*; the underlying instruments are performance-based rather than obligation-based. Distributions of income from *sukuk* and *murabaha* are profit-sharing distributions, not interest payments.

Equities generally do not offer performance guarantees based on future results. They expose the investor and issuer to both profits and losses depending on the future performance of the underlying assets. Equity investments naturally incorporate the risk-sharing principles of Islamic finance between the issuer and the investor.

Islamic investment certificates are tethered to an underlying asset(s), and the expectation of steady income can help reduce short-term price volatility relative to energy commodities and other asset classes, such as the broader equity and bond markets. Some Islamic scholars are comfortable with a face value threshold of at least 33% physical assets underlying *sukuk* structures, while other scholars require a threshold between 51% and 70%.⁷⁰

Islamic-compliant investment certificates typically incorporate a significant asset component within their investment structure. The assets could be tangible, such as equipment, real estate, infrastructure, or other operating assets. Some certificates are structured to have a broader range of assets and may have fewer tangible features. For example, Axiata, a Malaysian telecom operator, offers a certificate with income derived from cell phone usage through vouchers.⁷¹

An Islamic-compliant investment certificate may incorporate a broad range of assets only if it represents an “undivided share in the ownership,” according to AAOIFI. This ownership can be direct (asset-backed *sukuk*) or a beneficial interest (asset-based *sukuk*). There are 14 different types of *sukuk* structures.⁷² Over the years the market has largely coalesced around the adoption of two dominant types, *sukuk al wakalah* and *sukuk al ijarah*. For the twelve-year period from 2010 through 2022, 50% of total international *sukuk* issuance was *sukuk al wakalah* and 21% was *sukuk al ijarah*.⁷³

Beginning on January 1, 2021, AAOIFI mandated that all Islamic-compliant investment certificates maintain a minimum tangible-asset ratio both at issuance and until maturity. The intention was to address Islamic compliance concerns, as securities were sometimes described as “asset-light.” AAOIFI Standard 59, also known as the “tangibility requirement ratio,” mandates that the certificate’s

tangibility ratio must be greater than 50% at issuance and must be maintained throughout the security’s life to maturity. Should the security’s tangibility ratio drop below 51%, the issuer is required restore the ratio back to at least 51% within a prescribed period of time. If the tangibility ratio falls below 33% and the issuer is unable to raise it to 51% within the prescribed period, the security must be delisted.⁷⁴

Furthermore, it is possible for *sukuk* investors to obtain a higher value at the end of the investment certificate’s tenure if the market value of the security’s underlying asset or business enterprise appreciates above its issuance price. Though such an event is unlikely, it does not preclude the possibility, as the rationale is based upon the Islamic tenant of risk sharing.⁷⁵ In the paper “*Shariah Issues in the Application of Repurchase Undertaking in Sukuk Mudarabah*,” the authors state “[this] can be supported by another school of thought has it that, to be acceptable to undertake the underlying asset of *Sukuk* at fair value, net value, market value, or price that is agreed by both parties at the time of actual purchase according to the AAOIFI *Shariah* standard.”

What makes sukuk halal?

	Sukuk	Conventional Bonds
Underlying Asset	Proof of ownership in an asset	Debt obligation
Legal Structure	Holders each hold an undivided beneficial ownership in underlying assets	Issuer has a contractual obligation to pay bondholders, on certain specified dates, interest and principal
Halal considerations	The underlying assets are <i>halal</i>	n/a
Pricing	Pricing based upon value of underlying assets	Pricing based on credit rating of issue and issuer
Valuation	Buyers purchase an asset that has value	Buyers act as creditors in implicit loan agreement
Investment rewards and risks	Holders receive a share of profits from the underlying asset (and accept a share of any loss incurred)	Holders receive regularly scheduled interest payments for the life of the bond, and the principal is returned at the bond’s maturity date

J.P. Morgan's Inclusion of the GCC in its Emerging Market Benchmarks: Adoption and Acceptance of an Emerging Region.

In June of 2018, J.P. Morgan Chase & Co. began consulting with GCC members regarding potential plans to include GCC bonds and *sukuk* in its emerging market indices.⁷⁶ The inclusion of GCC members presented J.P. Morgan with several challenges. Typically, benchmarks employ various formulaic criteria to create a basket of similar securities to generate a desired exposure. Gross income per capita for GCC members (excluding Oman) was well above the \$20,000 limit of J.P. Morgan's emerging market index income criterion. For comparison, per capita income in 2018 was about \$40,000 in the UAE, about \$10,000 in Brazil, and about \$50,000 in the US.^{77, 78}

In September of 2018, J.P. Morgan formally announced its plans to include GCC bonds and *sukuk* in its Emerging Market Bond Index and several other emerging market indices, to be implemented in phases between January and September 2019.^{79, 80} At the time of J.P. Morgan's announcement, market analysts anticipated that the GCC region could see upwards of \$60 billion in new investor flows, potentially causing spreads to compress by 10-15 bps.⁸¹ This meant that increased demand would most likely bid up the price of the securities, causing the yield (profit) spread to narrow.

Over time, J.P. Morgan increased its exposure to GCC issuers, which came to represent more than 21% of the Emerging Market Bond Index Global Core Index by year-end 2022. Since then, the benchmark's exposure to the region has declined following the removal of several GCC constituents due to their exceptionally strong wealth metrics.

From 2017 through 2024, the J.P. Morgan Emerging Market Bond Index Global Core Index correlated closely with the FTSE IdealRatings Sukuk Index, averaging 78.5%, and then declining to a low of 75.5% at year-end 2023. This decline may be partially explained by J.P. Morgan's announcement in late September 2023 that it would include India in its emerging market indices.

Indian issuers will begin to be added into the indices in June of 2024, spanning 10 months, ultimately reaching a maximum of 10% of the indices.⁸² The inclusion of India also means that other countries' exposures, such as that of GCC member countries, will experience a decline to make room for India's announced inclusion.

In February 2025, J.P. Morgan announced it would reclassify Qatar and Kuwait as developed markets, leading to their removal from its Emerging Market Bond Index. The removal is being phased over a six-month period that began on March 31, 2025.⁸³ J.P. Morgan's decision is based on economic indicators that classify Qatar and Kuwait as developed markets rather than emerging markets. The firm evaluates economies based on several factors, including income levels, market accessibility, and cost-of-living ratios.⁸⁴ As of January 31, 2025, Qatar had a weighting of 3.2% and Kuwait had a weighting of 0.6% in the Emerging Market Bond Index Global Diversified Index.

GCC's Inclusion in J.P. Morgan's Emerging Market Bond Index Global Core & Correlation Matrix for the Trailing 3-year Periods

	2017	2018	2019	2020	2021	2022	2023	2024	2025
GCC	2.5%	2.9%	17.1%	18.4%	19.5%	21.4%	20.3%	20.9%	16.8%
Correlation (Trailing 3-year, weekly)									
J.P. Morgan Emerging Market Bond Index (JPEICORE)	76.8%	78.2%	69.5%	84.7%	84.7%	80.9%	75.5%	77.8%	85.4%
Bloomberg US Aggregate Index (LBUSTRUU)	52.8%	63.9%	73.8%	72.3%	71.8%	75.4%	82.5%	84.9%	90.3%

Source: Bloomberg, Correlation of SBKU to J.P. Morgan Emerging Market Bond Index and Bloomberg US Aggregate Index

Coinciding with J.P. Morgan's announcement to reclassify Qatar and Kuwait, the bank noted that the UAE's cost-of-living ratio has exceeded the Emerging Market Bond Index's average for two consecutive years, and if the Gulf state scores higher again in 2026, it will also be reviewed for removal from the index. As of January 31, 2025, the UAE accounted for 4.1% of benchmark exposure.⁸⁵

By year-end 2025, the trailing three-year correlation of the FTSE IdealRatings Sukuk Index with J.P. Morgan's Emerging Market Bond Index Global Diversified Index rose to 85.4%, up from 77.8% for the same trailing period ending 2024. This increase in correlation appears to run counter to earlier patterns in which reductions in GCC weightings within the index were associated with declining correlation.



Correlation Characteristics of Sukuk Relative to Other Asset Classes

Sukuk are a separate and distinct asset class that share many attributes with conventional fixed income. Both typically offer a stated profit rate (or coupon) and maturity date and usually are rated by the major credit rating agencies. *Sukuk* have attributes to promote liquidity and to encourage their adoption among global investors, particularly among the secular community. Understanding how *sukuk* correlate with other asset classes allows us to comprehend their risk and return characteristics.

At year-end 2025, the five-year correlation between the FTSE IdealRatings Sukuk Index and West Texas Intermediate (WTI) was -0.129. Stated differently, -12.9% of the price movement of the Index can be explained by crude oil prices, which were down from 17.3% at the prior five-year period at year-end of 2023. This also means that there is no relationship in the price movement in WTI with that of the FTSE IdealRatings Sukuk Index. It is interesting to note that over the subsequent publications the correlation has dropped. At that point, the correlation was 36.7% for the five-year period ended March 31, 2020.

Correlation Matrix: 5-years
(December 31, 2020 - December 31, 2025)

Asset Class	WTI	FTSE Sukuk Benchmark	Bloomberg US Agg Total Return	J.P. Morgan Emerging Market Global Core Index	MSCI ACWI Index	S&P 500 Index
WTI	1.000	-0.129	-0.161	-0.080	0.141	0.138
FTSE Sukuk Benchmark	-0.129	1.000	0.847	0.777	0.359	0.297
Bloomberg US Agg Total Return	-0.161	0.085	1.000	0.699	0.282	0.234
J.P. Morgan Emerging Market Global Core Index	-0.080	0.777	0.669	1.000	0.600	0.508
MSCI ACWI Index	0.141	0.359	0.282	0.600	1.000	0.963
S&P 500 Index	0.138	0.297	0.234	0.508	0.963	1.000

Source: Bloomberg (December 31, 2020 - December 31, 2025. Weekly Data)

This decline in relationship, otherwise correlation, is not surprising for several reasons. First, most US dollar-denominated *sukuk* from the GCC are not directly tied to the energy sector or the hydrocarbon industry. Second, many GCC sovereign issuers have prioritized the redirection of their economies away from the hydrocarbon industry. Saudi's Vision 2030 has demonstrated meaningful success. By yearend of 2024 Saudi Arabia identified that 61.6%⁸⁶ of the Kingdom's revenues, SAR 756 billion (\$200 billion),⁸⁷ and 73.8%⁸⁸ of the GDP were sourced from the non-hydrocarbon sector. According to S&P Global, the non-oil sectors of the UAE now accounts for about 75% of the country's GDP.⁸⁹ Third, the price of oil is largely managed by a consortium of oil-producing countries, such as OPEC+.⁹⁰ Fourth, technical and other exogenous factors can cause extreme volatility in the price of oil. Following a contentious disagreement between Saudi Arabia and Russia in April of 2020, the price of oil fell to -\$40.32. The price dynamics of a commodity are not necessarily associated with the business activities of a *sukuk* issuer.

When comparing the FTSE IdealRatings Sukuk Index with the WTI for the three-year period ended December 31, 2025, the correlation between the two becomes even more weaker by falling from -7.0% to -23.6%. When the second edition of the *GCC US Dollar Sukuk Primer* was published, this correlation

was 32.8%. Again, WTI's price decline to -\$43.32 in April of 2020 can help explain the material change in correlation.

For the three-year period ending 2025, the Bloomberg US Aggregate Total Return Index and the J.P. Morgan Emerging Market Bond Global Core Index exhibited strong correlations with the FTSE IdealRatings Sukuk Index. This alignment is expected, given that all three benchmarks are comprised of US dollar-denominated securities and share distinct structural similarities.

Over the past two years, correlations among these indices have strengthened. For the three-year period ending 2025, the correlation between the FTSE IdealRatings Sukuk Index and the Bloomberg US Aggregate rose to 90.3% (up from 82.5% for the period ending 2023). Similarly, its correlation with the J.P. Morgan Emerging Market Bond Global Core Index increased to 85.4% (up from 75.5%). Effectively, this implies that approximately 85% of the Sukuk Index's performance movements can be explained by the factors driving these broader benchmarks.

For comparison, we have included correlation data from the previous edition of this white paper. This table displays the correlation matrix for the trailing five-year period ending 2023, and the accompanying table displays the correlation matrix for the trailing three-year period ending 2023.

Correlation Matrix: 3-years (December 31, 2022 - December 31, 2025)

Asset Class	WTI	FTSE Sukuk Benchmark	Bloomberg US Agg Total Return	J.P. Morgan Emerging Market Global Core Index	MSCI ACWI Index	S&P 500 Index
WTI	1.000	-0.236	-0.256	-0.026	0.132	0.124
FTSE Sukuk Benchmark	-0.236	1.000	0.903	0.854	0.299	0.211
Bloomberg US Agg Total Return	-0.256	0.903	1.000	0.808	0.228	0.154
J.P. Morgan Emerging Market Global Core Index	-0.026	0.854	0.808	1.000	0.690	0.599
MSCI ACWI Index	0.132	0.299	0.228	0.520	1.000	0.964
S&P 500 Index	0.124	0.211	0.154	0.413	0.964	1.000

Source: Bloomberg (December 31, 2022 - December 31, 2025. Weekly Data)

Correlation Matrix: 5-years (December 31, 2018 - December 31, 2023)

Asset Class	WTI	FTSE Sukuk Benchmark	Bloomberg US Agg Total Return	J.P. Morgan Emerging Market Global Core Index	MSCI ACWI Index	S&P 500 Index
WTI	1.000	0.173	-0.007	0.247	0.299	0.272
FTSE Sukuk Benchmark	0.173	1.000	0.778	0.804	0.477	0.439
Bloomberg US Agg Total Return	-0.007	0.778	1.000	0.650	0.328	0.298
J.P. Morgan Emerging Market Global Core Index	0.247	0.804	0.650	1.000	0.731	0.666
MSCI ACWI Index	0.299	0.477	0.328	0.731	1.000	0.970
S&P 500 Index	0.272	0.439	0.298	0.666	0.970	1.000

The following displays the correlation matrix for the trailing three-year period ending 2023.

**Correlation Matrix: 3-years
(December 31, 2020 - December 31, 2023)**

Asset Class	WTI	FTSE Sukuk Benchmark	Bloomberg US Agg Total Return	J.P. Morgan Emerging Market Global Core Index	MSCI ACWI Index	S&P 500 Index
WTI	1.000	-0.070	-0.096	-0.080	0.164	0.142
FTSE Sukuk Benchmark	-0.070	1.000	0.825	0.755	0.431	0.387
Bloomberg US Agg Total Return	-0.096	0.825	1.000	0.682	0.381	0.344
J.P. Morgan Emerging Market Global Core Index	-0.080	0.755	0.682	1.000	0.658	0.573
MSCI ACWI Index	0.164	0.431	0.381	0.658	1.000	0.962
S&P 500 Index	0.142	0.387	0.344	0.573	0.962	1.000

A comparison of the changes between the two periods ending 2023 and 2025 for the trailing five-year and trailing three-year are provided.

Comparing 5-year Term (Period 2025 from 2023)

Asset Class	WTI	FTSE Sukuk Benchmark	Bloomberg US Agg Total Return	J.P. Morgan Emerging Market Global Core Index	MSCI ACWI Index	S&P 500 Index
WTI	0.000	-0.302	-0.154	-0.327	-0.158	-0.134
FTSE Sukuk Benchmark	-0.302	0.000	0.069	-0.027	-0.118	-0.142
Bloomberg US Agg Total Return	-0.154	-0.693	0.000	0.049	-0.046	-0.064
J.P. Morgan Emerging Market Global Core Index	-0.327	-0.027	0.019	0.000	-0.131	-0.158
MSCI ACWI Index	-0.158	-0.118	-0.046	-0.131	0.000	-0.007
S&P 500 Index	-0.134	-0.142	-0.064	-0.158	-0.007	0.000

Comparing 3-year Term (Period 2025 from 2023)

Asset Class	WTI	FTSE Sukuk Benchmark	Bloomberg US Agg Total Return	J.P. Morgan Emerging Market Global Core Index	MSCI ACWI Index	S&P 500 Index
WTI	0.000	-0.166	-0.160	0.054	-0.032	-0.018
FTSE Sukuk Benchmark	-0.166	0.000	0.078	0.099	-0.132	-0.176
Bloomberg US Agg Total Return	-0.160	0.078	0.000	0.126	-0.153	-0.190
J.P. Morgan Emerging Market Global Core Index	0.054	0.099	0.126	0.000	0.032	0.026
MSCI ACWI Index	-0.032	-0.132	-0.153	-0.138	0.000	0.002
S&P 500 Index	-0.018	-0.176	-0.190	-0.160	0.002	0.000

Diversification Benefits: Insulating Global Equity Exposures

Markets do not reward investors simply for holding more assets; they reward them for holding assets that behave differently at the same time. Lower correlation is the engine of diversification. By combining assets that zig and zag at different times, investors can reduce portfolio volatility and drawdowns while enhancing risk-adjusted returns.

For investors seeking to diversify their asset allocations, *sukuk* may be a valuable option. The FTSE IdealRatings Sukuk Index shows significantly lower correlation with US dollar-denominated emerging market fixed-income benchmarks while still benefiting from emerging market exposure.

In practice, the FTSE IdealRatings Sukuk Index exhibits lower equity correlation characteristics than the marquee global fixed income benchmark, the J.P. Morgan Emerging Market Bond Index Global Core, while providing a more insulated way to access emerging markets. This creates a distinct balance for investors who seek diversification and emerging market fixed-income exposure while maintaining lower volatility.

In this example, the correlation characteristics of the US dollar *sukuk* benchmark – the FTSE IdealRatings Sukuk Index – are compared with the J.P. Morgan Emerging Market Index, the MSCI All Country World Index (MSCI), which tracks stocks from 23 developed and 24 emerging market countries,⁹¹ and the US equity benchmark, the S&P 500 Index.

As shown in the accompanying table, over the trailing five-year period the J.P. Morgan Emerging Market Index's correlation with the MSCI and S&P 500 Index is 60.0% and 50.8%, respectively. Over the same period, the FTSE IdealRatings Sukuk benchmark's correlation with the MSCI is 35.9% and with the S&P 500 Index is 29.7%. This indicates that the *sukuk* benchmark has a materially lower correlation with both MSCI and the S&P 500 Index than the J.P. Morgan Emerging Market Index. In relative terms, the *sukuk* benchmark's correlation with MSCI and the S&P 500 Index is 40.2% and 41.5% lower, respectively. The three-year period shows a similar, but even more pronounced, pattern: the FTSE IdealRatings Sukuk benchmark's correlation with MSCI and the S&P 500 Index is 56.7% and 64.8% lower, respectively. These materially lower correlations provide important and highly desirable diversification benefits for investors.

	Correlation (5-year)		Correlation (3-year)	
	MSCI ACWI	S&P 500 Index	MSCI ACWI	S&P 500 Index
J.P. Morgan Emerging Market Global Core Index (J.P. Morgan Emerging Market Index)	60.0%	50.8%	69.0%	59.9%
FTSE IdealRatings Sukuk Benchmark	35.9%	29.7%	29.9%	21.1%
Correlation Reduction	-40.2%	-41.5%	-56.7%	-64.8%

Source: Bloomberg. 5-year period (December 2020 - December 2025). 3-year period (December 2022 - December 2025).

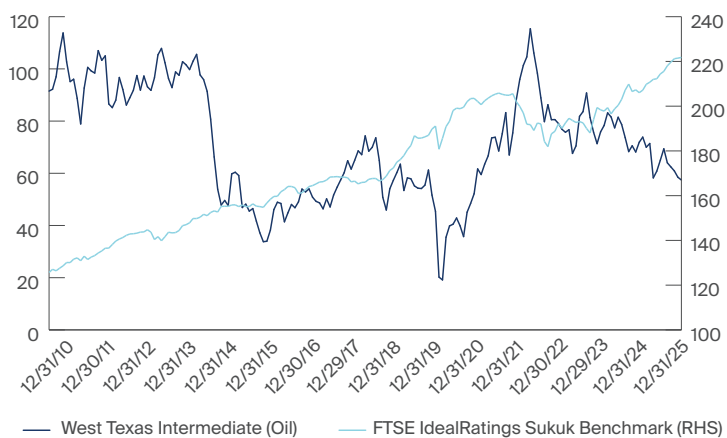
A Look Back in History: Oil’s Previous Price Decline and the FTSE IdealRatings Sukuk Index

The correlation matrix demonstrates that a weak relationship exists between oil prices and *sukuk* market movements. When comparing the FTSE IdealRatings Sukuk Index against the WTI, we observe divergence between the two over multiple time periods – the 15-year and 1-year periods.

Past performance does not indicate any assurance of future performance. *Sukuk* performance and oil returns do not behave in a lockstep manner; a more complex relationship exists.

	15-year Period (12/31/10 - 12/31/2025)		5-year Period (12/31/20- 12/31/2025)		3-year Period (12/31/22- 12/31/2025)		1-year Period (12/31/24- 12/31/2025)	
	Total Return	Annualized	Total Return	Annualized	Total Return	Annualized	Total Return	Annualized
FTSE IdealRatings Sukuk Benchmark	76.53%	3.86%	9.04%	1.74%	17.48%	5.51%	7.71%	
West Texas Intermediate (WTI)	-52.25%	-4.80%	127.78%	17.89%	4.81%	1.58%	-4.40%	

Monthly Price History of FTSE IdealRatings Sukuk Index Compared to WTI (Oil)



Putting a Pin in Relative Risk and Returns

While the GCC *sukuk* market has grown rapidly in recent years, it remains a nascent market subject to oil price shocks, regional tensions, volatile foreign institutional flows, and other factors. Nonetheless, GCC debt and *sukuk* markets have demonstrated favorable risk and return profiles that warrant long-term investors' consideration. When comparing various regional and broad-based fixed-income benchmarks, the Bloomberg GCC Credit Total Index Unhedged USD and the FTSE IdealRatings Sukuk Index demonstrated competitive performance. Most notable, the FTSE IdealRatings *sukuk* benchmark outperformed the selected fixed income index over the trailing five-year return ending December 31, 2025.

In offering added context of the return metrics over the five-year, three-year, and one-year trailing periods ended December 29, 2023, have been included. As can be observed, the FTSE IdealRatings Sukuk Benchmark demonstrated favorable returns when compared to selected fixed income benchmarks.

	5-year Trailing Return (12/31/20 - 12/31/2025)		3-year Trailing Return (12/31/22 - 12/31/2025)		1-year Return (12/29/24 - 12/31/2025)
	Total Return	Annualized	Total Return	Annualized	Annualized
Bloomberg Barclays GCC Credit TR Index Value Unhedged USD	1.60%	0.32%	16.22%	5.13%	8.77%
Bloomberg Barclay's EM Asia USD TR Index Value Unhedged	4.22%	0.83%	21.91%	6.81%	8.29%
Bloomberg Barclay's EM Hard Currency Aggregated TR Index Value Unhedged USD	5.72%	1.12%	30.10%	9.15%	12.16%
J.P. Morgan Emerging Market Global Core Index	7.19%	1.40%	34.07%	10.25%	13.90%
FTSE Sukuk	9.04%	1.74%	17.48%	5.51%	7.64%
Bloomberg Barclays US Treasury Index	-4.87%	-0.99%	11.26%	3.61%	6.32%
Bloomberg Barclays Global Aggregated Treasuries TR Index	-17.29%	-3.72%	7.30%	2.37%	6.82%
Bloomberg US Aggregated Total Return	-1.80%	-0.36%	14.65%	4.65%	7.30%
S&P 500 Index	95.98%	14.40%	86.01%	22.94%	17.86%
MSCI Emerging Markets Index	25.29%	4.61%	59.87%	16.90%	34.29%
Crude (Oil)	127.78%	17.89%	4.81%	1.58%	-4.40%

Source: Bloomberg

	5-year Trailing Return (12/30/18 - 12/29/2023)		3-year Trailing Return (12/31/20 - 12/29/2023)		1-year Return (12/30/22 - 12/29/2023)
	Total Return	Annualized	Total Return	Annualized	Annualized
Bloomberg GCC Credit TR Index Value Unhedged USD	15.26%	2.88%	-7.90%	-2.71%	5.36%
Bloomberg EM Asia USD TR Index Value Unhedged	9.01%	1.74%	-8.48%	-2.92%	7.07%
Bloomberg EM Hard Currency Aggregate TR Index Value Unhedged USD	6.99%	1.36%	-10.92%	-3.79%	9.66%
J.P. Morgan Emerging Market Global Core Index	8.79%	1.70%	-11.41%	-3.96%	10.84%
FTSE Sukuk	18.15%	3.39%	-1.98%	-0.67%	5.63%
Bloomberg US Treasury Index	2.68%	0.53%	-11.03%	-3.83%	4.06%
Bloomberg Global Aggregate Treasuries TR Index	-7.16%	-1.48%	-19.70%	-7.07%	4.19%
Bloomberg US Aggregate TR	5.64%	1.10%	-9.62%	-3.32%	5.54%
S&P 500 Index	107.04%	15.68%	33.02%	10.00%	26.34%
MSCI Emerging Markets Index	21.76%	4.02%	-13.74%	-4.82%	10.15%
Crude (Oil)	95.31%	14.33%	100.23%	26.09%	-11.88%

The FTSE IdealRatings Sukuk Index also demonstrated similar strong performance metrics relative to US fixed-income benchmarks such as the Bloomberg US Aggregate Total Return Index and the Bloomberg US Treasury Index.

We must stress that past performance is not indicative of potential future outcomes. However, the strong benchmark performance observed in this fourth edition of our *GCC US Dollar Sukuk Primer* was also seen in our previous three editions. We employed the same benchmarks in each Primer edition to promote consistency and objectivity.

Risks should also be considered an important factor for investor. Equities can demonstrate favorable return characteristics over the long-term, yet this asset class can experience pronounced volatility in pursuit of realizing its return potential. As the adage goes, it's **time** in the market that is important, rather than **timing** the market. If an investor was fully invested in the S&P 500 Index over the past thirty years, from 1995 through 2024, excluding the best 10 days performing days, the investor's overall return would be reduced by 50%. Missing the best 30 days would cut an investor's long-term results by an astonishing 83%.⁹²

Standard deviation measures the variation, or dispersion, of a set of observed values and is commonly used to measure investment risk. In this case, the set of values comprises investment returns over time. The higher the standard deviation, the greater the dispersion of returns – both positive and negative. Greater return dispersion implies greater risk, while lower dispersion implies lower the risk. Standard deviation is best used in a relative framework to compare returns across asset classes and thereby gain a sense of return variability.

Examining the five-year standard deviation across a broad range of asset class benchmarks allows for a more accurate assessment of risk. Consistent with findings in previous editions of our *GCC US Dollar Sukuk Primer*, the FTSE IdealRatings Sukuk Index demonstrated the lowest volatility among the selected benchmarks. This is a notable outcome given that it has held true across multiple time periods and diverse investment environments.

Generally, volatility across all benchmarks increased compared to our previous (3rd) edition. However, volatility over the trailing three-year period ending 2025 was generally lower than that of the trailing five-year period.

Benchmarks	5-Year Time Period		3-Year Time Period	
	5-year Standard Deviation (12/31/20 - 12/29/2025)	Calculated Risk of Benchmark Relative to FTSE Sukuk Bnch (Expressed as a Multiple)	3-year Standard Deviation (12/31/22 - 12/31/2025)	Calculated Risk of Benchmark Relative to FTSE Sukuk Bnch (Expressed as a Multiple)
Bloomberg Barclays GCC Credit Total Return Index Value Unhedged USD	5.5%	1.7	5.1%	1.7
Bloomberg Barclay's EM Asia USD Total Return Index Value Unhedged	4.7%	1.4	4.0%	1.3
Bloomberg Barclay's EM Hard Currency Agg. TR Index Value Unhedged USD	6.2%	1.9	5.0%	1.7
J.P. Morgan Emerging Market Global Core Index	8.1%	2.5	6.6%	2.2
FTSE Sukuk	3.3%	1.0	3.0%	1.0
Bloomberg Barclays US Treasury Index measures	5.3%	1.6	5.4%	1.8
Bloomberg Barclays Global Agg Treasuries Total Return Index	6.7%	2.1	6.4%	2.1
BB US Agg Total Return	5.7%	1.7	5.7%	1.9
S&P 500 Index	16.2%	4.9	14.5%	4.8
MSCI Emerging Markets Index	16.0%	4.9	14.4%	4.8
Crude (Oil)	35.5%	10.8	31.4%	10.5

Source: Bloomberg

As of year-end 2025, WTI Crude Oil exhibited the highest standard deviation among all asset classes for the five-year period at 35.5% (up from 24.8% at year-end 2023). The S&P 500 Index posted the second-highest volatility at 16.2%, which was also higher than its 2023 level of 9.7%. The MSCI Emerging Market Equity Index followed at 16.0%, up from 7.8%. Notably, for both the three-year and five-year periods ending 2025 and 2023, the S&P 500 Index demonstrated higher volatility than emerging market equities.

The FTSE IdealRatings Sukuk Index maintained the lowest standard deviation metrics among all benchmarks. It reported a standard deviation of 3.3% for the trailing five-year period ending 2025 and 3.0% for the trailing three-year period. This compares to 1.2% for both the five-year and three-year periods ending 2023.

If we establish the FTSE IdealRatings Sukuk Index as a baseline (one unit of risk), we can express the volatility of other benchmarks as a multiple of that index. Using five-year data ending 2025 (3.3%):

- **Bloomberg US Treasury Index:** 1.6x more volatile.
- **Bloomberg US Aggregate Index:** 2.1x more volatile.
- **J.P. Morgan Emerging Market Global Core Index:** 2.5x more volatile (8.1%).
- **S&P 500 Index:** 4.9x more volatile.
- **WTI Crude Oil:** 10.8x more volatile.

These relative risk multiples remain consistent across both the five-year and three-year periods.

Expanding Upon Risk: Comparative Context

In this publication we introduce what we believe is a holistic means of comparing the investment universe of widely recognized fixed income benchmarks relative to US dollar *sukuk*.

Unlike equity markets, where price performance provides a straightforward measure of risk and return, fixed income markets are often opaque. We aim to provide a transparent framework that enables investors to evaluate fixed income allocations holistically.

Evaluating fixed income requires looking beyond headline yield and composite credit ratings. Investors must consider a multitude of factors, including duration, the yield-to-duration ratio, and volatility. The scope of this section is to benchmark US dollar *sukuk* against widely recognized global fixed income indices.

To facilitate this analysis, we have developed a comparative framework. For each benchmark and the Fund, we examine five key investment characteristics, listed below.

- **Weighted average duration:** Use of option adjusted duration (OAD) is used, otherwise referred as effective duration.
- **Weighted average yield-to-worst (YTW):** YTW measures the yield (profit rate for Islamic compliant income producing instruments) provided by securities that may incorporate optionality such as a callable *sukuk*. Yield to maturity (YTM) assumes the security does not have a call feature.

As such, YTW is a better measure of projected yield as it informs investors what can be expected to be realized under a worst case scenario.

- **YTW-Duration Ratio:** This ratio measures the amount yield provided by the benchmark or Fund given its duration. This ratio measures risk and can be thought of what is the return, expressed as yield, for one unit of duration. Formula: YTW divided by duration.
- **Weighted average credit rating:** The benchmarks' and the Fund's credit rating profile is obtained from Bloomberg's composite credit rating toolset.
- **3-year average 90 volatility:** We find that investors frequently just consider yield or returns when choosing an investment instrument, failing to consider the risk involved. Analyzing returns alone can be deceptive because it fails to account for risk. To measure volatility we have used Bloomberg's 90-volatility function. Bloomberg defines this metric as the measure of the risk of price movements for a security calculated from the standard deviation of day to day logarithmic historical price changes. The 90-day price volatility equals the annualized standard deviation of the relative price change for the 90 most recent trading days closing price, expressed as a percentage.⁹³

A summary of the investment characteristics of the benchmarks and the Amana Participation Fund as of yearend of 2025 are provided.

Selected Fixed Income Exposures (Yearend of 2025)

	YTW	Duration	Ratio: YTW/Duration	Credit Ratings	90 Volatility*
Global Fixed Income Exposures					
J.P. Morgan Emerging Market Global Core Index (EMBI)	5.9%	6.9	0.9	BBB-/BB+	5.9
Bloomberg Global Aggregate Index (GLOBE)	3.5%	6.3	0.6	AA+/AA	5.9
US Fixed Income Exposures					
Bloomberg US Aggregate Total Return Index (USAGG)	4.4%	5.9	0.7	AA/AA-	6.0
Bloomberg US Treasury Index (TREAS)	3.9%	5.8	0.7	AA+	5.7
US Dollar Sukuk Exposures					
FTSE IdealRatings Sukuk Index (SUKUK)	4.6%	4.8	1.0	A / A-	2.5
Amana Participation Fund Investor Shares (AMAPX)	5.1%	3.2	1.6	BBB+ / BBB	1.9

The Duration & Yield to Worst (YTW) Matrix graph illustrates the dispersion of yield and duration profiles across the selected universe of fixed income benchmarks relative to the Fund. The J.P. Morgan Emerging Market Index occupies the upper-right (northeast) quadrant, capturing a higher yield profile driven by its heavy emerging market exposure. However, it also carries the longest duration of the group at 6.9 years. The index's lower credit rating justifies its higher yield of 5.9%.

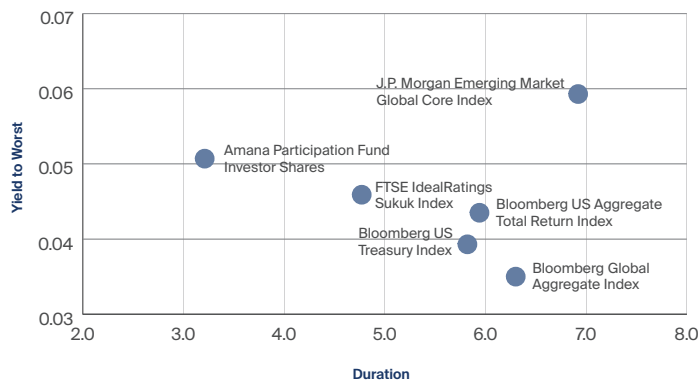
Conversely, the Bloomberg Global Aggregate Index resides in the lower-right quadrant, representing a universe of developed and emerging market issuers across various currencies. Its significant exposure to sovereign and government-related entities (67.3%) explains its lower yield and longer duration profile. While the benchmark's high-grade credit profile may suggest safety, its extended duration exposes investors to significant interest rate risk.

The FTSE IdealRatings Sukuk Index sits centrally in the graph, offering a favorable balance of yield (profit rate) relative to duration. Movement toward the upper-left quadrant signifies optimization: attaining higher yield with lower duration. As of year-end 2025, the Fund positioned itself here, achieving a yield enhancement of approximately 50 bps with a duration 1.6 years shorter than the FTSE IdealRatings Sukuk Index. This demonstrates alpha generation through active management.

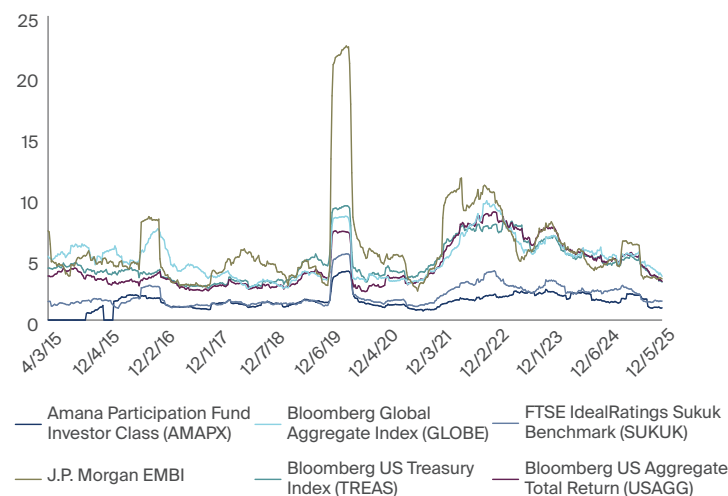
We can further quantify this relationship using the yield-to-duration ratio. This metric measures the return generated for every unit of duration risk (price sensitivity to interest rate changes). Referring to the first table, we observe that the J.P. Morgan Emerging Market Index and Sukuk benchmarks maintain an approximate 1:1 yield-to-duration ratio. In contrast, the Fund demonstrates superior efficiency with a ratio of 1.6:1 – effectively generating over 50% more yield per unit of duration than its benchmark.

Finally, we examine how these benchmarks respond during 'risk-off' periods, which are typically characterized by rising market volatility. Over the past 10 years, the J.P. Morgan Emerging Market Index experienced the greatest volatility, notably spiking during the pandemic. This outsized movement is consistent with its dedicated exposure to emerging markets. Interestingly, despite its high-grade 'AA+/AA' composite rating, the GLOBE index did not provide the safe-haven stability one might expect, also exhibiting significant volatility.

Duration & Yield to Worst (YTW) Matrix:
Selected Fixed Income Exposures



90-Day Volatility
(Weekly: April 2015 - December 2025)

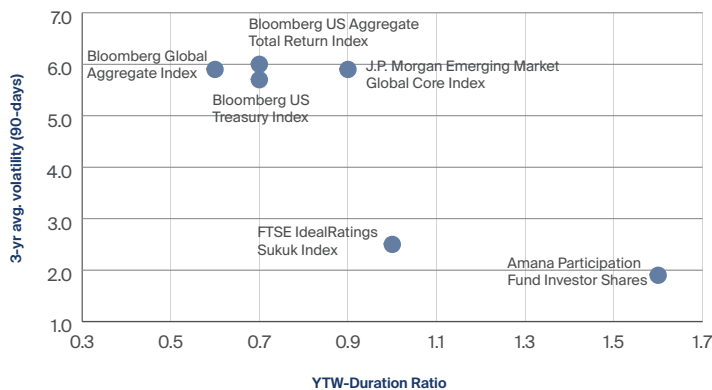


Plotting the Yield-to-Worst (YTW)-Duration ratio against the benchmark’s 3-year average 90-day volatility provides the context needed for a holistic understanding of fixed income behavior. Investors are frequently drawn to fixed income for its potential to preserve capital while generating current income. However, all assets – even the US Treasury market – are subject to price fluctuations. The associated graph illustrates the historically stable characteristics of the US dollar *sukuk* market.

The US dollar *sukuk* asset class demonstrates significantly lower volatility compared to the broader complex of benchmarks. Notably, the Sukuk benchmark exhibits a 55% reduction in volatility relative to the US Treasury Benchmark (TREAS), as measured by the trailing three-year average (4Q 2022 – 4Q 2025) of the 90-Day Volatility metric. This finding often surprises investors.

In closing, examining fixed income instruments requires a comprehensive framework that extends beyond headline yield and credit ratings. Investors must weigh broader considerations – such as duration, the YTW-Duration ratio, and volatility – to make informed decisions aligned with their objectives. We believe this framework illuminates the appeal of US dollar *sukuk*, highlighting their ability to deliver favorable risk-adjusted returns with historically low volatility.

YTW-Duration Ratio & 3-year Average Volatility (90 days) Matrix



Conclusion

Ultimately, GCC US dollar-denominated *sukuk* serve as a powerful diversification tool, offering a distinct asset class with a favorable risk-return profile.

The region’s fundamental strengths – including substantial capital buffers, vast hydrocarbon reserves, and robust credit ratings – present a compelling opportunity for investors. This combination of stability and yield is rare among emerging and frontier markets, yet equally scarce within developed-world fixed-income benchmarks.

Given their consistent top-tier performance and defensive characteristics, *sukuk* warrant serious consideration within a comprehensive asset allocation strategy. While this asset class remains overlooked by many global investors, we trust this white paper has provided valuable insight into the region, its stakeholders, and the unique dynamics of the Islamic-compliant fixed-income market.

Saturna Capital seeks to close that gap by pairing long-tenured experience in Islamic-compliant investing with dedicated *sukuk* research, active credit and structure selection, and specialized offerings such as the Amana Participation Fund for investors seeking halal income and capital preservation. With a global Islamic asset management presence and a track record of managing faith-based and values-aligned portfolios since 1989, Saturna is well positioned to help investors, financial advisors, and institutions thoughtfully incorporate GCC *sukuk* into diversified, income-oriented strategies.

Appendix:

Selected Geopolitical Events

United Kingdom: September 2022:

On Friday September 23, 2022, England's markets experienced a material 'risk-off' episode when former Prime Minister Liz Truss unveiled a "mini-budget" which included £45 billion (\$48 billion) in unfunded tax cuts,⁹⁴ raising the government's estimated costs to roughly £161 billion (\$175 billion) over the next five years.⁹⁵ The abrupt reaction in the markets necessitated intervention by the Bank of England, which pledged to buy up to £65 billion (\$70 billion) worth of government bonds in order to stop the market's collapse.⁹⁶ The table shows that seven working days following the debacle the value of the pound declined by 8.90% versus the US dollar, the credit default swaps (CDS);ⁱⁱⁱ otherwise, the premium – or cost - for an insurance contract in the unlikely event the issuer goes bankrupt increased by 31.62%, and the 2-year and 10-year bonds issued by the UK increased by 6.79% and 6.92%, respectively.

France: June 2024

Another example of a risk-off event occurred in Europe in early June 2024, when French President Emmanuel Macron of the Renaissance Party unexpectedly declared a snap election in France. Markets saw considerable volatility as a result of Macron's unexpected decision to call a snap election, despite the widespread prediction of success for the NR party. This volatility was partly driven by investor concerns about the sustainability of France's debt, reflecting divergent fiscal policies such as the possibility of undoing Macron's pension reforms – an action that could cost the government €9 billion (\$9.65 billion).⁹⁷

Seven business days after June 9th, France's stock market was down 6.23% with French CDS rising as 69.32%. Markets in Germany moved in sympathy as the stock market fell 2.99% and CDS contracts rose 42.89%. More significantly, the yields on 2-and 10-year German bonds dropped in yield by 10.48% and 9.89%, respectively. The

response in German markets reflected investors seeking the safety offered by Germany's 'AAA' credit rating status, as affirmed by S&P Global on March 22, 2024,⁹⁸ by aggressively buying German bonds – bidding up prices and causing yields to fall dramatically.

Israel & Saudi Arabia: October 2023 and June 2025

In late October of 2023 Israel's markets were severely affected by Hamas' surprise strike, as seen by the country's CDS rising 182.17%, the stock market plummeting 7.55%, and the yields on government 2-year and 10-year bonds dropping by 9.34% and 3.16%, respectively. Other Middle Eastern countries, like Saudi Arabia, on the other hand, did not see any appreciable instability. As can be observed, Saudi Arabia's stayed relatively stable despite the country's CDS increasing by 21.11%. Many investors are often taken aback by this, as they assume that volatility will be comparable across all of the countries in the region. It implies that investors are more concerned with the national debt's sustainability than with war. The key takeaway is that countries that comprise the Gulf Cooperation Council (GCC) did not experience a 'risk off' response.

Years after Hamas' surprise attack the conflict has unfortunately continued. The Hamas-Israel conflict gained notable world-wide attention that latter drew the United States participation. On Friday, June 13, 2025, Israel launched a surprised air campaign against Iran, often viewed by some as a proxy supporter of Hamas, known as Operation Rising Lion.⁹⁹ Iran immediately responded by launching retaliatory missile and drone strikes at Israel. This, in part, motivated the United States to participate with its own air strikes against Iran.¹⁰⁰ The engagement reached a climax on June 21, 2025, with US launching a major strike with B-2 bombers known as 'Operation Midnight Hammer' against three of Iran's nuclear facilities: Fordow, Natanz, and Isfahan.¹⁰¹

iii. A credit default swap (CDS) is a financial derivative contract in which one party pays another for protection against the risk of default on a borrower's debt. In the event of a credit default, the CDS seller compensates the buyer, allowing investors to transfer or hedge credit.

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A Few Words About Risk

The Amana Funds limit the securities they purchase to those consistent with Islamic and sustainable principles. The Saturna Sustainable Funds limit the securities they purchase to those consistent with sustainable principles. This limits opportunities and may affect performance. Fund share prices, yields, and total returns will change with market fluctuations as well as the fortunes of the countries, industries, and companies in which it invests. Foreign investing involves risks not normally associated with investing solely in US securities. These include fluctuations in currency exchange rates, less public information about securities, less governmental market supervision, and the lack of uniform financial, social, and political standards. Foreign investing heightens the risk of confiscatory taxation, seizure or nationalization of assets,

establishment of currency controls, or adverse political or social developments that affect investments.

While diversification does not guarantee against a loss in a declining market, it can help minimize the risk of the decline of a single market

Principal Risks of Investing in the Fund

Market risk: *The value of the Fund's shares rises and falls as the market value of the securities in which the Fund invests goes up and down. Consider investing in the Fund only if you are willing to accept the risk that you may lose money. Fund share prices, yields, and total returns will change with the fluctuations in the securities markets as well as the fortunes of the industries and companies in which the Fund invests.*

Diversification and concentration risks: *The Fund is nondiversified and may invest a larger percentage of its assets in fewer issuers, which may cause the Fund to experience more volatility than diversified funds. In addition, the Fund may concentrate its investments within the financial services industry and real estate sector.*

Investment strategy risk: *The Fund's restricted ability to invest in certain market sectors, such as non-Islamic financial companies and conventional fixed-income securities, limits opportunities and may adversely affect the Fund's performance. Because Islamic principles preclude the use of interest-paying instruments, cash reserves do not earn interest income but, to the extent that they are invested in murabaha or wakala, cash reserves will share in the distribution of profits (as opposed to the payment of interest) related to any murabaha or wakala investments.*

Liquidity risk: *Liquidity risk exists when particular investments are difficult to sell and may be more difficult to value. If the Fund is forced to sell these investments during unfavorable conditions to meet redemptions or for other cash needs, the Fund may lose money on its investments. As a result, the Fund may be unable to achieve its objective.*

The Fund invests substantially in sukuk certificates that are traded outside of the US or within the US subject to certain trading restrictions which may increase the liquidity risks associated with the Fund's investments.

Foreign investing risk: *The Fund involves risks not typically associated with investing in US securities. Investments in the securities of foreign issuers may involve risks in addition to those normally associated with investments in the securities of US issuers. All foreign investments are subject*

to risks of: (1) foreign political and economic instability; (2) adverse movements in foreign exchange rates; (3) currency devaluation; (4) the imposition or tightening of exchange controls or other limitations on repatriation of foreign capital; (5) changes in foreign governmental attitudes toward private investment, including potential nationalization, increased taxation, or confiscation of assets; and (6) differing reporting, accounting, and auditing standards of foreign countries. In developing markets, these risks are magnified by less mature political systems and weaker corporate governance standards than typically found in the developed world.

Sukuk risk: Sukuk are specifically structured to adhere to Islamic investment principles, but also must be engineered to be economically feasible in order to attract investment. Sukuk structures may be significantly more complicated than conventional bonds and often include a series of entities created specifically to support the sukuk structure. In addition, sukuk are largely created in or otherwise subject to the risks of developing economies, many of which have weak or inconsistent accounting, legal, and financial infrastructure. The structural complexity of sukuk, along with the weak infrastructure of the sukuk market, increases risks of investing in sukuk, including operational, legal, and investment risks. In addition, adherence to Islamic investment principles increases the risk of loss in the event of a default. As compared to rights of conventional bondholders, holders of sukuk may have limited ability to pursue legal recourse to enforce the terms of the sukuk or to restructure the sukuk in order to seek recovery of principal. Sukuk are also subject to the risk that issuers or Islamic scholars may deem certain sukuk as not meeting Islamic investment principles subsequent to the sukuk being issued and therefore classify the investments as noncompliant with Islamic principles.

Murabaha risk: A murabaha transaction involves a purchase and deferred-payment resale of an asset. The asset is typically purchased by an Islamic bank as agent for the Fund. The bank, acting as the Fund's agent, immediately resells the asset to a previously identified third party who agrees to repay the Fund's cost for the asset plus a profit. Murabaha investments are subject to market risk (fluctuating prices and exchange rates), credit risk, and operational risk (errors in processes).

Wakala: When the Fund invests in wakala, it will be subject to the credit risk of the bank acting as agent, and the risk that the bank will not manage the investment in a profitable manner.

Interest rate risk: The Fund does not invest in interest bearing investments. However, since murabaha and wakala are Islamic fixed-income investments, the financial and economic data associated with interest bearing investments similarly affect the yields and returns on murabaha and wakala. Changes in interest rates impact prices of fixed-income and related investments. When interest rates rise, the value of fixed-income investments (paying a lower rate of interest) generally will fall. Investments with shorter terms may have less interest rate risk, but generally have lower returns and, because of the more frequent maturity dates, may involve higher re-investment costs.

Credit risk: Corporate and sovereign issuers of the notes and certificates in which the Fund invests may not be able or willing to make payments when due, which may lead to default or restructuring of the investment. In addition, if the market perceives deterioration in the creditworthiness of an issuer, the value and liquidity of the issuer's securities may decline.

High-yield risk: Securities that are rated below investment grade may have greater price fluctuations and have a higher risk of default than investment-grade securities. Below-investment grade securities may be difficult to sell at an acceptable price, especially during periods of increased market volatility or significant market decline.

Subsidiary Investment risk: By investing in the Subsidiary, the Fund is subject to the risks associated with the Subsidiary's investments. Those investments are similar to the investments that are permitted to be held by the Fund and are subject to the same risks that would apply to similar investments if held directly by the Fund. The Subsidiary is organized under the laws of the Cayman Islands and is not registered with the SEC under the Investment Company Act of 1940, as amended. Accordingly, the Fund will not receive all of the protections offered to shareowners of registered investment companies. Changes in the laws of the United States and/or the Cayman Islands could result in the inability of the Fund and/or the Subsidiary to operate as intended, which may negatively affect the Fund and its shareowners.

Tax risk: To qualify as a regulated investment company ("RIC"), the Fund must meet certain requirements concerning the source of its income. The Fund's investment in the Subsidiary is intended to provide exposure to murabaha and wakala in a manner that is consistent with the "qualifying income" requirement applicable to RICs. Failure to qualify as a RIC could subject the Fund to adverse tax consequences,

including a federal income tax on its net income at regular corporate rates, as well as a tax to shareowners on such income when distributed as an ordinary dividend.

The tax treatment of the Fund's investment in the Subsidiary may be adversely affected by future legislation, court decisions, Treasury Regulations, and/or guidance issued by the Internal Revenue Service that could affect the character, timing, and/or amount of the Fund's taxable income or any gains or distributions made by the Fund.

Index Definitions

The Bloomberg US Treasury Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index. STRIPS are excluded from the Index because their inclusion would result in double-counting.

The Bloomberg US Treasury Bills 1-3 Month Index is designed to measure the performance of public obligations of the US Treasury that have a remaining maturity of greater than or equal to 1 month and less than 3 months. The Index includes all publicly issued zero coupon US Treasury Bills that have a remaining maturity of less than 3 months and at least 1 month, are rated investment grade, and have \$300 million or more of outstanding face value.

The Bloomberg US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by US and non-US industrial, utility, and financial issuers.

The Bloomberg US Corporate High Yield Bond Index measures the USD-denominated, high-yield, fixed-rate corporate bond market. Securities are classified as high-yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below.

The Bloomberg Emerging Markets Hard Currency Aggregate Index is a flagship hard currency emerging markets debt benchmark that includes USD, EUR, and GBP-denominated debt from sovereign, quasi-sovereign, and corporate EM issuers. This includes the EM Hard Currency Aggregate: Corporate, and the EM Hard Currency Aggregate: Other Government Related.

The Bloomberg Emerging Markets Local Currency Government Universal Index is the broadest Barclays benchmark tracking the performance of fixed-rate local currency Emerging Markets (EM) debt. Classification as

an EM is rules-based and reviewed annually using World Bank income group and International Monetary Fund (IMF) country classifications. This includes the Bloomberg EM Local Currency Universal Asia Total Return Index and the Bloomberg EM Local Currency Europe/Mideast/Africa Total Return Index.

The Bloomberg Emerging Markets Local Currency Government Index is a flagship index that measures the performance of local currency Emerging Markets (EM) debt. Classification as an EM is rules-based and reviewed annually using World Bank income group, International Monetary Fund (IMF) country classification and additional considerations such as market size and investability. This includes the Bloomberg Emerging Markets Local Currency Government Index: Americas.

The Bloomberg Emerging Markets Hard Currency Aggregate Index is a flagship hard currency emerging markets debt benchmark that includes USD-denominated debt from sovereign, quasi-sovereign, and corporate EM issuers. This includes the Bloomberg Emerging Markets Hard Currency Aggregate Index. This index includes the Bloomberg GCC USD Credit Total Return Index.

The Bloomberg Global Aggregate ex USD Index is a measure of investment-grade debt from 24 local currency markets. This multi-currency benchmark includes Treasury, government-related, corporate, and securitized fixed-rate bonds from both developed and emerging markets issuers. Bonds issued in USD are excluded. This includes the Bloomberg Global Aggregate ex USD Index.

The Bloomberg China Aggregate Index tracks the performance of the CNY-denominated fixed-income market. The China Aggregate Index was launched in March 2004, with an inception date of January 1, 2004. It contains fixed-rate Treasury, government-related (including policy banks), and corporate securities that are listed on the China Interbank market. This includes the Bloomberg China Aggregate Index (CNY Denominated).

The Bloomberg Pan-European Aggregate Index tracks fixed-rate, investment-grade securities issued in the following European currencies: EUR, GBP, NOK, DKK, SEK, CHF, CZK, HUF, PLN, RUB, and SKK. Inclusion is based on the currency of the issue, and not the domicile of the issuer. This includes the Bloomberg Pan European Aggregate Corporate TR Index Unhedged USD and the Bloomberg Pan-European Government Total Return Index Unhedged USD.

The Bloomberg Pan-European High Yield Index measures the market of non-investment grade, fixed-rate corporate bonds denominated in the following currencies: euro, pounds sterling, Danish krone, Norwegian krone, Swedish krona, and Swiss franc. Inclusion is based on the currency of issue, and not the domicile of the issuer. This includes the Bloomberg Pan-European High Yield (USD) Total Return Index Unhedged US.

The Bloomberg Global Aggregate Index is a flagship measure of global investment-grade debt from 24 local currency markets. This multi-currency benchmark includes Treasury, government-related, corporate, and securitized fixed-rate bonds from both developed and emerging markets issuers. This includes the Bloomberg Global Aggregate - United Kingdom Total Return Index Unhedged USD and the Bloomberg Global Credit - United Kingdom Total Return Index Unhedged USD.

The FTSE IdealRatings Sukuk measures the performance of global Islamic fixed-income securities, also known as sukuk. Investors cannot invest directly in the Index.

The FTSE WorldBIG Bond Index is a multi-asset, multi-currency index, which provides a broad-based measure of the global fixed-income markets.

The J.P. Morgan Emerging Market Global Core Index is composed of US dollar-denominated government bonds issued by emerging market countries. The Index is a broad, diverse US dollar-denominated emerging markets debt benchmark that tracks the total return of actively traded external debt instruments in emerging market countries. This includes the Bloomberg Global Credit - United Kingdom Total Return Index Unhedged USD.

The MSCI All Country World Index is produced by Morgan Stanley Capital International (MSCI). It is a broad measure of equity market performance throughout the world. Investors cannot invest directly in the Index.

The MSCI Emerging Markets Index, produced by Morgan Stanley Capital International, measures equity market performance in over 20 emerging market countries.

The MSCI Emerging Markets (EM) Currency Index tracks the performance of 25 emerging market currencies relative to the US dollar.

The MSCI World Net Total Return Index Futures are cash settled upon expiration. The underlying index is the MSCI World Net Total Return Index denominated in USD. This index covers approximately 85% of the free float-adjusted market capitalization across the World Developed Markets equity universe (large and mid-cap).

The S&P 500 is an index comprised of 500 widely held common stocks considered to be representative of the US stock market in general.

Performance data quoted herein represents past performance, which is no guarantee of future results.

Investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be higher or lower than the performance data quoted herein. Performance current to the most recent month-end can be obtained by visiting www.amanafunds.com or calling toll-free 1-800-728-8762. Please consider an investment's objectives, risks, charges, and expenses carefully before investing. For this and other important information about the Amana Participation Fund, please obtain and carefully read a free prospectus or summary prospectus from your financial adviser, at www.amanafunds.com, or by calling toll-free 1-800-728-8762.

Average Annual Total Returns	Since Inception ^a	1 Year	3 Year	5 Year	10 Year	Expense Ratio ^b
Investor Shares (AMAPX)	2.07%	2.83%	3.32%	1.32%	2.17%	0.82%
Institutional Shares (AMIPX)	2.31%	3.08%	3.57%	1.55%	2.40%	0.59%
Bloomberg Global Aggregate Bond	1.01%	4.26%	2.59%	-1.46%	0.58%	n/a
FTSE IdealRatings Sukuk Index	3.34%	4.07%	4.44%	1.79%	3.31%	n/a

(as of March 31, 2026, Net of Fees)

a. September 28, 2015.

b. Expense ratio shown is as stated in the Fund's most recent Prospectus, dated September 29, 2025.