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# Lighting the way to smarter green bond investments

Acuity's comprehensive green bond  
analysis framework

[acuitykp.com](https://www.acuitykp.com)

# KEY TAKEAWAYS

1. Green bonds have become increasingly popular in recent years among investors seeking sustainable and socially responsible investment opportunities. As a result, there is growing demand for transparent and standardised data to support green bond investments.
2. Unfortunately, most sources currently available for analysing green bond issuances are limited in terms of the data and coverage they offer. Moreover, there is an increasing need for green bond investors to be equipped with an internal framework to screen and identify the relative strengths of issuances under consideration. To address these challenges, a comprehensive analysis framework that can be customised to the needs of each green bond investor is necessary.
3. Acuity Knowledge Partners' (Acuity's) proprietary green bond analysis framework provides a comprehensive and customisable tool for screening and ranking green bonds; this is, based on a 16-criteria rating system covering six broad categories of assessment.
4. Equipped with Acuity's framework, green bond investors would be able to stay ahead of the pack in identifying, standardising and comparing qualitative and quantitative information essential to choosing the right green bonds for their portfolios.
5. The framework could also be used for initial screening and ranking of green bond issuances and subsequent monitoring of portfolio positions for potential breaches of key criteria. It also includes insightful visualisations of the 16 criteria at both the bond and portfolio level that can be used in internal memos/reviews and external publications.
6. Data extraction for green bonds is supported by Acuity's proprietary suite of Business Excellence and Automation Tools (BEAT) that use AI/ML tools to deliver significant efficiency gains.



## Green bonds in numbers



**USD2.5tn**

Annual investment needed to meet goals of Paris Agreement



**USD2.3tn**

Aggregate value of green bond issuances (as of May 2023)

**44%**

of investors cite **greenwashing** as the biggest concern when investing in ESG



*BNP Paribas ESG Global Survey, 2021*



**USD487bn**

New green bond issuance in 2022



**1.5k**

Number of green bonds listed on the world markets in 3Q22  
4.2% ▲ q/q (2Q22)  
34.3% ▲ y/y (3Q21)

**43%**

**of issuers** do not report post-issuance use of proceeds or engage in impact reporting



*Climate Bonds Initiative, 2021*



**22%**

of investors say all or most of their portfolios incorporate ESG

*BNP Paribas ESG Global Survey, 2021*



**4x**

AuM in sustainable investment funds quadrupled in just 3 years (2019-21)

**25%**

**of green bond issuance**

does not meet standards and is excluded from the Climate Bonds database

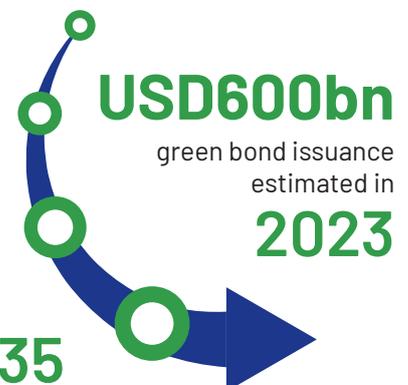
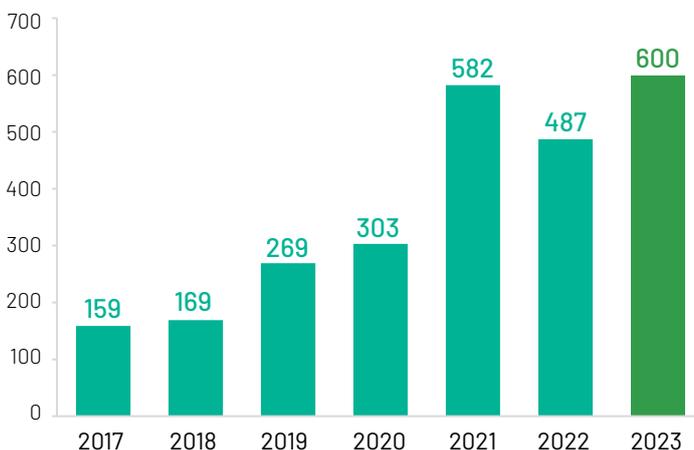


*Climate Bonds Initiative, 2021*

## Growth potential

### Green bond issuance

in USDbn



by **2035**  
global green bond market to reach

**USD4.7-5.6tn**

# 1. Introduction

## Green bond issuance soaring on growing investor demand

Green bonds are a fixed-income instrument where the proceeds from issuance are used exclusively to finance or re-finance new or existing green projects, green assets or business activities with positive environmental and/or climate benefits such as renewable energy, sustainable transport and clean water projects. These instruments have attracted significant interest and investment in recent years as demand for sustainable and socially responsible investments continues to grow. Global issuance of green bonds reached a record high of USD522.7bn in 2021, according to the Climate Bonds Initiative (CBI), an increase of 75% from 2020. Although the market experienced a brief setback in 2022 due to high market volatility and rising interest rates, demand for green bonds is expected to gain traction as investors seek to align their portfolios with their values, supporting the transition to a more sustainable future. Global green bond issuance is projected to reach USD4.7-5.6tn by 2035, according to the Organization for Economic Co-operation and Development (OECD).

## Existing solutions fall short of meeting investors' needs

Issuers of green bonds have a commitment to ensure the proceeds are allocated to finance green initiatives. Nevertheless, a 2022 study conducted by the CBI found that 25% of global green bond issuance does not meet best practice climate standards, owing to insufficient disclosure by the issuers or the use of proceeds lacking the required green ambition. As the green bond market and investor appetite have grown, so has the need for greater transparency and standardised, comparable data for validating green bond investments. However, issuers and investors suffer from a lack of consensus on what green data should be provided and be analysed in connection with green bond offerings.

Most of the solutions currently available for analysing green bond issuance are limited in terms of data and coverage they offer, and almost none provides an assessment of the environmental impact and management of a green bond issue. Moreover, information pertaining to the detailed use of proceeds and alignment with the United Nations' Sustainable Development Goals (UN SDGs), market standards and post-issuance reporting and disclosure requirements are often not available. This calls for a more comprehensive solution and a reliable analysis framework that provides standardised, comparable information on green bond issuances.

## Leveraging Acuity's solution

Acuity's proprietary green bond analysis framework is a solution developed to overcome these challenges. It enables investors/asset managers to screen the green bond universe and build their investment portfolios. The framework also allows a comparative assessment of green bond offerings across 16 criteria under six categories.

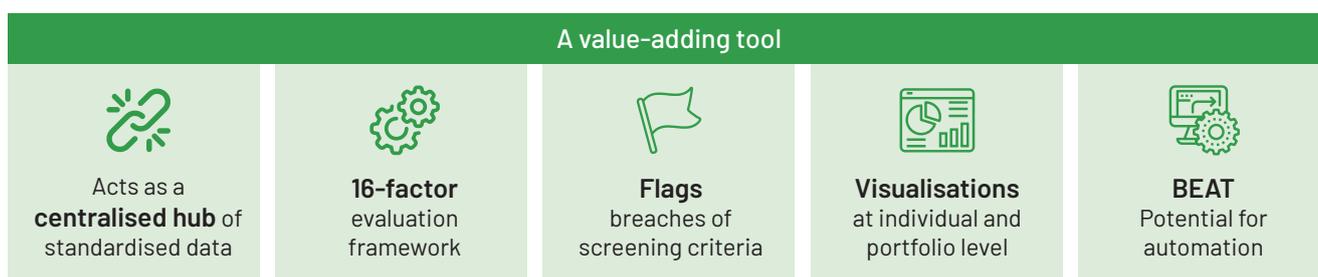
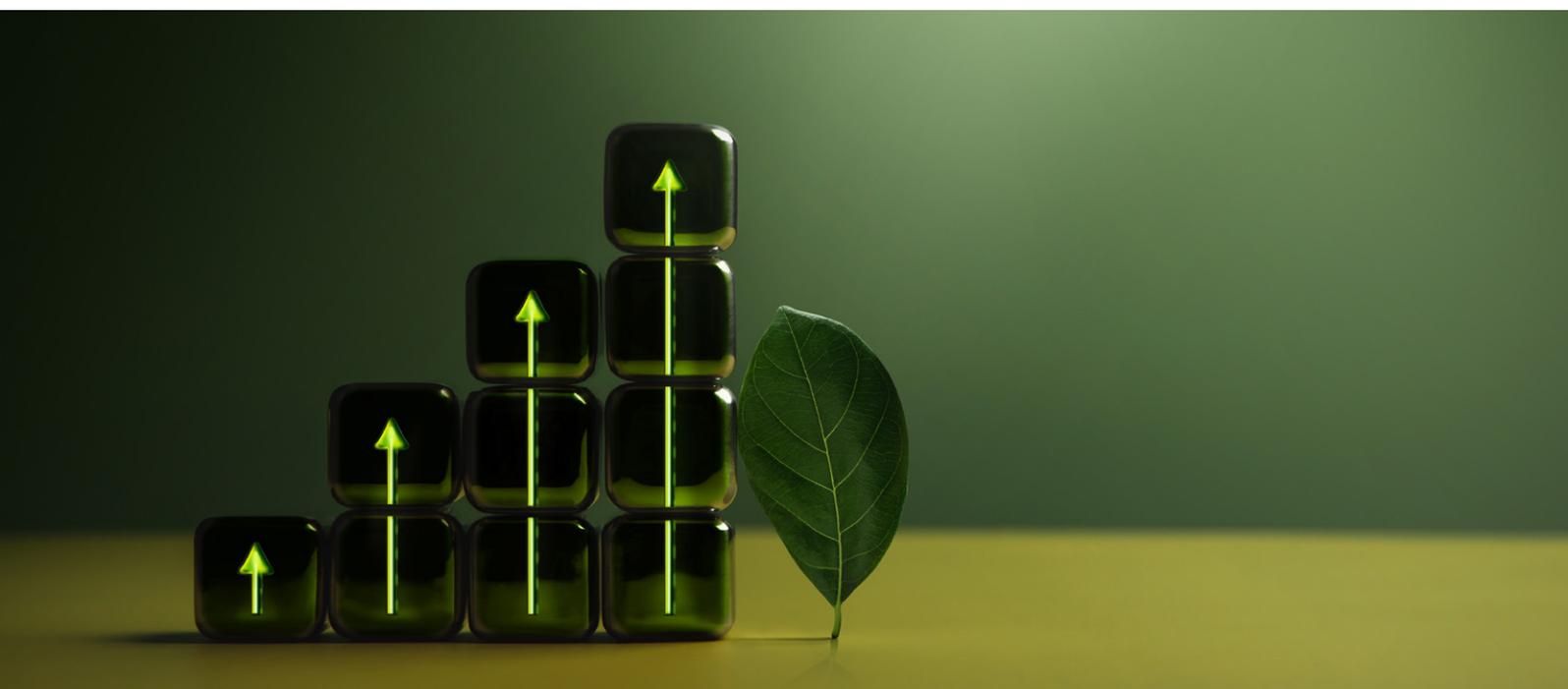


Figure 1: Overcoming market challenges with Acuity's solution

Challenge	Our solution
 <p><b>Dispersed data on green bonds</b></p> <p>Data is spread across issuers' information templates on green bond frameworks, offering memorandums/prospectuses, post-issuance impact reports, external-party review forms, etc. Most green bond issuers provide post-issuance reports at a portfolio level rather than providing data on individual green bonds.</p>	<p><b>Green bond data in one place</b></p> <p>The framework acts as a centralised hub of information on global green bond issuance, with data extracted from multiple source documents.</p>
 <p><b>Unstructured data</b></p> <p>Green bond data from multiple sources is not in a standard format. As adoption of green bond market standards is voluntary, the information disclosed under a particular issuance may not be in a specific order.</p>	<p><b>Data arranged in a standardised format</b></p> <p>Lays out green bond issuance data in a standard and easy-to-read format.</p>
 <p><b>Low comparability and evaluation</b></p> <p>Limited ability to compare issuances and rank/rate them.</p>	<p><b>Enables comparison and evaluation</b></p> <p>Provides a single platform to compare and evaluate issuances across 16 criteria.</p>



## 2. Acuity's green bond analysis framework

Acuity is the #1 provider of research, analytics, operations and technology services to 520 global financial institutions, equipped with an ESG practice providing customised and bespoke support to buy-side and sell-side clients across the ESG research value chain, including SDG research, analysis of ESG-linked credit instruments, ESG/SDG/greenwashing risk ratings, net zero alignment ratings, issuer engagement research and questionnaires, data science for ESG research and SFDR/EU Taxonomy disclosure preparation support.

Acuity's proprietary green bond analysis framework is a robust and comprehensive tool designed to provide a thorough and objective evaluation of the performance of individual green bonds by screening and ranking green bonds based on a 16-criteria rating system. The framework is built on a central green bond database, where key information relating to global green bond issuance is stored in a standardised format. This database serves as the foundation for the analysis, providing a comprehensive repository of information on the green bond market.

The next step in the analysis process involves evaluating the individual bonds against a set of 16 criteria grouped into six broad categories. These categories cover various aspects of green bonds, including alignment with market standards, external verification, alignment with the company's overall sustainability objectives, use of proceeds, relative environmental impact and disclosure. The criteria have been carefully selected to ensure they are comprehensive, relevant and aligned with global best practices.

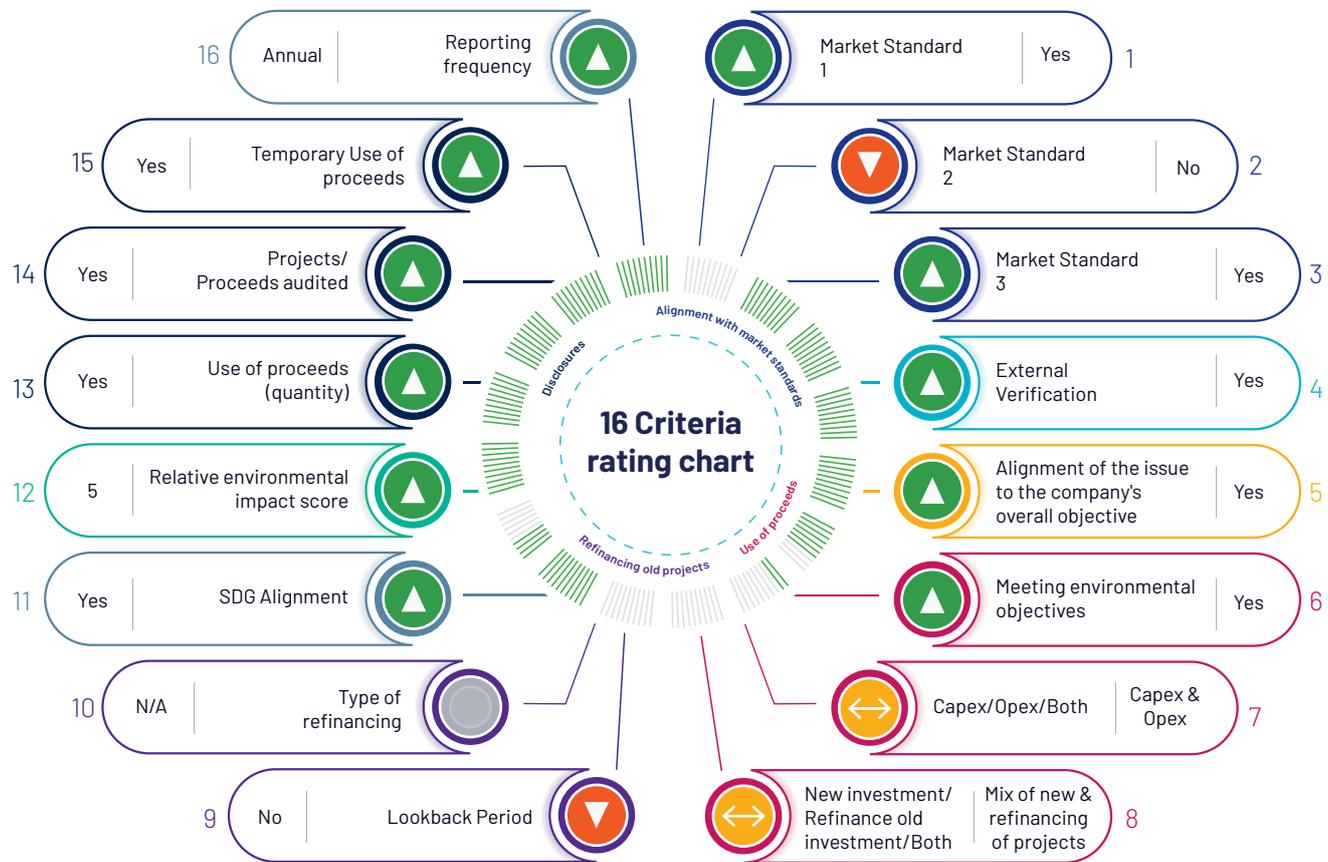
The bonds are then assigned scores on each of the criteria, based on their performance against the standards set in the framework. This allows for a systematic and objective evaluation of the bonds, providing a clear picture of their strengths and weaknesses. Finally, a normalised average of the individual scores on the 16 criteria is calculated and used to assign a rating for the bond, reflecting its overall performance. This rating provides investors with a quick and easy way to assess the quality of the green bonds and make informed investment decisions.

The analysis is complemented with insightful visualisations of green bond assessment at bond level (Figure 2) and portfolio level.

The framework also includes a robust screening process to identify potential breaches of key criteria. If a bond is flagged for a breach, it is highlighted in the analysis, signalling a possible issue.

Figure 2:

Know all about a green bond on one screen; we provide high-quality visualisations for quick reference and impactful IMs



**Select Issuer**

**ISIN**  
XS2079716853  
0.000% Notes due 2025

**Issuer**  
Apple Inc

**Rating summary**

**Overall Score**  
14

**Normalised Score**  
11.1

**Final Grading**  
Fair

**Bond profile details**

<b>Industry</b> Electronic Technology	<b>Issue Amount (millions)</b> 2000
<b>Sector</b> Telecommunications Equipment	<b>Interest rate</b> 0.000%
<b>Issuer type</b> Corporate	<b>Issue date</b> 15-Nov-19
<b>Issuer location</b> US	<b>Maturity date(s)</b> 15-Nov-25
<b>Currency</b> EUR	

**Green bond objectives**

**Environmental Sustainability Strategy**  
Climate change mitigation  
Transition to a circular economy  
Pollution prevention and control

**UN SDG core alignment**  
UN SDG 7: Affordable and Clean Energy  
UN SDG 9: Industry Innovation and Infrastructure  
UN SDG 12: Responsible Consumption and Production  
UN SDG 15: Life on Land

**Legend**

Criteria score: 5  
Result indicator: Green Up Arrow  
Criteria Description: Alignment of the issue to the company's overall objective  
Result description: Yes

**Meeting the evaluation criteria**

- Green Up Arrow: Meets the criteria
- Red Down Arrow: Not meeting the criteria
- Yellow Double Arrow: Partially meets the criteria
- Grey Circle: Insufficient disclosures

## First step of analysis

The database underlying our analysis is a repository of both quantitative and qualitative information on green bonds that provide in-depth insights on the various attributes of a bond. The bond data is extracted primarily from four main sources:

- » Bond prospectus/offering memorandum
- » Market information templates on the issuers' green financing frameworks
- » External verification reports
- » Post-issuance impact reports

Data extraction is supported by Acuity's proprietary suite of Business Excellence and Automation Tools (BEAT) that use AI/ML tools and offer easy scalability to our analysis.

## Green bond scoring – evaluation categories

### **Alignment with market standards:**

The scoring system checks the alignment of green bonds with globally accepted market standards, including EU Taxonomy and those developed by international organisations such as the International Capital Market Association (ICMA) and the Climate Bonds Initiative (CBI). The alignment of green bonds with these market standards serves as a benchmark for verifying the green credentials of a bond.

### **External verification:**

Our evaluation checks whether the issuer's green bond framework has been externally verified by a third-party entity. This involves an independent review of the issuer's green bond framework to ensure it meets industry standards and is aligned with the use of proceeds. External verification improves credibility and transparency of the issuer's green bond framework and assures investors that the funds raised through the green bond will be used in a way that aligns with the stated environmental goals.

### **Alignment with the issuer's overall sustainability objectives:**

Alignment of the green bond issuance with the issuer's overall sustainability objectives ensures the issuance is not merely a greenwashing exercise but is aimed genuinely at financing environmentally sustainable projects. Moreover, it helps establish a clear link between the issuer's sustainability objectives and the specific green projects being funded, providing greater transparency and accountability in the use of funds.

### **Use of proceeds:**

The evaluation category assesses the use of proceeds from the bond issuance. This includes analysing how the funds raised will be allocated to finance specific green projects. The assessment looks at several sub-criteria including the split of proceeds between green capex and opex, whether the bonds will be used to refinance existing projects and how the use of proceeds aligns with UN SDGs. This helps ensure the funds raised are used to finance environmentally sustainable projects, helps assess the bond's potential environmental impact and helps build investor confidence.

**Relative environmental impact:**

Each green bond is assessed to determine the extent to which it meets the environmental objectives stated in the issuer's green bond framework through its use of proceeds. The types of green projects are categorised as green buildings, clean water, clean transport, renewable energy and energy efficiency. We assess the environmental impact using an internal rating for each project category separately through the use of standardised metrics such as the level of carbon emissions mitigated. The overall internal rating for the green bond is derived as an average of the ratings assigned under each individual project category funded by the particular green bond. For green bond projects not covered under these project categories, an internal rating is assigned by referring to the assessments of external verifiers. Green bonds with alternative disclosures that are not considered in our internal rating methodology are rated based on the information available on a case-by-case basis. This internal rating provides a transparent, objective and comparable evaluation of a bond's environmental impact.

**Disclosures:**

The category aims to evaluate the level of transparency and accountability of the issuer in disclosing information on the use of proceeds and the environmental impact of the financed projects. The quality of disclosure is crucial for investors to make informed decisions and understand the actual impact of their investments. The sub-criteria used to evaluate this category are designed to ensure the issuer provides timely and accurate information on the green projects being financed, including the allocation of funds and any temporary use of proceeds.



## Acuity's 16-criteria green bond rating model

We provide a sample of our green bond rating methodology below.

**Figure 3: Green bond rating grid for Apple Inc. 0.000% notes due 2025**

Underlying database input data			
16-criteria scorecard for green bonds			
Criteria	Score	Score weightage	Sample rating ISIN: XS2079716853
Alignment with market standards	3	18.75%	2
Market standard 1	1	6.25%	1
Market standard 2	1	6.25%	0
Market standard 3	1	6.25%	1
External verification	1	6.25%	1
External verification	1	6.25%	1
Alignment with the issuer's overall sustainability objectives	1	6.25%	1
Alignment of the issuance with the company's overall sustainability objectives	1	6.25%	1
Use of proceeds	6	37.50%	2.7
Meeting environmental objectives	1	6.25%	1
Capex/opex/both	1	6.25%	0.5
New investment/refinancing old investment/both	1	6.25%	0.2
Lookback period	1	6.25%	0
Type of refinancing	1	6.25%	N/A
SDG alignment	1	6.25%	1
Relative environmental impact	1	6.25%	1
Relative environmental impact score	1	6.25%	1
Disclosures	4	25.00%	4
Use of proceeds (quantity)	1	6.25%	1
Projects/proceeds audited	1	6.25%	1
Temporary use of proceeds	1	6.25%	1
Reporting frequency	1	6.25%	1
<b>Total score</b>	<b>16</b>	<b>100.00%</b>	<b>11.7</b>
<b>Normalised score out of 16</b>			

Grading on the normalised score					
Rating classifiers					Sample rating
15 or above	12-14	10-12	8-10	0-8	11.7
Outstanding	Good	Fair	Marginal	Poor	Fair

# 3. Conclusion

Growing demand for green bonds necessitates transparent and standardised performance data to support investments in the sector. Existing sources of green bond analysis are insufficient in terms of data coverage and lack an opinion on what qualifies as “green”. These sources primarily act as data aggregators, lacking a method of evaluating green bond issuance.

With Acuity Knowledge Partners’ proprietary green bond analysis framework, users overcome these limitations and stand to benefit from comprehensive information, customisable screening tools and informative visualisations that will light the way to smarter green bond investments.

Through a 16-criteria rating system, we offer a robust method for assessing the environmental impact of green bond investments that goes beyond data aggregation and provides valuable direction for investors. Our analysis is complemented by insightful visualisations that present green bond assessments at both the bond and portfolio level. In addition, our screening process flags potential breaches of key criteria, highlighting concerns associated with specific green bond issuances, as investors continue to grow their green bond portfolio holdings.



## Author



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#### Delivery Manager

Hiruni has over seven years of experience in investment research and finance. At Acuity Knowledge Partners, she is part of the Fixed Income and Credit Research team in the Investment Research vertical, currently supporting the emerging markets debt team of a European Asset Manager, primarily in the domains of sovereign credit and ESG/SDG research. She is an Associate Member of the Chartered Institute of Management Accountants (UK) and holds a Bachelor of Science in Economics and Management from the London School of Economics and Political Science, University of London and an MBA from the University of Colombo.

*The author would like to acknowledge the contribution made by Lourdeena Kudaliyanage, an Assistant Director and Kasun Suraweera, a Delivery Lead in the Fixed Income and Credit Research team.*

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## About Acuity Knowledge Partners

Acuity Knowledge Partners (Acuity) is a leading provider of bespoke research, analytics and technology solutions to the financial services sector, including asset managers, corporate and investment banks, private equity and venture capital firms, hedge funds and consulting firms. Its global network of over 6,000 analysts and industry experts, combined with proprietary technology, supports more than 500 financial institutions and consulting companies to operate more efficiently and unlock their human capital, driving revenue higher and transforming operations. Acuity is headquartered in London and operates from 10 locations worldwide.

Acuity was established as a separate business from Moody's Corporation in 2019, following its acquisition by Equistone Partners Europe (Equistone). In January 2023, funds advised by global private equity firm Permira acquired a majority stake in the business from Equistone, which remains invested as a minority shareholder.

### Our expertise includes the following:

- » Investment Banking: origination and trading support
- » Investment Research support: covering all asset classes in terms of ideation, data science, and research support across the buy side and sell side
- » Commercial Lending support: across origination, credit assessment, underwriting, and covenant and portfolio risk for all lending types
- » Private Equity: origination, valuation and portfolio monitoring support
- » Asset Management services support: across marketing, investment research, portfolio management/ optimisation, risk and compliance
- » Corporate and Consulting services: market and strategic research; survey work; treasury and counterparty risk support; and CEO office support, including M&A, FP&A and investor relations support
- » Compliance support: AML analytics, KYC, counterparty credit risk modelling and servicing across banks, asset managers and corporates
- » Data Science: web scraping, data structuring, analytics and visualisation These services are supported by our proprietary suite of Business Excellence and Automation Tools (BEAT) that offer domain-specific contextual technology.

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