

# Spotlight on Asian Credit – An Index Perspective

## Contributors

**Kangwei Yang**

Director  
Fixed Income Indices  
[kangwei.yang@spglobal.com](mailto:kangwei.yang@spglobal.com)

**Srichandra Masabathula**

Director  
Fixed Income Tradable  
Products  
[srichandra.masabathula@spglobal.com](mailto:srichandra.masabathula@spglobal.com)

## Current Landscape

The understanding of Asian credit has experienced some changes over recent years. The traditional view of Asian credit has largely been U.S. dollar bonds from Asian issuers outside Japan. This was also how most investment and risk teams were set up in the region. Teams that were set up to manage the broader Asia-Pacific (APAC) markets—which include Australia, New Zealand and Japan—only existed within a few organizations.

Today, there is much more acceptance of an APAC viewpoint. This change was driven by a couple of factors—namely the unfolding of the real estate crisis in China, which had a profound impact on the Asian high yield market, as well as the need for greater geographical diversification within the Asian credit space. For context, as of Feb. 29, 2024, the weight of USD bonds with exposure to China was around 40.3% in the Asia ex-Japan market, as represented by the iBoxx USD Asia ex-Japan. The same exposure drops to 26.7% in the context of APAC, as represented by the iBoxx USD Asia-Pacific.<sup>1</sup>

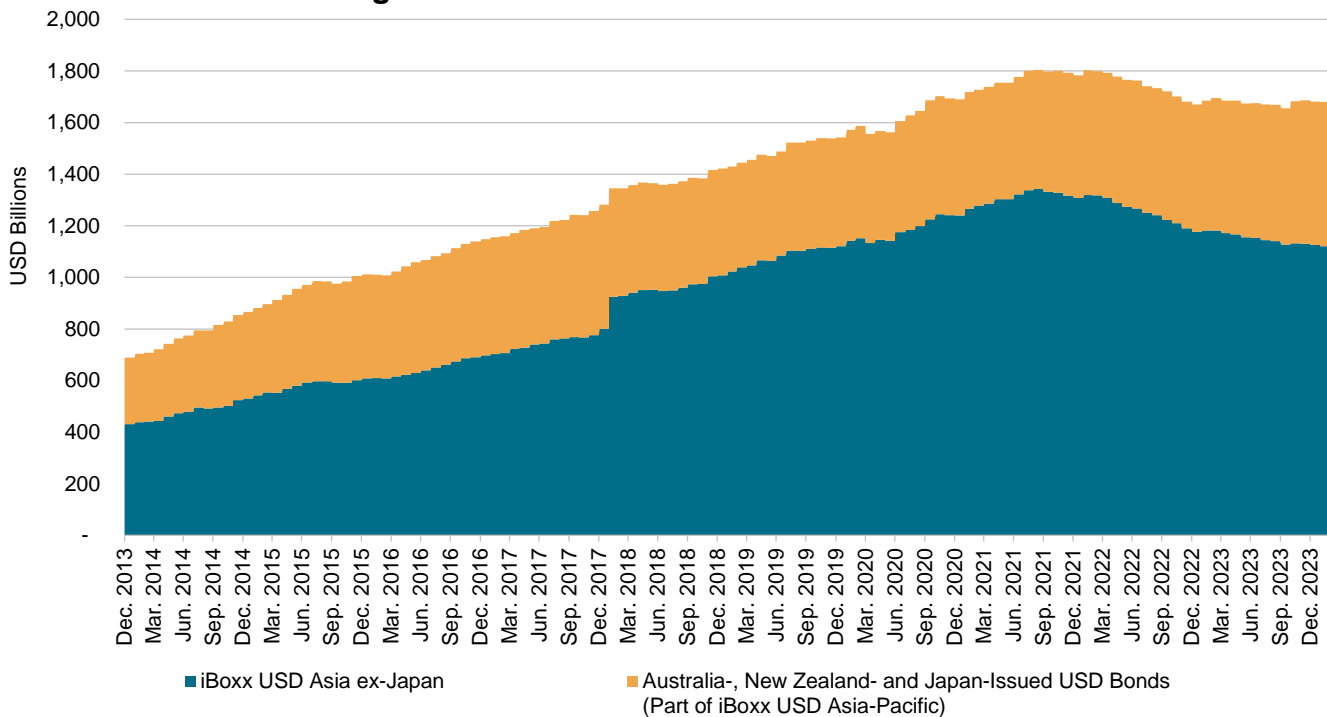
Over the course of 2022 and 2023, the total notional of Chinese USD bonds in the iBoxx USD Asia-Pacific dropped more than 30%, largely due to defaults from Chinese real estate issuers and debt refinancing moving onshore or to the dim sum bond market. Meanwhile, APAC USD bonds issued outside of China painted a different picture.

<sup>1</sup> Data as of Feb. 29, 2024.

Over the same period, non-China APAC USD bonds increased by 8.8%. Despite the uptick, overall growth in the segment slowed to more than one-half of the level seen in 2020 and 2021. On top of the tightening of monetary policy in the U.S. driven by higher inflation in 2022—making issuing new bonds much more expensive—uncertain economic conditions also resulted in companies being less willing to take risks, and thus reduced borrowing for business expansions.

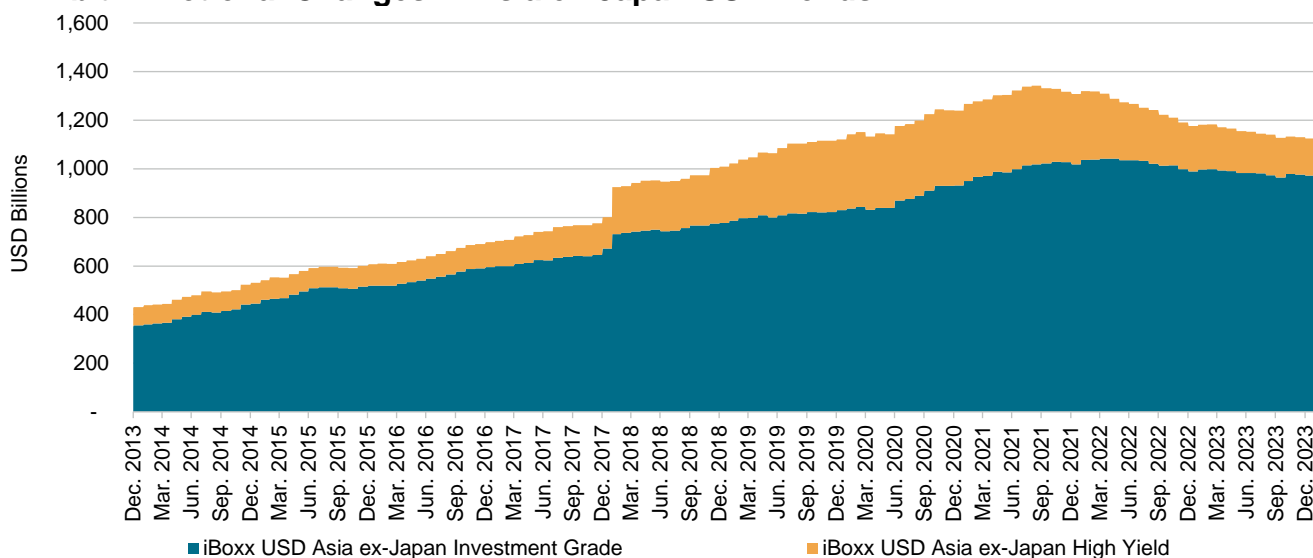
As seen in Exhibit 1, the notional of Asian credit bonds (as measured by the iBoxx USD Asia ex-Japan) grew substantially over the past 10 years, despite the recent slowdown. From Dec. 31, 2013, to Feb. 29, 2024, it saw an (absolute) increase of 262.2%, slightly larger than the 245.8% increase in the broader APAC markets, as measured by the iBoxx USD Asia-Pacific.

**Exhibit 1: Notional Changes in Asia-Pacific USD Bonds**



Source: S&P Dow Jones Indices LLC. Data as of Feb. 29, 2024. Overall index performance based on total return in USD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

If we dive deeper, we can see that a majority of bonds in the Asia ex-Japan credit market are investment grade (see Exhibit 2). There was a slew of new issuances in the high yield segment between 2018 to 2021, mostly from Chinese real estate companies. These issuances then fell away from late 2021 onwards due to market headwinds, which left a marked impact on the weight of China in the Asian credit market.

**Exhibit 2: Notional Changes in Asia ex-Japan USD Bonds**

Source: S&P Dow Jones Indices LLC. Data as of Feb. 29, 2024. Overall index performance based on total return in USD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Just three years ago, the weight of China in the iBoxx USD Asia ex-Japan exceeded 50%, while South Korea was the fourth-largest market (7.8%). As of Feb. 29, 2024, the underlying composition paints a different picture; the weight of China-issued USD bonds dropped to 40.3%, while South Korea's share in contrast almost doubled, making it the second-largest market in the index today (14.9%). Similar to South Korea, most other regions also increased their weights in relative terms.

**Exhibit 3: Composition of the iBoxx USD Asia ex-Japan – Three-Year Change**

Market (Top 10)	Weight as of Feb. 28, 2021 (%)	Weight as of Feb. 29, 2024 (%)
China	52.8	40.3
Indonesia	10.3	11.6
Hong Kong	8.2	9.1
South Korea	7.8	14.9
India	6.1	6.8
Philippines	4.2	5.2
Singapore	2.7	3.1
Malaysia	2.4	2.4
Macao	1.7	2.1
Thailand	1.5	1.7

Source: S&P Dow Jones Indices LLC. Data as of Feb. 29, 2024. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

In the upcoming sections, we describe the different indices that offer a unique view of the nuances of the APAC credit market. These indices include iBoxx bond indices, iTraxx Asia-

Pacific credit default swap (CDS) indices, and the specific iBoxx indices underlying ETFs aiming to track segments of the Asian credit market. The reliability and tradability of fixed income indices largely depends on the quality of the pricing data and liquidity of the underlying constituents. The iBoxx and iTraxx indices utilize bond pricing data provided by S&P Global Market Intelligence, which provides the pricing data of the underlying bonds and CDSs based on several factors, including executed trades, dealer quotes, banks' books of record and modeled inputs such as issuer and sector curves, as well as pricing of comparable securities.

## iBoxx Bond Indices for the APAC Credit Market

Indices can be effective tools for investment managers to assess the performance of the underlying markets and to make informed investment decisions. S&P Dow Jones Indices publishes a wide spectrum of hard and local currency indices across geographies and markets, serving the needs of market participants. The following section features three major indices covering the Asia ex-Japan and Asia-Pacific credit markets.

### iBoxx USD Asia ex-Japan

The iBoxx USD Asia ex-Japan benchmark and subindices are designed to reflect the performance of USD-denominated bonds issued by entities domiciled in the Asia ex-Japan region. The index series consists of sovereign, sub-sovereign and corporate debt, further broken down into subindices based on country, rating and maturity.

### iBoxx USD Asia-Pacific

The iBoxx USD Asia-Pacific Indices are an extension of the iBoxx USD Asia ex-Japan index series to include bonds from Australia, New Zealand and Japan. The indices were launched in 2022 as investors began to look beyond Asia ex-Japan and to the Asia-Pacific region. Similarly, this index series consists of sovereign, sub-sovereign and corporate debt, further broken down into subindices based on country, rating and maturity.

### iBoxx ChinaBond Asian High Yield

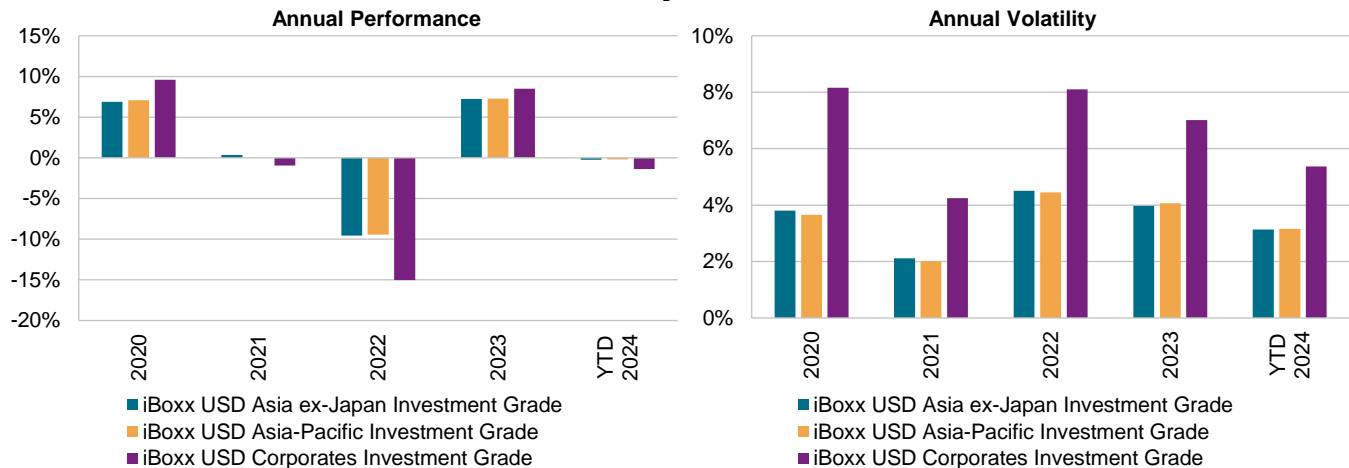
Breaking away from the traditional views of looking only at USD bonds, the iBoxx ChinaBond Asian High Yield seeks to combine local currency bonds (CNY and SGD) with the traditional hard currency bonds (USD) to reflect the performance of high yield debt from Asian issuers. The index is a joint initiative between S&P Dow Jones Indices and ChinaBond Pricing Center Co., Ltd. It was designed in response to a declining market size for the Asian USD high yield credit market in recent years. The index market was expanded through the inclusion of accessible local currency bonds, while simultaneously offering more diversification across currencies and issuers.

The next section breaks down the three indices into investment grade and high yield segments, where we dive deeper into their performance and compare it to the broader USD markets over the past five years.

## Investment Grade

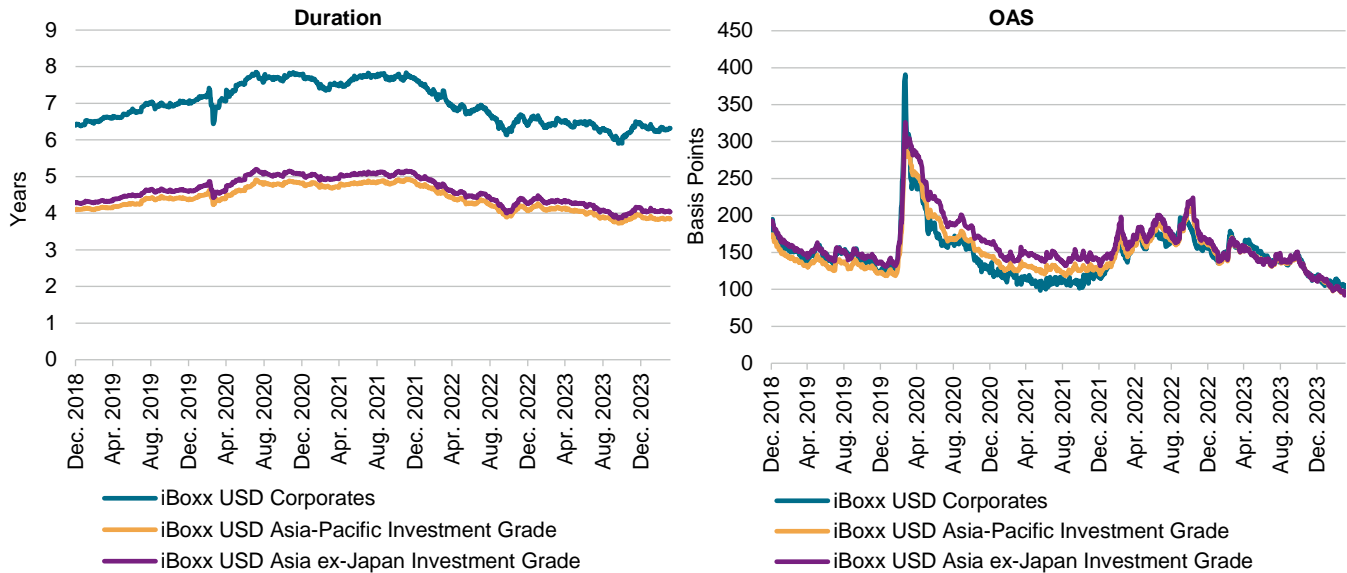
Within the investment grade segment, there were not many differences in the return and volatility profiles of the iBoxx USD Asia ex-Japan USD and iBoxx USD Asia-Pacific USD, as depicted in Exhibit 4. In comparison, the broader U.S. corporate investment grade market exhibited higher volatility compared to its Asian counterparts, resulting in larger swings in index gains and losses. Looking at the duration and credit spreads of the Asian investment grade indices relative to the broader iBoxx USD Corporates shows key components of the risk contained in the indices.

**Exhibit 4: Annual Performance and Volatility over the Past 5 Years – Investment Grade**



Source: S&P Dow Jones Indices LLC. Data as of Feb. 29, 2024. Index performance based on total return in USD. Past performance is no guarantee of future results. Charts are provided for illustrative purposes.

The iBoxx USD Corporates consists of global USD corporate bonds that are rated investment grade, whereas the iBoxx USD Asia-Pacific Investment Grade and iBoxx USD Asia ex-Japan Investment Grade indices track both sovereign and corporate bonds in their respective regions. As shown in Exhibit 5, the duration of the iBoxx USD Corporates Investment Grade was consistently about two years higher than that of the iBoxx USD Asia ex-Japan Investment Grade and iBoxx USD Asia-Pacific Investment Grade, creating a higher sensitivity to interest rate risk. The iBoxx USD Corporates Investment Grade had a significantly higher proportion of longer-dated bonds and as of March 2024, had an expected remaining life of 10.2 years, whereas the expected remaining life of the iBoxx USD Asia ex-Japan Investment Grade and iBoxx USD Asia-Pacific Investment Grade was 6.1 years and 5.1 years, respectively.

**Exhibit 5: Duration and Credit Spreads – Investment Grade**

Source: S&P Dow Jones Indices LLC. Data as of Feb. 29, 2024. Past performance is no guarantee of future results. Charts are provided for illustrative purposes.

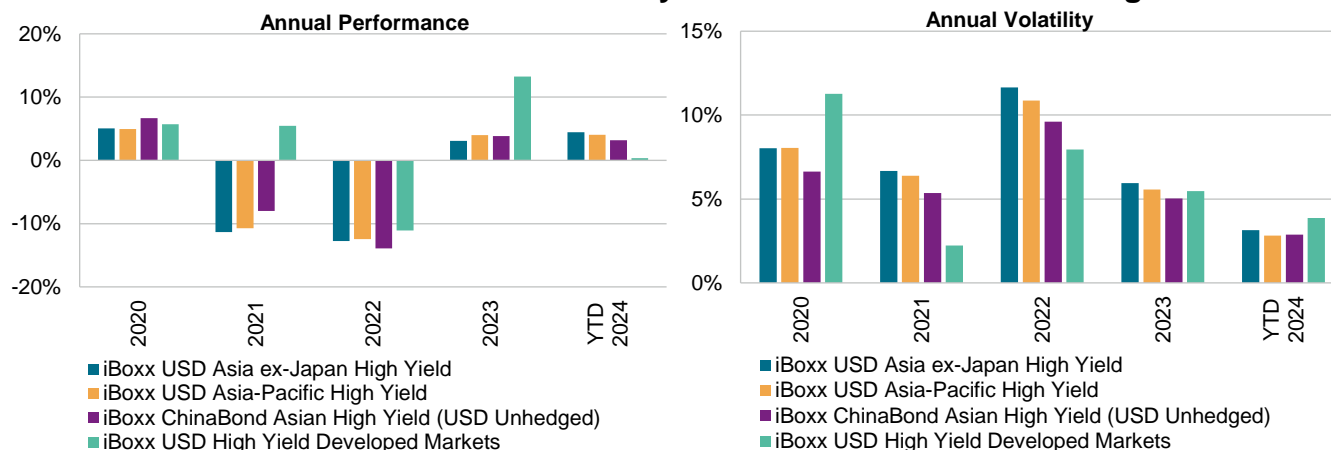
While there was a noticeable difference in the duration, the credit spreads of the indices over the last five years were quite close to each other. The credit risk profiles of the iBoxx USD Corporates Investment Grade and the Asian investment grade, as indicated by their option-adjusted spreads, were similar. However, in periods of market stress such as the COVID-19-induced volatility in March 2020, there was greater deviation of the credit spreads of these indices.

## High Yield

Things look different and more mixed in the high yield segment. Within Asian high yield, we look at three different indices.

- iBoxx USD Asia ex-Japan High Yield
- iBoxx USD Asia-Pacific High Yield
- iBoxx ChinaBond Asian High Yield

At the onset of the real estate crisis in 2021—triggered in part by a missed payment from Chinese developer Evergrande—the index with the highest exposure to Chinese real estate issuers (the iBoxx USD Asia ex-Japan High Yield) was the most severely affected, losing 11.3%. Losses continued in 2022, with the index retreating another 12.8% (see Exhibit 6).

**Exhibit 6: Annual Performance and Volatility over the Past Five Years – High Yield**

Source: S&P Dow Jones Indices LLC. Data as of Feb. 29, 2024. Past performance is no guarantee of future results. Charts are provided for illustrative purposes.

The inclusion of some Australia- and Japan-issued USD high yield bonds provides the iBoxx USD Asia-Pacific High Yield with some diversification across markets that may have led to slightly more subdued losses compared to the iBoxx USD Asia ex-Japan High Yield for both years (-10.7% and -12.5% for 2021 and 2022, respectively).

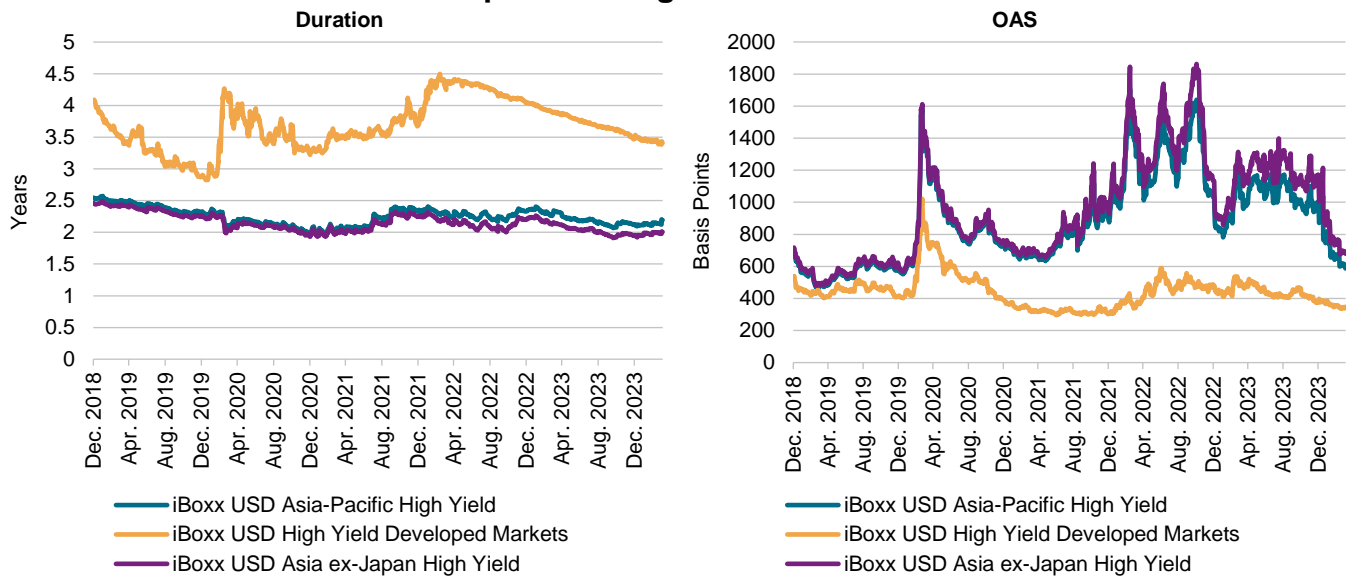
In 2021, the impact on the iBoxx ChinaBond Asian High Yield was smaller (-8.0%), due to positive returns from the SGD and CNY portions of the index, which absorbed some losses in the Asian USD bonds. However, the index saw the steepest drop in 2022, as losses in China real estate extended into onshore bonds and all three segments of the index (USD, CNY and SGD) suffered losses. Since 2021, the annual volatility of the iBoxx USD Asia ex-Japan High Yield was consistently the highest among these three indices.

The broader USD high yield market—as represented by the iBoxx USD High Yield Developed Markets Index—exhibited much lower volatility compared to the Asian indices in both 2021 and 2022. In 2021, it also managed a positive return of 5.5%, when all three Asian indices experienced losses. While the iBoxx USD High Yield Developed Markets Index significantly exceeded gains compared to Asian credit in 2023, Asian credit markets have performed better YTD as of Feb. 29, 2024.

Looking at the data for the past five years, which included the COVID-19-induced volatility of March 2020, there was a significant difference in the duration and option-adjusted spreads (OAS) between the iBoxx USD High Yield Developed Markets Index and the Asian high yield indices (see Exhibit 7). While the duration of iBoxx USD High Yield Developed Markets Index had always been higher than that of the iBoxx USD Asia ex-Japan High Yield and iBoxx USD Asia-Pacific High Yield, it also showed more variation, hovering between 2.8 and 4.4 years during the period. Part of this variation can be attributed to a slew of downgrades in March 2020, which resulted in longer-duration fallen angels entering the iBoxx USD High Yield Developed Markets Index. Another noticeable trend was the consistent decline in the duration

from about 4.4 years in April 2022 to about 3.4 years in March 2023, when high refinancing costs contributed to a lower volume of new issuance in the iBoxx USD High Yield Development Markets Index. The duration for the iBoxx USD Asia ex-Japan High Yield and iBoxx USD Asia-Pacific High Yield was much more consistent, staying in the 1.9-2.5 year range during the past five years.

**Exhibit 7: Duration and Credit Spreads – High Yield**



Source: S&P Dow Jones Indices LLC. Data as of Feb. 29, 2024. Past performance is no guarantee of future results. Charts are provided for illustrative purposes.

With a greater part of the variation in high yield indices being explained by changes in the underlying credit risk of the issuers, it is imperative to look at how the credit spreads of these indices changed over time. Even before the unfolding of the real estate crisis in China in late 2021, credit spreads of the iBoxx USD Asia ex-Japan High Yield and iBoxx USD Asia-Pacific High Yield had been high relative to iBoxx USD High Yield Development Markets Index, perhaps due to the inherent emerging markets risk. This difference increased significantly from late 2021 onward due to the heightened volatility in the Asian credit markets. During this period, the weight of Chinese real estate bonds in the iBoxx USD Asia ex-Japan High Yield dropped from 34% at the Sept. 30, 2021, rebalance to 14% by Feb. 29, 2024. Starting in Q1 2024, the credit spreads of the iBoxx USD Asia ex-Japan High Yield and iBoxx USD Asia-Pacific High Yield began a downward trend, narrowing the gap with the iBoxx USD High Yield Development Markets Index.



# iTraxx Asia-Pacific Indices

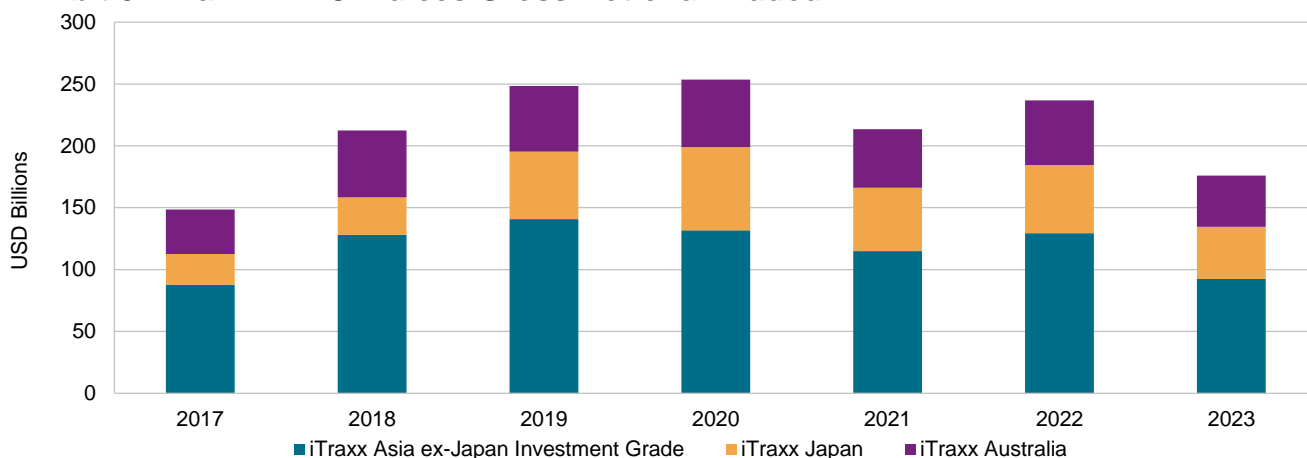
The iTraxx Asia-Pacific CDS indices track a key component of the APAC credit market. These indices can be used to gain exposure to or hedge credit risk of issuers in the region. While iBoxx cash bond indices reflect both interest rate risk and credit risk of the underlying bonds, the iTraxx indices aim to reflect the pure credit risk of the issuers themselves.

Unlike the iBoxx bond indices, which are market-cap weighted, the iTraxx CDS indices are equally weighted, offering a unique perspective on the APAC credit market. The iTraxx indices “roll” into the new on-the-run series every six months, and each new series has a five-year tenor at the time of its launch.

There are three key iTraxx Asia-Pacific indices:

- **iTraxx Asia ex-Japan**  
Consists of the 40 most liquid investment grade issuers in the Asia ex-Japan region based on CDS liquidity, while broadly maintaining the market-sector profile of the Asia ex-Japan USD investment grade bond market. The index consists of both sovereign and corporate entities.
- **iTraxx Australia**  
Consists of the 25 most liquid Australian investment grade corporate issuers in the CDS market.
- **iTraxx Japan**  
Consists of the 40 most liquid Japanese investment grade corporate issuers in the CDS market, with sector capping to maintain sector diversification.

The indices measure standardized, centrally cleared credit derivatives that are supported by a number of market-makers providing liquidity. Exhibit 8 shows the annual trading volume for the iTraxx Asia-Pacific indices. In 2023, the iTraxx Asia ex-Japan traded about USD 92 billion, the iTraxx Japan about USD 42 billion and the iTraxx Australia index about USD 41 billion. It is worth noting that the indices had record combined volumes of over USD 250 billion in 2020, which was the year of heightened market volatility induced by the COVID-19 pandemic. The indices also traded at tight bid-ask spreads, as shown in Exhibit 9.

**Exhibit 8: iTraxx APAC Indices Gross Notional Traded**

Source: DTCC. Data as of Feb. 29, 2024. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

**Exhibit 9: iTraxx APAC Indices 2023 Bid-Ask Spreads**

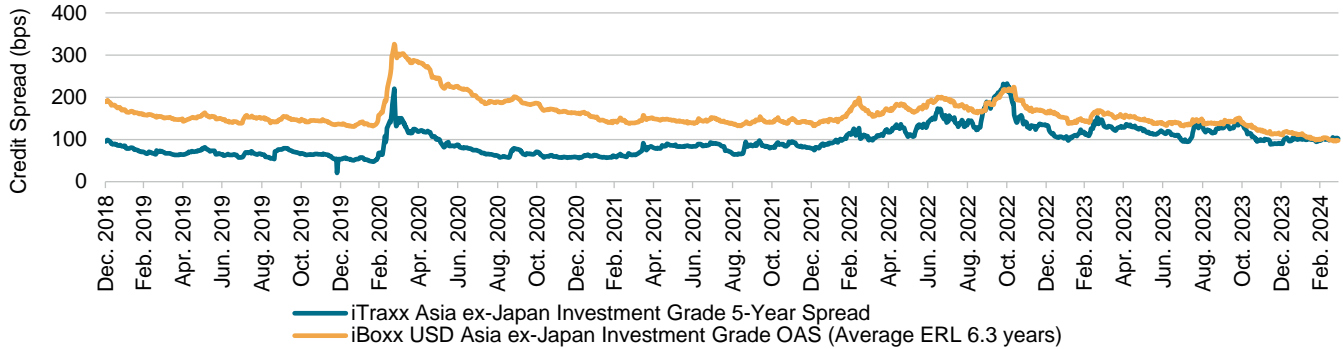
Index	2023 Average Bid-Ask Spread (bps)
iTraxx Asia ex-Japan 5-Year	2.66
iTraxx Australia 5-Year	1.97
iTraxx Japan 5-Year	2.03

Source: S&P Global Market Intelligence. Data as of Feb. 29, 2024. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

In the charts that follow, we aim to illustrate a comparison of the iTraxx Asia ex-Japan versus the iBoxx USD Asia ex-Japan Investment Grade. As noted earlier, the iTraxx Asia ex-Japan aims to have a similar geographic-sector profile as the iBoxx USD Asia ex-Japan Investment Grade. This potentially enhances the use of the iTraxx Asia ex-Japan as an instrument to hedge or gain exposure to the Asia ex-Japan investment grade bond market.

Exhibit 10 shows the iTraxx Asia ex-Japan 5-year spreads along with the iBoxx USD Asia ex-Japan Investment Grade OAS over the past five years. Prior to March 2021, there was a significant difference between the geographic-sector profile of the two indices; the iTraxx Asia ex-Japan had a higher weighting in South Korea and the iBoxx bond index had a higher weighting in China. This explains the larger gap in the credit spreads of the two indices prior to March 2021. In September 2019, the iTraxx Asia ex-Japan rules were amended to align the geographic-sector profile of the index with that of the corresponding cash market. This adjustment was done over a period of 18 months, following which the gap in the credit spreads of the two indices narrowed.

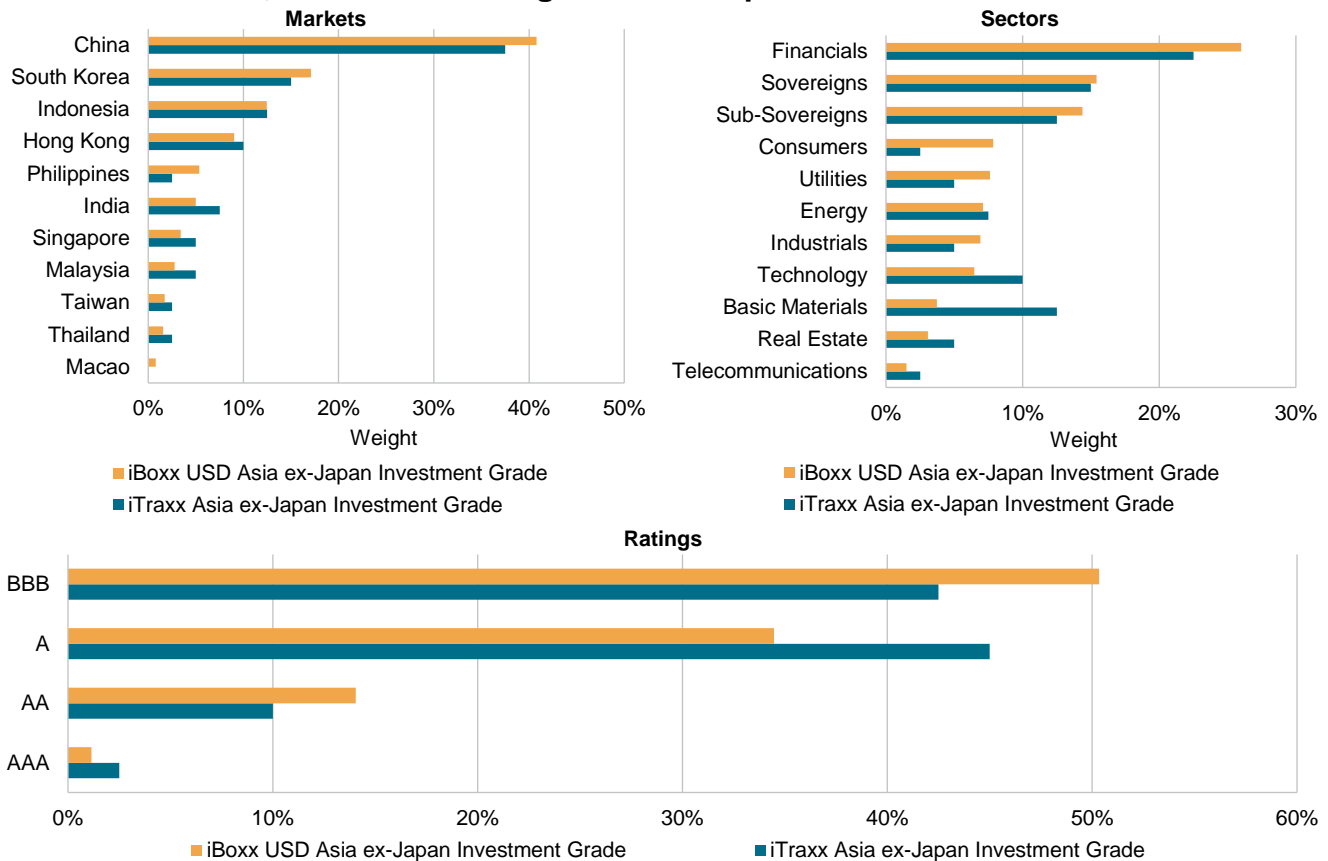
### Exhibit 10: Credit Spreads of the iTraxx Asia ex-Japan versus the iBoxx Asia ex-Japan Investment Grade



Source: S&P Global Market Intelligence, S&P Dow Jones Indices LLC. Data as of Feb. 29, 2024. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Exhibit 11 shows a comparison of the weights in the iTraxx Asia ex-Japan and the iBoxx USD Asia ex-Japan Investment Grade across markets, sectors and ratings. The two indices closely align with each other, presenting perspectives into the Asia ex-Japan investment grade credit market from CDS and bond markets.

### Exhibit 11: Market, Sector and Rating Profile Comparison



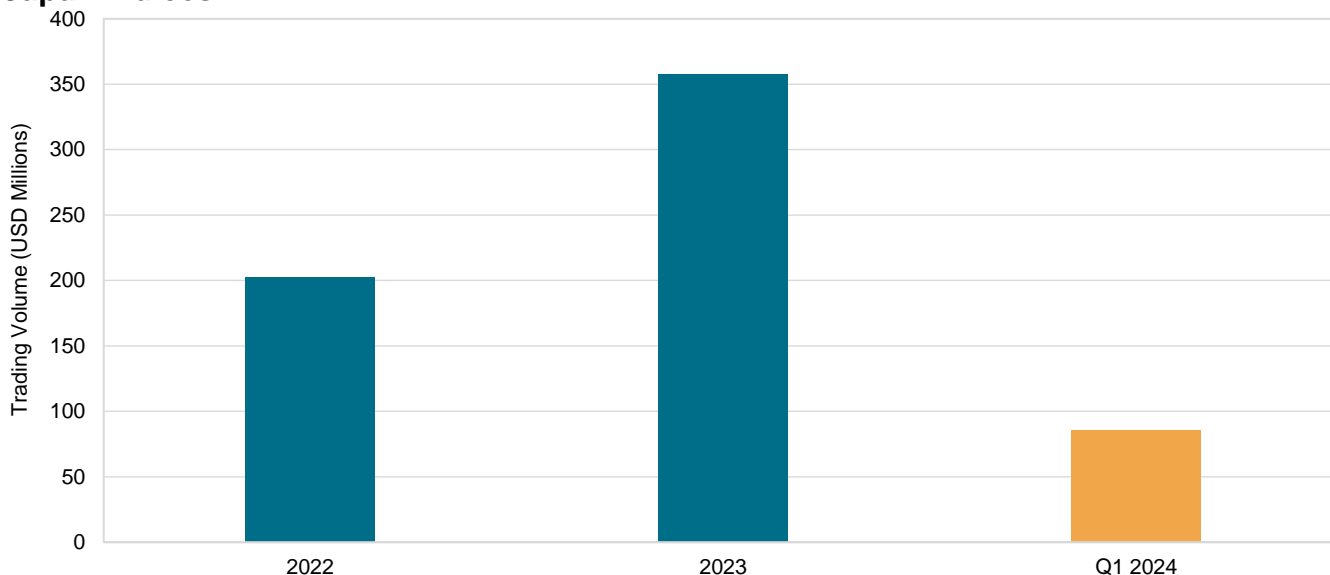
Source: S&P Dow Jones Indices LLC. iBoxx USD Asia ex-Japan Investment Grade weights as of March 31, 2024, rebalance. iTraxx Asia ex-Japan Investment Grade weights refer to the on-the-run series as of March 31, 2024; i.e. Series 40. Charts are provided for illustrative purposes.

# ETFs

Exchange-traded funds (ETFs) tracking the Asian credit markets have continued to gain popularity as versatile investment vehicles for gaining exposure to key segments of the market. Trading ETFs could provide key benefits such as liquidity and diversification, in addition to ease of access through exchanges. Several ETFs tracking the Asian investment grade and high yield markets are discussed below.

Exhibit 12 shows the aggregate annual ETF trading volumes linked to the iBoxx USD Asia ex-Japan indices, specifically the iBoxx USD Asia ex-Japan Corporates Investment Grade ESG Screened Index and the iBoxx MSCI ESG USD Asia ex-Japan High Yield Capped Index.

## Exhibit 12: Aggregate Annual ETF Trading Volumes Linked to the iBoxx USD Asia ex-Japan Indices



Source: BlackRock, Tabula, Bloomberg. Data as of March 31, 2024. Chart is provided for illustrative purposes.

The specific indices within the iBoxx USD Asia ex-Japan family that have ETFs linked to them have some unique characteristics which are briefly summarized in Exhibit 13. The indices are transparent, rules-based benchmarks that allow market participants to gain diversified exposure to the Asian credit market.

### Exhibit 13: Index Characteristics

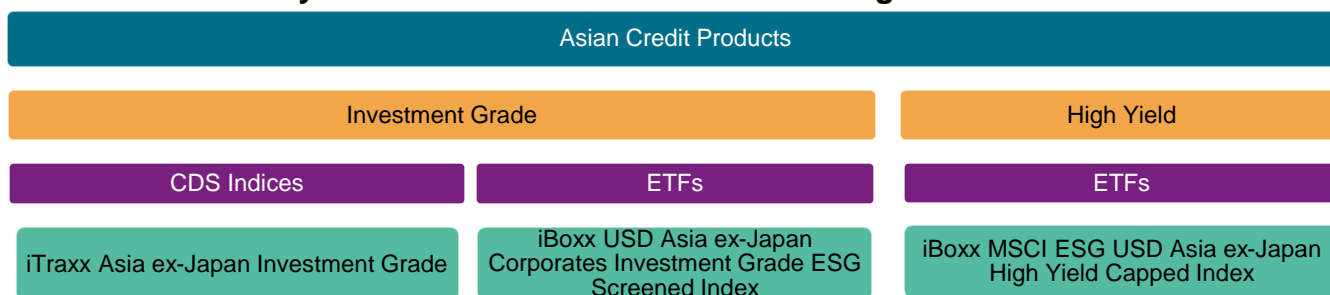
Characteristic	iBoxx USD Asia ex-Japan Corporates Investment Grade ESG Screened Index	iBoxx MSCI ESG USD Asia ex-Japan High Yield Capped Index
Rating Segment	Investment Grade	High Yield
Issuer Capping	4%	3%
Sector Capping	-	50%
Business Involvement Exclusions	Issuers breaching UN Global Compact sustainability standards or product involvement thresholds on small arms, controversial weapons, thermal coal, oil sands and tobacco	Issuers breaching product involvement thresholds on thermal coal, adult entertainment, alcohol, gambling, tobacco, controversial weapons, nuclear weapons, conventional weapons, civilian firearms, nuclear power, genetically modified organisms and recreational cannabis
Controversy-Based Screening	Yes	Yes
Additional Factors	-	ESG tilt, momentum

Source: S&P Dow Jones Indices LLC. Data as of June 2024. Table is provided for illustrative purposes.

## Conclusion

There are different ways to understand and access credit markets in the APAC region, and the iBoxx and iTraxx indices can act as transparent, rules-based points of reference in this space. From broad bond benchmarks to indices underlying ETFs to the iTraxx CDS, there is a solid foundation of index-based investment vehicles in the region, offering index liquidity and depth in the market. With rapidly evolving fixed income markets, there is likely to be plenty of opportunities for growth of credit index products in the coming years.

### Exhibit 14: Summary of Asian Credit Products Referencing iBoxx and iTraxx Indices



Source: S&P Dow Jones Indices LLC. Chart is provided for illustrative purposes.

For further reading see:

- [iBoxx USD Asia-Pacific Index Guide](#)
- [iBoxx USD Asia ex-Japan Index Guide](#)
- [iBoxx USD Asia ex-Japan Corporates Investment Grade ESG Screened Index Guide](#)
- [iBoxx MSCI ESG USD Asia ex-Japan High Yield Capped Index](#)
- [CDS Indices Primer](#)
- [The Evolution of the Fixed Income Tradable Ecosystem](#)
- [iTraxx Asia ex-Japan Index Rules](#)
- [Talking Points: The iBoxx ChinaBond Asian High Yield Index](#)
- [Defensive Strategies for the Asian USD High Yield Credit Market](#)

## General Disclaimer

© 2024 S&P Dow Jones Indices. All rights reserved. S&P, S&P 500, SPX, SPY, The 500, US 500, US 30, S&P 100, S&P COMPOSITE 1500, S&P 400, S&P MIDCAP 400, S&P 600, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, DIVIDEND MONARCHS, BUYBACK ARISTOCRATS, SELECT SECTOR, S&P MAESTRO, S&P PRISM, GICS, SPIVA, SPDR, INDEXOLOGY, iTraxx, iBoxx, ABX, ADBI, CDX, CMBX, MBX, MCDX, PRIMEX, HHPI and SOVX are trademarks of S&P Global, Inc. (“S&P Global”) or its affiliates. DOW JONES, DJIA, THE DOW and DOW JONES INDUSTRIAL AVERAGE are trademarks of Dow Jones Trademark Holdings LLC (“Dow Jones”). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, S&P Global, Dow Jones or their respective affiliates (collectively “S&P Dow Jones Indices”) do not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. Index performance does not reflect trading costs, management fees or expenses. S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. S&P Dow Jones Indices is not an investment adviser, commodity trading advisor, commodity pool operator, broker dealer, fiduciary, promoter” (as defined in the Investment Company Act of 1940, as amended), “expert” as enumerated within 15 U.S.C. § 77k(a) or tax advisor. Inclusion of a security, commodity, crypto currency or other asset within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, commodity, crypto currency or other asset, nor is it considered to be investment advice or commodity trading advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof (“Content”) may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively “S&P Dow Jones Indices Parties”) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN “AS IS” BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT’S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.