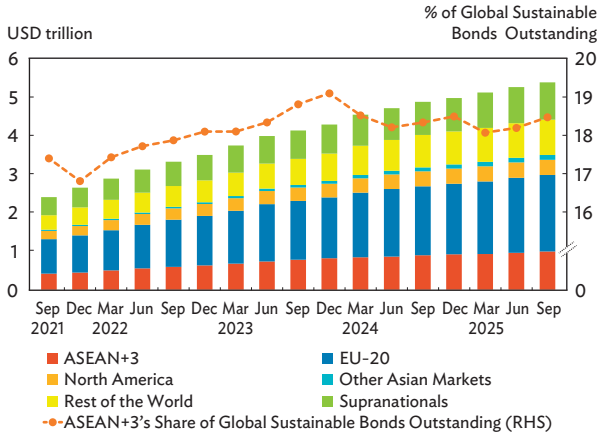
Recent Developments in the ASEAN+3 Sustainable Bond Market

Sustainable Bonds Outstanding

Favorable monetary conditions supported the expansion of ASEAN+3's sustainable bond market in the third quarter (Q3) of 2025, led by ASEAN.[15] Most central banks in ASEAN+3 maintained an easing monetary stance during the quarter amid benign inflation, which encouraged sustainable bond issuance, particularly in ASEAN economies. The region's overall sustainable bonds outstanding rose by 3.9% quarter-on-quarter (q-o-q) to reach USD994.4 billion at the end of September, supported by robust issuance of USD76.7 billion (**Figure 8**). The expansion in ASEAN+3's sustainable bond market outpaced that in other major global markets in Q3 2025, including the European Union 20 (EU-20), slightly raising ASEAN+3's share of global sustainable bonds outstanding to 18.5% from 18.2% in the second quarter (Q2). The expansion in ASEAN+3 was led by ASEAN markets amid continued rate cuts by regional central banks. ASEAN's outstanding sustainable bonds gained 8.6% q-o-q in Q3 2025, up from 3.6% q-o-q in the prior quarter. ASEAN's share of the ASEAN+3 sustainable bond market inched up to 11.0% at the end of Q3 2025, nearly double its 5.9% contribution to the ASEAN+3 general bond market.

The ASEAN+3 sustainable bond market has greater diversity in terms of instrument type than the EU-20 market (Table 1). While green bonds remain the predominant instrument in the ASEAN+3 sustainable bond market, accounting for 57.7% of bonds outstanding at the end of September, this was less than the corresponding share of 66.8% in the EU-20 market. ASEAN+3's sustainable bond market, however, had greater diversity across instrument types at the end of

Figure 8: Global Sustainable Bonds Outstanding



ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea;
EU-20 = European Union 20; RHS = right-hand side; USD = United States dollar.

Notes:
1. The EU-20 includes EU member markets Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.
2. Data include both local currency and foreign currency issues.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Table 1: Instrument Profiles of the ASEAN+3 and EU-20 Sustainable Bond Markets at the End of September 2025

Instrument Profile	ASEAN+3	EU-20
Green bonds	57.7%	66.8%
Social bonds	19.2%	16.5%
Sustainability bonds	15.3%	8.9%
SLBs (including transition-linked bonds)	4.3%	7.5%
Transition bonds	3.5%	0.2%
Herfindahl–Hirschman Index	0.40	0.49

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea; EU-20 = European Union 20; SLB = sustainability-linked bonds.

Notes:
1. Figures are based on the outstanding amount for each instrument type relative to the regional total of sustainable bonds outstanding.
2. The EU-20 includes European Union member markets Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.
3. The Herfindahl–Hirschman Index is a commonly accepted measure of market concentration. The index is used to measure the instrument profile diversification of bond markets and is calculated by summing the squared share of each instrument type in the market. A lower HHI indicates greater diversification across different instrument types, while a higher HHI suggests a more concentrated market structure dominated by fewer instruments.

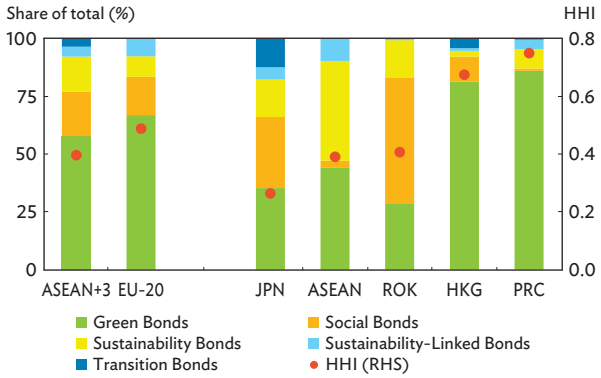
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

[15] ASEAN+3 comprises the member states of the Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea.

Q3 2025, as reflected by a Herfindahl–Hirschman Index (HHI) score of 0.40 versus 0.49 for the EU-20.[16] This diversity is evidenced by a broader distribution of issuance across a range of sustainable bond types including social bonds, sustainability bonds, and transition bonds. Within the region, the diversity of sustainable bond instruments was highest in Japan, ASEAN, and the Republic of Korea (**Figure 9**). Meanwhile, green bonds continued to dominate in the People's Republic of China (PRC) and Hong Kong, China, accounting for 86.1% and 81.3% of sustainable bonds outstanding, respectively.

Private sector financing continued to dominate ASEAN+3's sustainable bond market (Figure 10). At the end of Q3 2025, private sector sustainable bonds comprised 69.5% of ASEAN+3's sustainable bond total, compared with only 23.9% in the region's general bond market (**Table 2**). This indicates that ASEAN+3 economies are effectively leveraging private capital through sustainable bond markets. However, although the private sector's share of bonds outstanding in the EU-20's sustainable bond market was smaller (50.6%) at the end of Q3 2025, the absolute amount of private capital mobilized in the EU-20's sustainable bond market (USD1,003.4 billion) exceeded that in ASEAN+3 (USD691.5 billion). Within ASEAN+3, the PRC (93.2%) and Japan (59.2%) had the highest shares of private sector financing in their sustainable bond markets due to their relatively large corporate bond

Figure 9: Market Profile of Sustainable Bonds Outstanding by Instrument Type

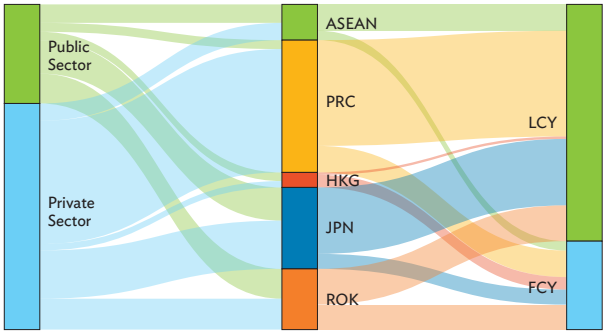


ASEAN = Association of Southeast Asian Nations; PRC = People's Republic of China; EU-20 = European Union 20; HHI = Herfindahl–Hirschman Index; HKG = Hong Kong, China; JPN = Japan; ROK = Republic of Korea; RHS = right-hand side.

Notes:
1. The EU-20 includes European Union member markets Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.
2. The Herfindahl–Hirschman Index is a commonly accepted measure of market concentration. The index is used to measure the instrument profile diversification of bond markets and is calculated by summing the squared share of each instrument type in the market. A lower HHI indicates greater diversification across different instrument types, while a higher HHI suggests a more concentrated market structure dominated by a few instruments.
3. Data include both local currency and foreign currency issues.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Figure 10: Market Profile of Outstanding ASEAN+3 Sustainable Bonds at the End of September 2025



ASEAN = Association of Southeast Asian Nations; PRC = People's Republic of China; FCY = foreign currency; HKG = Hong Kong, China; JPN = Japan; ROK = Republic of Korea; LCY = local currency.

Notes:
1. ASEAN+3 is defined to include member states of ASEAN plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea.
2. ASEAN comprises the markets of Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Table 2: Issuer and Currency Profiles in the ASEAN+3 and EU-20 Sustainable Bond Markets at the End of September 2025

Issuer and Currency Profile	ASEAN+3	EU-20
Private sector's share of regional general bonds outstanding	23.9%	39.6%
Private sector's share of regional sustainable bonds outstanding	69.5%	50.6%
LCY financing's share of regional general bonds outstanding	95.4%	89.6%
LCY financing's share of regional sustainable bonds outstanding	72.8%	90.4%

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea; EU-20 = European Union; LCY = local currency.

Note: The EU-20 includes European Union member markets Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

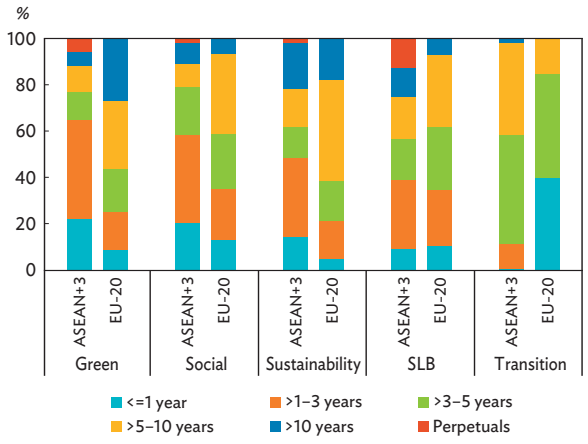
[16] The Herfindahl–Hirschman Index is a commonly accepted measure of market concentration. The index is used to measure market diversification and is calculated by summing the squared share of each type of sustainable bond. A lower score indicates greater diversity.

markets. Meanwhile, the private sector's financing shares in the sustainable bond markets of ASEAN (48.3%) and the Republic of Korea (50.9%) were comparable to that in the EU-20's (50.9%). While local currency (LCY) financing is prevalent in ASEAN+3's sustainable bond market, accounting for 72.8% of total bonds outstanding, it is well below the corresponding 95.4% in the region's general bond market. In the EU-20, the LCY financing share was broadly similar for both its sustainable (90.4%) and general (89.6%) bond markets.

Sustainable bonds outstanding in ASEAN+3 have a shorter size-weighted average tenor compared to those in the EU-20, with ASEAN markets having the longest average tenor within ASEAN+3. At the end of Q3 2025, 73.8% of sustainable bonds outstanding in ASEAN+3 carried tenors of less than 5 years, while the corresponding share in the EU-20 was 47.5%. The size-weighted average tenor of ASEAN+3 sustainable bonds outstanding was 4.5 years compared with the EU-20's 7.9 years.

- By instrument type, social bonds and green bonds had the highest shares of short-term tenors (5 years or less) among total bonds outstanding at 79.3% and 77.2%, respectively (**Figure 11**). Sustainability-linked bonds had the highest share of tenors longer than 5 years at 43.1%. Longer-tenor bonds comprised a higher percentage of sustainable bonds outstanding in the EU-20 than in ASEAN-3 (52.5% versus 26.2%). However, for sustainability-linked bonds (37.9% versus 43.1%) and transition bonds (15.0% versus 41.5%), the opposite was observed.
- The size-weighted average tenor of public sector sustainable bonds outstanding in ASEAN+3 at the end of Q3 2025 was 6.9 years, compared with the private sector's average of 3.4 years (**Figure 12**).
- ASEAN sustainable bonds outstanding had a size-weighted average tenor that exceeded the ASEAN+3 average. ASEAN's public sector had a size-weighted average tenor of 15.2 years at the end of September, compared with the EU-20's 9.5 years. Sustainable bonds outstanding in ASEAN's private sector had a size-weighted average tenor of 5.2 years. Within ASEAN+3, this was second only to Japan's corresponding average of 5.6 years.

Figure 11: Tenor Profiles of ASEAN+3 and EU-20 Sustainable Bonds Outstanding by Type of Bond at the End of September 2025

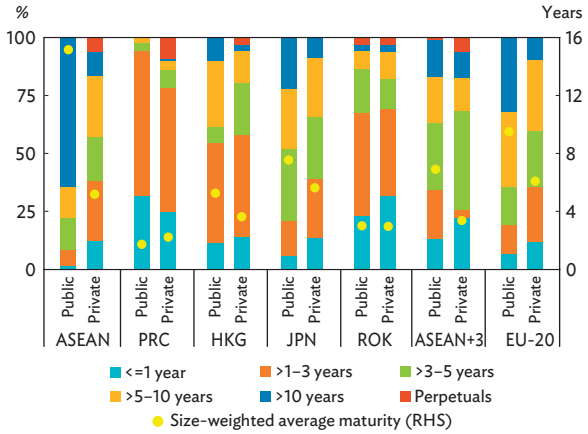


ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea; EU-20 = European Union 20; SLB = sustainability-linked bond.

Notes:
1. The EU-20 includes EU member markets Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.
2. Data include both local currency and foreign currency issues.
3. SLBs include transition-linked bonds.

Source: *AsianBondsOnline* computations based on Bloomberg LP data.

Figure 12: Tenor Profiles of ASEAN+3 and EU-20 Sustainable Bonds Outstanding by Sector at the End of September 2025



ASEAN = Association of Southeast Asian Nations; PRC = People's Republic of China; HKG = Hong Kong, China; JPN = Japan; RHS = right-hand side; ROK = Republic of Korea; EU-20 = European Union 20.

Notes:
1. ASEAN+3 is defined to include member states of ASEAN plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea.
2. ASEAN comprises the markets of Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.
3. The EU-20 includes EU member markets Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.

Source: *AsianBondsOnline* computations based on Bloomberg LP data.

Sustainable Bond Issuance

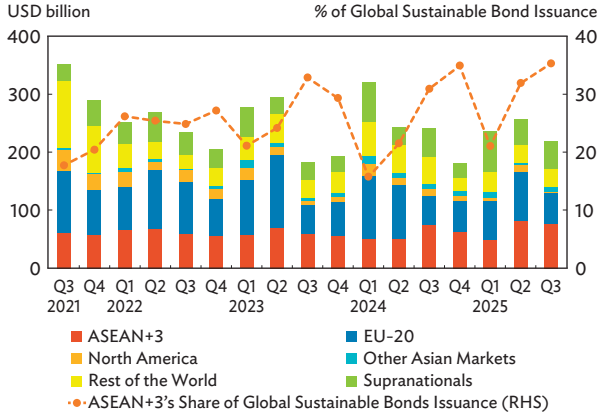
ASEAN+3 was the global leader in sustainable bond issuance in Q3 2025, reaching USD76.7 billion and accounting for 35.2% of the global total (Figure 13). ASEAN+3's sustainable bond issuance exceeded that of the EU-20 (USD53.0 billion) and the United States (USD0.9 billion), which had global issuance shares of 24.3% and 0.4%, respectively. ASEAN+3's issuance contracted by 5.7% q-o-q in Q3 2025 on reduced issuance in the large regional markets of the PRC and the Republic of Korea. Meanwhile, Q3 issuance totals in the EU-20 and the US contracted 37.0% q-o-q and 88.7% q-o-q, respectively, due to the rollback of US climate policy initiatives by the Trump administration and easing regulations in Europe that reduced the number of companies required to conduct environment, social, and governance disclosure.

ASEAN markets led the growth in ASEAN+3 sustainable bond issuance in Q3 2025. Supported by monetary easing, sustainable bond issuance in ASEAN markets more than doubled to USD10.7 billion in Q3 2025. Nearly all ASEAN economies saw expanded issuance, led by Malaysia (288.8% q-o-q), the Philippines (209.8% q-o-q), Singapore (125.6% q-o-q), and Indonesia (122.6% q-o-q). Consequently, ASEAN markets' sustainable bond issuance as a share of their total bond financing increased to 15.3% at the end of September from 9.1% at the end of June. This exceeded the corresponding share in the EU-20 (8.8%) as well as in the global bond market (4.3%).

Figure 14 captures the instrument, market, currency, maturity, and sector profiles of ASEAN+3 sustainable bond market issuance in Q3 2025:

- **Instrument profile.** In Q3 2025, green bond issuance accounted for 55.8% of ASEAN+3's sustainable bond issuance, down from 65.5% in Q2 2025. Excluding green bonds and social bonds, all other bond types recorded increases in their respective market shares.
- **Market profile.** The PRC accounted for nearly half (49.1%) of all sustainable bond issuance in ASEAN+3 in Q3 2025. The PRC led the region in the issuance of green bonds (69.6% of the regional total), sustainability bonds (45.8%), and sustainability-linked bonds (44.6%) during the quarter. The Republic of Korea led all regional markets in the issuance of social bonds (51.1%), while Japan was the sole market with transition bond issuance. ASEAN's sustainable bond issuance comprised 13.9% of the ASEAN+3 total in Q3 2025

Figure 13: Global Sustainable Bond Issuance and ASEAN+3 Share of Global Total Issuance

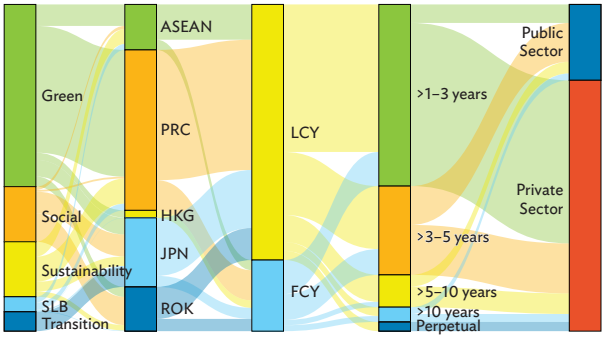


ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea; EU-20 = European Union 20; Q1 = first quarter; Q2 = second quarter; Q3 = third quarter; Q4 = fourth quarter; RHS = right-hand side; USD = United States dollar.

Note: The EU-20 includes EU member markets Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Figure 14: Market Profile of ASEAN+3 Sustainable Bond Issuance in the Third Quarter of 2025



ASEAN = Association of Southeast Asian Nations; PRC = People's Republic of China; FCY = foreign currency; HKG = Hong Kong, China; JPN = Japan; ROK = Republic of Korea; LCY = local currency; SLB = sustainability-linked bond.

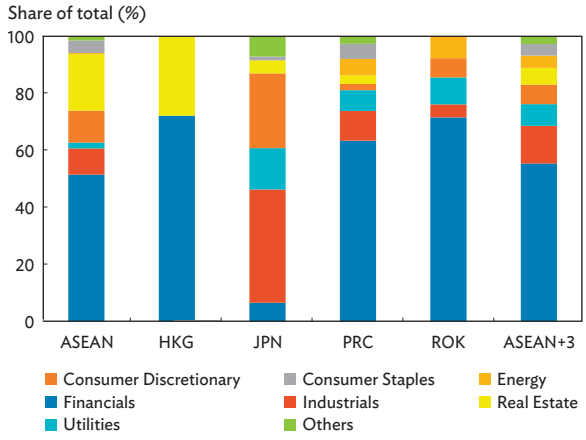
Notes:
1. ASEAN+3 is defined to include member states of ASEAN plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea.
2. ASEAN comprises the markets of Cambodia, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.
3. SLBs include transition-linked bonds.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

and included the region's second-highest issuance of sustainability-linked bonds (39.7%).

- **Currency profile.** In Q3 2025, 78.2% of ASEAN+3's sustainable bond issuance was denominated in a local currency. While substantial, this lagged the LCY financing share in the EU-20 sustainable bond market (93.7%) and the ASEAN+3 general bond market (91.3%) during the quarter. Within ASEAN+3, the LCY financing share of sustainable bond issuance was the highest in Japan (84.0%) and the PRC (81.2%). In contrast, all sustainable bond issuance in Hong Kong, China in Q3 2025 was denominated in a foreign currency.
- **Maturity profile.** Bonds with maturities of 5 years or less comprised 82.8% of total sustainable bond issuance in ASEAN+3 in Q3 2025. This differed sharply with the corresponding shares of 18.7% in the EU-20 sustainable bond market and 48.5% in the ASEAN+3 general bond market. In ASEAN markets, short-term (less than 5 years) maturities accounted for 60.1% of sustainable bond issuance during the quarter. The corresponding shares were over 90% in the PRC; Hong Kong, China; and the Republic of Korea. As a result, the size-weighted average maturity of sustainable bond issuance in Q3 2025 was longer in ASEAN (5.8 years) than in ASEAN+3 (4.7 years). The longer average maturity of ASEAN sustainable bond issuance was the result of relatively more public sector issuance, which had a size-weighted average maturity of 9.7 years compared to 4.2 years for private sector bond issuance.
- **Sector profile.** The private sector contributed 76.8% of ASEAN+3 sustainable bond issuance in Q3 2025, compared with 41.7% in the general bond market. Within the private sector, financial firms accounted for 55.5% of sustainable bond issuance, followed by industrials (13.3%) (**Figure 15**). In the EU-20, sustainable bond issuance in Q3 2025 was also led by the private sector (69.5%), with financials (46.2%) and utilities (29.7%) as the dominant private sector issuers. The sectoral diversity of sustainable bond issuance in ASEAN+3 and the EU-20 is broadly similar, as reflected in their comparable HHI scores of 0.34 and 0.32, respectively. **Box 3** provides an analysis of the effects of environmental, social, and governance investing on systemic risk in the banking system.

Figure 15: ASEAN+3 Sustainable Bond Issuance by Sector in the Third Quarter of 2025



ASEAN = Association of Southeast Asian Nations; PRC = People's Republic of China; HKG = Hong Kong, China; JPN = Japan; ROK = Republic of Korea.

Notes:
1. ASEAN+3 is defined to include member states of the Association of Southeast Asian Nations plus the People's Republic of China; Hong Kong, China; Japan; and the Republic of Korea.
2. Data include both local currency and foreign currency issues.

Source: *AsianBondsOnline* computations based on Bloomberg LP data.

Box 3: Does ESG Investing Affect Systemic Risk in the US Banking System?

The 2007–2008 global financial crisis and the collapse of Silicon Valley Bank in 2023—the second-largest bank failure in United States (US) history after the demise of Washington Mutual in 2008—and the acquisition of Credit Suisse by the Swiss investment bank UBS Group AG demonstrated the continued weakness of global banks in absorbing and managing major on- and off-balance sheet risk exposures. Responding to such challenges, the Basel Committee on Banking Supervision (2021) expanded its conventional regulatory capital and liquidity risk requirements by including environmental (E), social (S), and governance (G) considerations as important components of a bank's overall enterprise risk management framework. Following the "stakeholder theory" of the firm advanced by Freeman (1984) and Donaldson and Preston (1995), the ESG risk-reduction (or value-generating) opportunities for a bank can arise from three different, but related, sources. First, banks with high ESG scores can reduce adverse selection issues between managers and external investors by signaling their high quality transparently and with full disclosure. Second, banks with high ESG scores are typically exposed to a lower level of litigation and compliance risk. Finally, by systematically lending to environmentally and socially conscious borrowers, banks may become more attractive to green investors with a preference for banks with higher ESG scores. Depositors and borrowers may also gravitate to banks exhibiting positive social performance by moving their deposits and/or borrowing away from banks with poor social performance.

On the other hand, several recent studies question whether ESG investments are associated with either higher profitability or a lower cost of capital. Focusing on European banks, Di Tommaso and Thornton (2020) find only a modest reduction in risk-taking behavior among banks with high ESG scores. They argue that the potential risk-reducing effects of increased ESG investment are not necessarily aligned with creating bank value. Priem and Gabllone (2022) find that while banks with higher ESG scores tend to have a lower cost of capital, this relationship depends on the strength of the legal system in a bank's home country. Avramov et al. (2024) find that the lack of consistency in ESG disclosure and the ratings provided by different vendors and rating agencies tends to increase investors' uncertainty about ESG profiles, making them less likely to actively engage with high-scoring ESG firms than might be expected amid improved ratings consistency.

This study focuses on the joint and separate effects of ESG scores and their adjusted measures for observed controversies on banks' systemic risk in the US as measured by a battery of market and idiosyncratic risk indices, including the capital asset pricing model and the Fama-French equity return model, Merton's (1974) distance-to-default model, and levered and unlevered equity betas. As summarized in **Table B3**, using an instrumental variable approach on a sample of 245 US banks from 2016 to 2023, the results show that (i) investors demand a lower cost of capital from banks with higher overall ESG score; and (ii) banks with higher ESG scores are exposed to lower systemic risks, as captured by levered and unlevered betas. There is partial evidence of the risk-reducing effects of the environmental and governance components of ESG scores. The results further show that the idiosyncratic component of bank risk captured by the Merton distance-to-default

Table B3: ESG Investment and Systemic Risk Among US Banks, 2016–2023

	Cost of Capital	Beta (Levered/Unlevered)	Merton's Distance-to-Default
ESG (overall)	(–) Significant	(–) Significant	Not Significant
ESG (adjusted for controversies)	Not Significant	Not Significant	(-)Significant
Environmental	(–) Significant	(–) Significant	Not Significant
Social	Not Significant	Not Significant	(+) Significant
Governance	Not Significant	Not Significant	(–) Significant

ESG = environmental, social, and governance; US = United States.
Source: Author's calculations.

This box was written by Abol Jalilvand (professor of finance and director of the Center for Risk Management and Insurance) at Quinlan School of Business, Loyola University Chicago, United States. Anh Nguyen provided data collection, computational, and statistical support. An earlier version of the paper was presented at the 10th Multinational Energy and Value Conference in Izmir, Türkiye (May 2025); International Online Conference on Risk and Financial Management (June 2025); and Western Economic Association Annual Meeting in San Francisco, United States (June 2025). All remaining errors are the responsibility of the author.

continued on next page

Box 3 *continued*

index is not affected by a bank's overall ESG score, while its social component appears to be associated with a longer distance to default, thereby mitigating the bank's risk of default. On the other hand, the negative and significant effect of the governance component appears to be reducing the distance to default, thereby increasing the bank's risk of default.

Further, ESG scores are not generally significant when the combined scores adjusted for reported controversies are used. The negative and significant impact of adjusted ESG scores on the Merton distance to default is an exception that is likely resulting from the effect of the governance component highlighted earlier. Overall, the estimated coefficients on ESG are largely model-dependent and generated within a financial environment where ESG scores and firm riskiness are endogenously determined, necessitating the use of an instrumental econometric technique for avoiding the complications caused by omitted variables and measurement errors. The impact of ESG scores on bank risk is also largely dependent on bank size, leverage, and capital adequacy ratios. The results support the conjecture that barriers to sustainable investing and firms' risk-taking behavior may be due to investor uncertainty about the ESG profiles of firms. There is a need for regulatory policies to create standardized and objective measures of ESG investment to facilitate the channeling of resources to ESG-intensive firms.

References

Avramov, D., S. Cheng, A. Lioui, and A. Tarelli. 2024. Sustainable Investing with ESG Rating Uncertainty. *Journal of Financial Economics*. 145. pp. 642–664.

Basel Committee on Banking Supervision. 2021. *Climate-Related Risk Drivers and Their Transmission Channels*. Bank for International Settlements.

Di Tommaso, C. and J. Thornton. 2020. Do ESG Scores Effect Bank Risk Taking and Value? Evidence from European Banks. *Corporate Social Responsibility and Environmental Management*. 27 (5). pp. 2286–2298.

Donaldson, T. and L. Preston. 1995. The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implication. *Academy of Management Review*. 20 (1). pp. 65–91.

Freeman, R. 1984. *Strategic Management: A Stakeholder Approach*. Boston Pitman Publishing.

Merton, R. C. 1974. On the Pricing of Corporate Debt: The Risk Structure of Interest Rates. *Journal of Finance*. 29. pp. 449–470.

Priem, R. and A. Gabllone. 2022. *The Impact of a Firm's ESG Score on Its Cost of Capital: Can a High ESG Score Serve as a Substitute for a Weaker Legal Environment?*