

China Construction Bank Global Green Finance Index 18



London

Singapore

Amsterdam

Geneva

Zurich

Copenhagen

Paris

Frankfurt

Luxembourg

Vienna

October 2026



Sustainable Futures





Beginning in March 2018, as part of its Long Finance initiative, Z/Yen published the first five editions of the Global Green Finance Index with the generous support of the MAVA Foundation, and more recently with support from Abu Dhabi Global Market. In 2026, the China Construction Bank offered sponsorship for the index, which is now retitled China Construction Bank Global Green Finance Index. With this support, we are pleased to present the eighteenth edition of the China Construction Bank Global Green Finance Index (CCB GGFI 18).

Z/Yen helps organisations make better choices - our clients consider us a commercial think-tank that spots, solves, and acts. Our name combines Zen and Yen - 'a philosophical desire to succeed' - in a ratio, recognising that all decisions are trade-offs. One of Z/Yen's specialisms is the development and publication of research combining factor analysis and professional assessments.

Long Finance is a Z/Yen initiative designed to address the question ***"When would we know our financial system is working?"*** This question underlies Long Finance's goal to improve society's understanding and use of finance over the long-term. In contrast to the short-termism that defines today's economic views the Long Finance timeframe is roughly 100 years.

China Construction Bank (CCB), a leading global financial institution headquartered in Beijing, offers comprehensive banking services across corporate, retail, and treasury sectors. As one of the world's largest banks, CCB is committed to sustainable development, actively promoting green finance initiatives to support low-carbon growth and environmentally responsible investment.

China Construction Bank London Branch (CCBLB), serves as CCB's key hub in the UK, facilitating financial cooperation between China and the UK. It plays an important role in advancing green finance initiatives such as green bonds and sustainable lending. As a designated RMB clearing bank in the UK, and the largest offshore RMB clearing centre outside Asia, CCBLB is central to enabling efficient cross-border RMB transactions and strengthening London's position as a global RMB hub.

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The China Construction Bank is not responsible for the underlying data, methodology, or research used in compiling the CCB GGFI 18.

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Contents	Page
Summary	3
CCB GGFI 18 Ranks And Ratings	5
CCB GGFI Dimensions	7
Regional Performance	10
Top Five Centres	12
Leading Financial Centres	14
CCB GGFI 18 Further Analysis	15
Instrumental Factors	16
Areas Of Competitiveness	18
Commentary On Factors	21
Connectivity	22
Financial Centre Profiles	23
The CCB GGFI 18 World – Centres In The Index	25
Changing Lanes For Transport – Technology, Geopolitics, And Financial Services	27
Regional Analysis	46
• North America	47
• Middle East & Africa	49
• Asia/Pacific	51
• Eastern Europe & Central Asia	53
• Latin America & The Caribbean	55
• Western Europe	57
Stability	59
Industry Sectors	60
CCB GGFI 18 Interest, Impact, And Drivers Of Green Finance	62
Financial Centre Strategies To Address Sustainability	65
• Appendix 1: Assessment Details	66
• Appendix 2: Interest, Impact, And Drivers Details	68
• Appendix 3: Respondents' Details	70
• Appendix 4: Methodology	71
• Appendix 5: Instrumental Factors	74

Summary

Overview

This is the eighteenth edition of the China Construction Bank Global Green Finance Index (CCB GGFI 18). The CCB GGFI is a factor assessment index, based on a range of instrumental factors - quantitative measures - and a worldwide survey of finance professionals' assessments on the quality and depth of green finance offerings in financial centres. CCB GGFI 18 features 94 financial centres. Ho Chi Minh City and Kuwait City feature in the index for the first time.

There has been a continuing rebound in confidence in the development of green finance in financial centres. In this edition of the index, the average rating was up 3.89% compared with CCB GGFI 17, with all centres improving in the ratings. The data on which the index is based was largely collated after the start of the recent conflict in the Middle East.

Western European centres dominate the leading positions in the index, which reflects their history of developing green finance products and expertise. Asia/Pacific centres continue to make gains in this edition of the index. The policy background and the general commitment of a city or jurisdiction to sustainability is a strong influence on the depth and quality of green finance in a financial centre.

Among those responding to the CCB GGFI survey, Sustainable Infrastructure Finance, Renewable Energy Investment, and Environment, Social, And Governance (ESG) Analytics are rated as the areas of green finance with most impact, while Sustainable Infrastructure Finance, Renewable Energy Investment, and Green Bonds are seen as the areas of most interest.

Policy and Regulatory Frameworks, Technological Change, Climate Change, and Tax Incentives are listed by respondents as the major drivers of green finance. These underline the importance of regulatory frameworks in green finance.

In the supplement to this edition of the CCB GGFI, we focus on the shift of energy in transport across road, rail, aviation, and shipping.

Index Results

- London and Singapore retained their positions in first and second place in the index. Amsterdam rose to third position, while Geneva and Zurich took fourth and fifth positions.
- Western European centres take nine of the top 10 places. Singapore is the only Asia/Pacific centre in this leading group.
- The margins separating centres at the top of the index are small. Among the top 10 centres the spread of ratings is just 10 points out of 1,000 in CCB GGFI 18.
- Eight centres rose 10 or more places in the rankings. Four centres fell 10 or more places.

Western Europe

- Thirteen Western European centres feature in the top 20 in CCB GGFI 18.
- Edinburgh rose 11 rank places. Rome and the Isle of Man fell 18 and 12 rank places respectively.
- The average rating among Western European centres rose 3.55%, the lowest rate of increase across the regions.

North America

- Los Angeles and Washington DC take the leading positions in North America.
- Washington DC rose 13 places in the index ranking, while Toronto fell 16 places.
- The average rating for centres in North America improved by 3.9%.

Asia/Pacific

- Singapore remains in second position globally and the leading position in the Asia/Pacific region. Tokyo is in second place in the region, up four places to 14th globally.
- Osaka, Hong Kong, and Mumbai rose 10 or more places in the index ranking.
- The average increase in the ratings in Asia/Pacific was 4.30%.

Middle East & Africa

- Dubai continued to lead in the Middle East & Africa, followed by Mauritius and Riyadh.
- Johannesburg gained 10 places in the ranking.
- The average rating in the region rose 3.83%.

Latin America & The Caribbean

- Sao Paulo leads the region with Rio de Janeiro second.
- The Bahamas and Bermuda rose 10 or more ranking places, while Panama fell 16 places.
- The average rating in the region rose by 4.59%, the highest average improvement across the regions.

Eastern Europe & Central Asia

- Warsaw took the leading position in Eastern Europe & Central Asia, with Sofia overtaking Prague to take second position.
- The average rating in the region rose 3.75%.

CCB GGFI 18

CCB GGFI 18 was compiled using 129 instrumental factors. These quantitative measures are provided by third parties including the World Bank, the OECD, and the United Nations. Details can be found in Appendix 5.

The instrumental factors were combined with 4,378 financial centre assessments provided by respondents to the CCB GGFI online questionnaire. A breakdown of the 616 respondents is shown in Appendix 3. Further details of the methodology behind CCB GGFI 18 are in Appendix 4.

The 94 centres listed in CCB GGFI 18 are those which received a minimum of 25 assessments from survey respondents located outside of those centres to enter the index and a minimum of 10 assessments in each following index edition. Assessments of respondents' home centres were excluded from the data, in order to avoid home centre bias.

CCB GGFI 18 Ranks And Ratings

Table 1 | CCB GGFI 18 Ranks And Ratings

Centre	CCB GGFI 18		CCB GGFI 17		Change In	Change In
	Rank	Rating	Rank	Rating	Rank	Rating
London	1	626	1	617	0	▲ 9
Singapore	2	624	2	607	0	▲ 17
Amsterdam	3	623	4	599	▲ 1	▲ 24
Geneva	4	622	5	598	▲ 1	▲ 24
Zurich	5	621	3	602	▼ 2	▲ 19
Copenhagen	6	620	8	595	▲ 2	▲ 25
Paris	7	619	6	597	▼ 1	▲ 22
Frankfurt	8	618	9	594	▲ 1	▲ 24
Luxembourg	9	617	7	596	▼ 2	▲ 21
Vienna	10	616	10	593	0	▲ 23
Los Angeles	11	615	12	591	▲ 1	▲ 24
Oslo	12	614	16	587	▲ 4	▲ 27
Washington DC	13	613	26	577	▲ 13	▲ 36
Tokyo	14	612	18	585	▲ 4	▲ 27
Stockholm	15	611	11	592	▼ 4	▲ 19
Edinburgh	16	610	27	576	▲ 11	▲ 34
Osaka	17	609	30	573	▲ 13	▲ 36
Minneapolis / St Paul	18	608	13	590	▼ 5	▲ 18
New York	19	607	21	582	▲ 2	▲ 25
Munich	20	606	14	589	▼ 6	▲ 17
Brussels	21	605	15	588	▼ 6	▲ 17
Sydney	22	604	24	579	▲ 2	▲ 25
San Francisco	23	603	28	575	▲ 5	▲ 28
Shanghai	24	602	25	578	▲ 1	▲ 24
Melbourne	25	601	31	572	▲ 6	▲ 29
Montreal	26	600	19	584	▼ 7	▲ 16
Madrid	27	599	22	581	▼ 5	▲ 18
Seoul	28	598	23	580	▼ 5	▲ 18
Vancouver	29	597	20	583	▼ 9	▲ 14
Glasgow	30	596	33	570	▲ 3	▲ 26
Hong Kong	31	595	45	558	▲ 14	▲ 37
Taipei	32	594	40	563	▲ 8	▲ 31
Toronto	33	593	17	586	▼ 16	▲ 7
Beijing	34	592	38	565	▲ 4	▲ 27
Shenzhen	35	591	32	571	▼ 3	▲ 20
Busan	36	590	29	574	▼ 7	▲ 16
Milan	37	589	34	569	▼ 3	▲ 20
Dubai	38	588	36	567	▼ 2	▲ 21
Malta	39	587	41	562	▲ 2	▲ 25
Atlanta	40	586	44	559	▲ 4	▲ 27
Mauritius	41	585	46	557	▲ 5	▲ 28
Chicago	42	584	39	564	▼ 3	▲ 20
Guangzhou	43	583	42	561	▼ 1	▲ 22
Calgary	44	582	37	566	▼ 7	▲ 16
Berlin	45	581	48	555	▲ 3	▲ 26
Miami	46	580	50	553	▲ 4	▲ 27
Sao Paulo	47	579	52	551	▲ 5	▲ 28

Table 1 (continued) | CCB GGFI 18 Ranks And Ratings

Centre	CCB GGFI 18		CCB GGFI 17		Change In	Change In
	Rank	Rating	Rank	Rating	Rank	Rating
Riyadh	48	578	55	548	▲ 7	▲ 30
Hamburg	49	577	43	560	▼ 6	▲ 17
Kigali	50	576	58	545	▲ 8	▲ 31
Doha	51	575	56	547	▲ 5	▲ 28
Johannesburg	52	574	62	541	▲ 10	▲ 33
Rome	53	573	35	568	▼ 18	▲ 5
Lisbon	54	572	47	556	▼ 7	▲ 16
Casablanca	55	571	51	552	▼ 4	▲ 19
Rio de Janeiro	56	570	61	542	▲ 5	▲ 28
Philadelphia	57	569	64	539	▲ 7	▲ 30
Tel Aviv	58	568	53	550	▼ 5	▲ 18
Boston	59	567	60	543	▲ 1	▲ 24
Abu Dhabi	60	566	54	549	▼ 6	▲ 17
Mexico City	61	565	68	535	▲ 7	▲ 30
Ho Chi Minh City	62	564	New	New	New	New
Warsaw	63	563	57	546	▼ 6	▲ 17
Sofia	64	562	66	537	▲ 2	▲ 25
Panama	65	561	49	554	▼ 16	▲ 7
Monaco	66	560	65	538	▼ 1	▲ 22
Santiago	67	559	59	544	▼ 8	▲ 15
Dublin	68	558	69	534	▲ 1	▲ 24
Bahamas	69	557	79	524	▲ 10	▲ 33
Prague	70	556	63	540	▼ 7	▲ 16
Bermuda	71	555	85	518	▲ 14	▲ 37
Cape Town	72	554	70	533	▼ 2	▲ 21
Mumbai	73	553	83	520	▲ 10	▲ 33
Jersey	74	552	67	536	▼ 7	▲ 16
Moscow	75	551	75	528	0	▲ 23
Guernsey	76	550	72	531	▼ 4	▲ 19
St Petersburg	77	549	80	523	▲ 3	▲ 26
Astana	78	548	71	532	▼ 7	▲ 16
Kuala Lumpur	79	547	88	515	▲ 9	▲ 32
Cyprus	80	546	76	527	▼ 4	▲ 19
Nairobi	81	545	73	530	▼ 8	▲ 15
New Delhi	82	544	74	529	▼ 8	▲ 15
Bahrain	83	543	87	516	▲ 4	▲ 27
Manila	84	542	91	512	▲ 7	▲ 30
Bangkok	85	541	81	522	▼ 4	▲ 19
Jakarta	86	540	78	525	▼ 8	▲ 15
Almaty	87	539	82	521	▼ 5	▲ 18
Istanbul	88	538	84	519	▼ 4	▲ 19
Isle of Man	89	537	77	526	▼ 12	▲ 11
Liechtenstein	90	536	86	517	▼ 4	▲ 19
British Virgin Islands	91	535	92	511	▲ 1	▲ 24
Kuwait City	92	534	New	New	New	New
Cayman Islands	93	532	89	514	▼ 4	▲ 18
Lagos	94	524	90	513	▼ 4	▲ 11

CCB GGFI Dimensions

The CCB GGFI ascertains the green finance performance of international financial centres by asking practitioners to rate them on two dimensions:

- The depth to which green finance has penetrated the business of the financial centre, i.e. the prevalence of green financial services and products within the financial centre in question.
- The quality of the green finance products and services on offer.

The purpose of tracking both aspects is to enable respondents to rate a financial centre independently from its market volumes. For example, if a centre adopts weak green labelling standards in a bid to boost volumes, this may show up in the index as a lower quality rating.

The additional data generated through this approach increases granularity. This allows the identification of trends and can assist policy makers to track the impacts of their decisions.

The detailed ratings of the dimensions for the top 15 centres are shown in table 2. Additional details are in Appendix 1.

Table 2 | Top 15 Centres - Rating Details For Depth And Quality Dimensions

CCB GGFI 18 Rank	Centre	CCB GGFI Dimensions			
		Green Finance Depth		Green Finance Quality	
		Rank	Rating	Rank	Rating
1	London	1	308	2	318
2	Singapore	4	306	2	318
3	Amsterdam	1	308	5	315
4	Geneva	12	302	1	320
5	Zurich	10	304	4	317
6	Copenhagen	7	305	5	315
7	Paris	7	305	9	314
8	Frankfurt	4	306	10	312
9	Luxembourg	12	302	5	315
10	Vienna	3	307	16	309
11	Los Angeles	10	304	12	311
12	Oslo	17	299	5	315
13	Washington DC	4	306	19	307
14	Tokyo	16	301	12	311
15	Stockholm	7	305	25	306

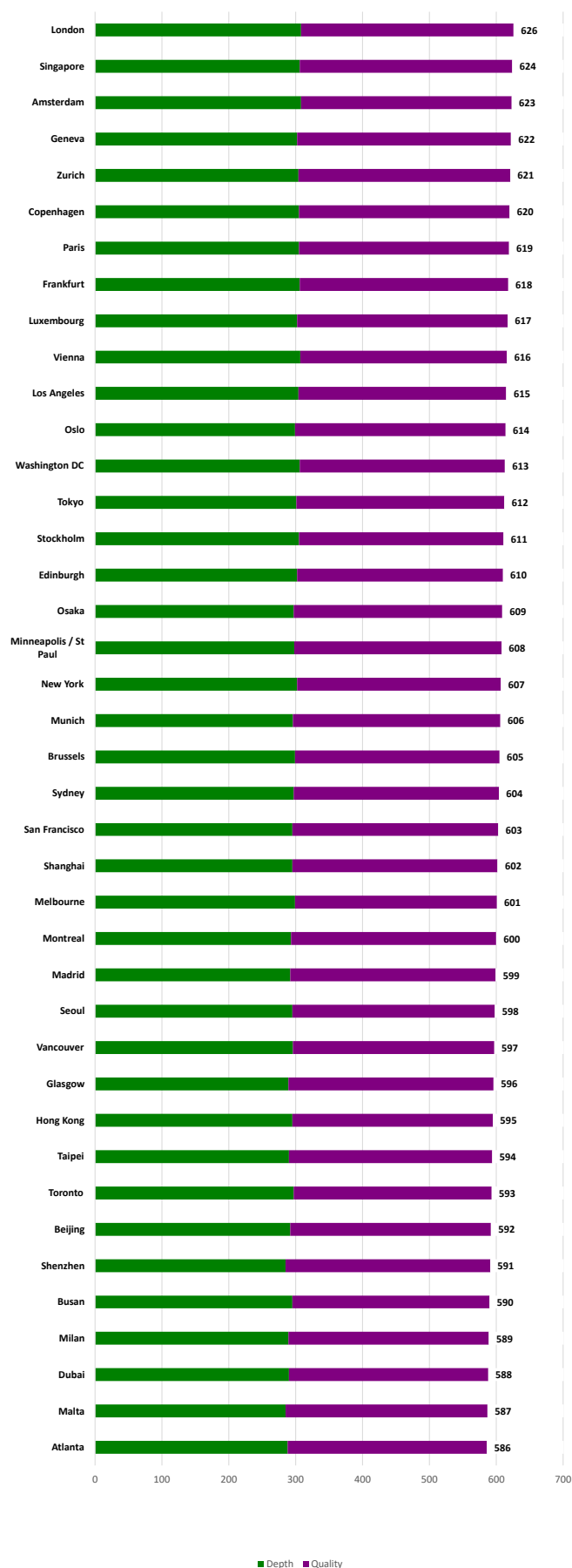
Chart 1 shows the relationship between ratings of the depth and quality dimensions in the index and the generally close correlation between the assessments of each factor by respondents. Centres close to the trend line are balanced for depth and quality, centres further away have either a better rating for depth, or for quality. The relative score of Geneva, Shenzhen, Mauritius, Kigali, Rome, Tel Aviv, Jakarta, the Isle of Man, Kuwait City, and Lagos for green finance quality are high compared with their scores in depth. On the other side of the line, London, Vienna, Washington DC, Stockholm, New York, Melbourne, Toronto, Busan, Miami, Hamburg, Mexico City, Bermuda, Almaty, and British Virgin Islands have high relative scores for depth.

Chart 1 | Relationship Between Ratings Of Depth And Quality



Chart 2 on the following page shows the contribution of each of the dimensions to the overall rating for the top 40 centres in the CCB GGFI. London ranked equal first for depth and equal second for quality and Singapore ranked fourth for depth and equal second with London for quality. Amsterdam ranked equal first for depth but fifth for quality. Copenhagen ranked seventh and fifth for depth and quality. Successful financial centres focused on green finance have both good quality products and services in their green markets, and depth of investment.

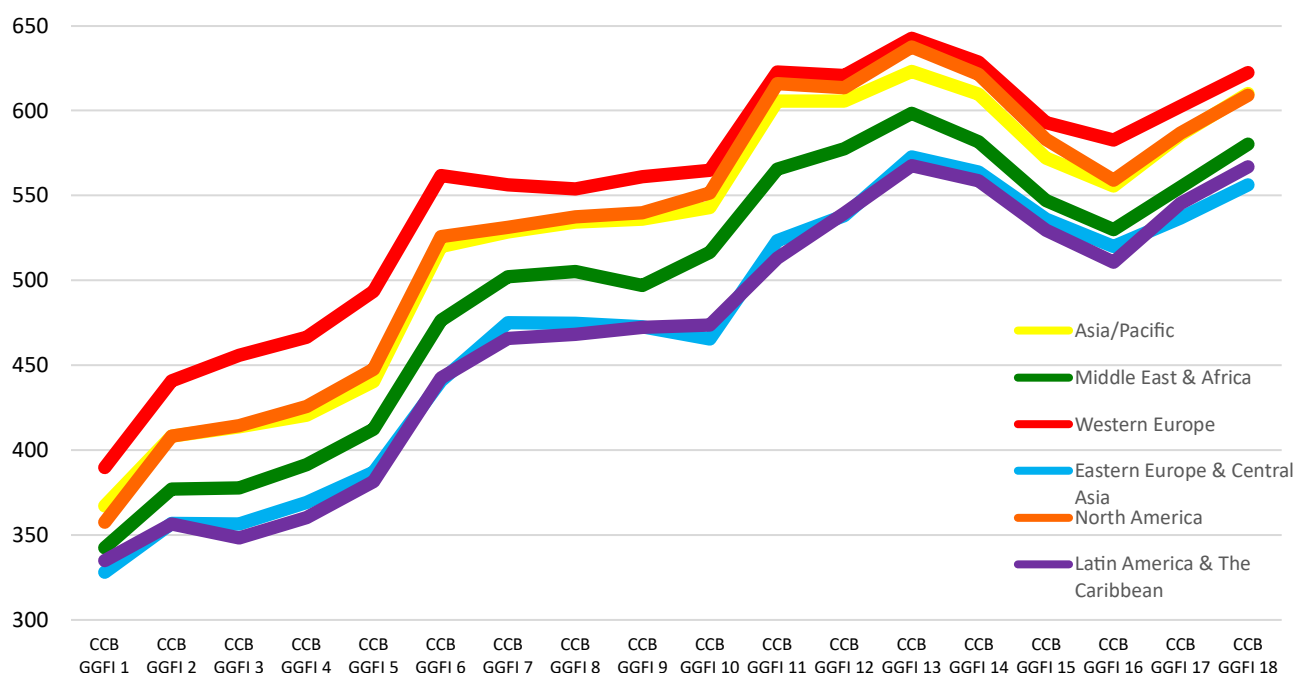
Chart 2 | The Contribution Of The Dimensions To The Overall Rating - CCB GGFI 18 Top 40 Centres



Regional Performance

The average rating of the top five centres in all regions improved, with Western Europe leading but with the leading Asia/Pacific and North American centres following. The leading centres in the Middle East & Africa improved their position most on this measure in CCB GGFI 18.

Chart 3 | Average Ratings Of The Top Five Centres In Each Region



“For transition finance and other emerging themes (adaptation finance etc.), we need more guidance and central agreement from governments, so companies understand what 'transition' means for them.”

DIRECTOR, BANK, TAIPEI

Examination of the quality and depth dimensions demonstrates that on both measures, the average rating for the top five centres in all regions improved. In the depth scores, the leading centres in Latin America & The Caribbean and North America improved most. In the quality measure, the leading centres in the Middle East & Africa and Asia/Pacific improved their relative position in comparison with other regions.

Chart 4 | Average Ratings For Depth Of The Top Five Centres In Each Region

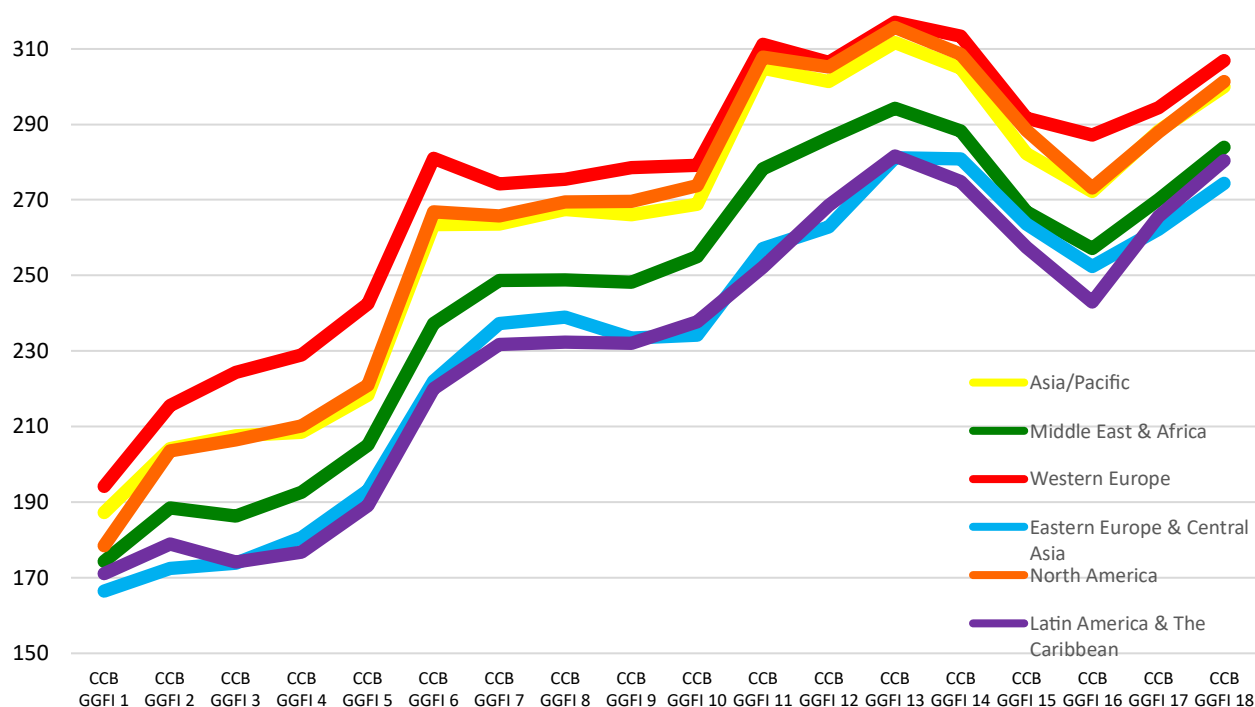
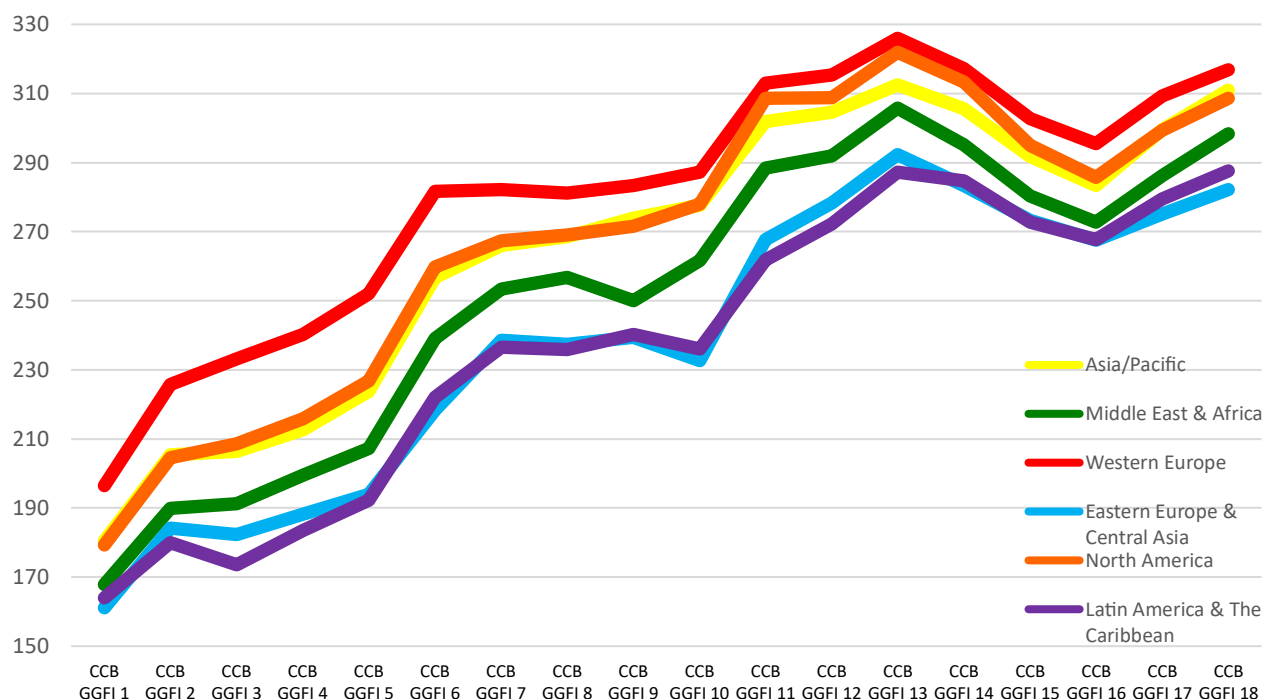


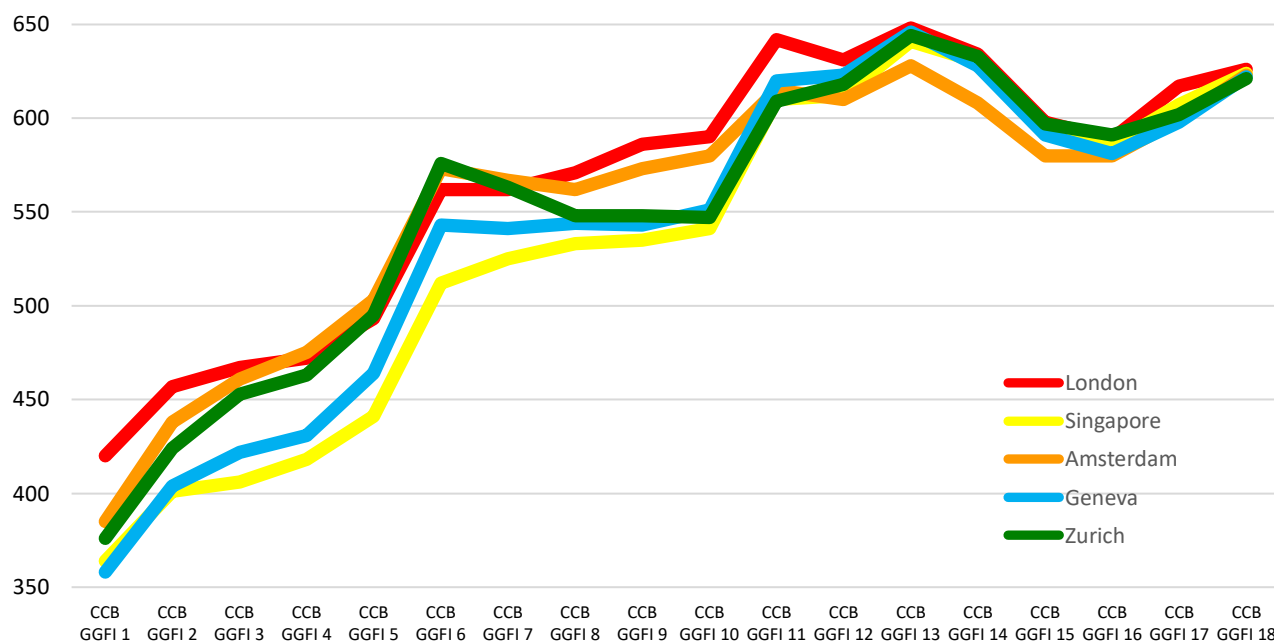
Chart 5 | Average Ratings For Quality Of The Top Five Centres In Each Region



Top Five Centres

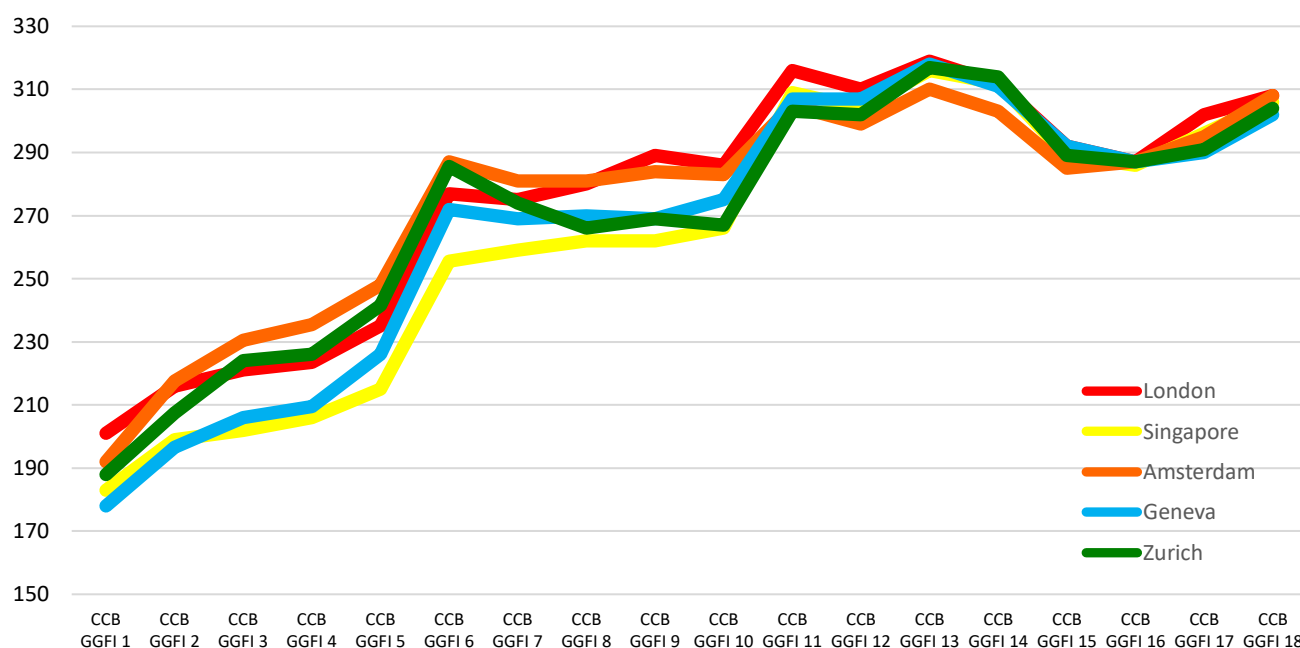
Competition at the top of the index continued to be tight, and the chasing centres moved closer to London. Only 5 rating points separate London in first position from Zurich in fifth.

Chart 6 | The Top Five Centres Over Time



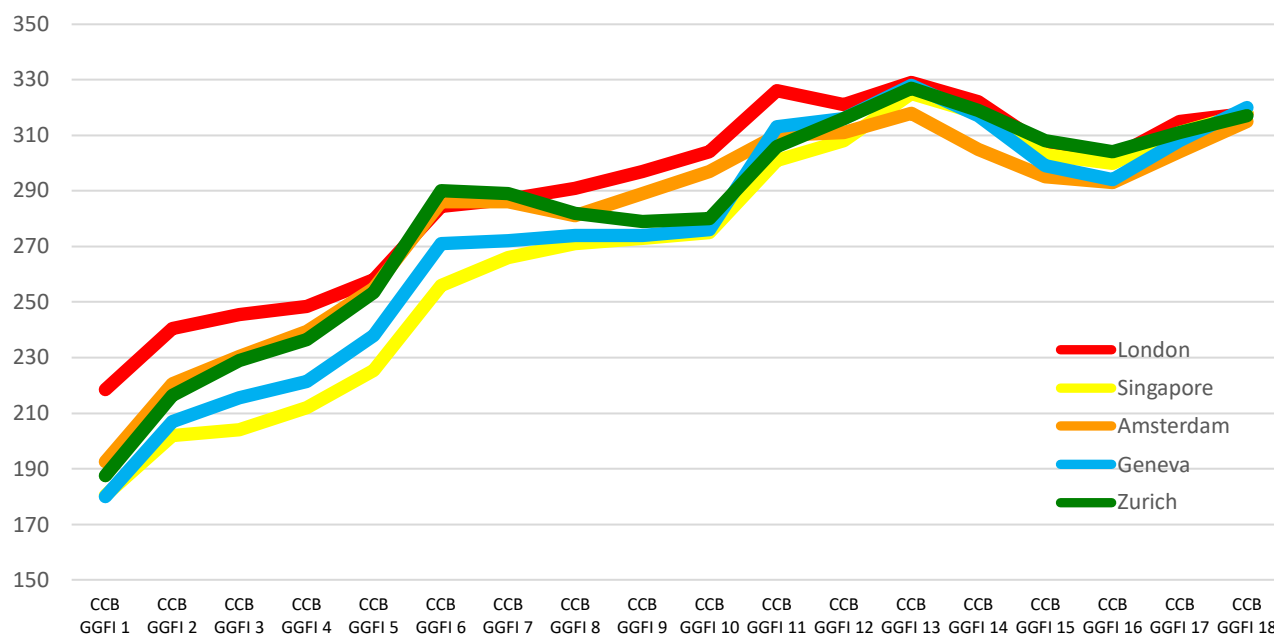
When the depth dimension is examined, London and Amsterdam are in equal first position, with Singapore third.

Chart 7 | Ratings For The Depth Dimension In The Top Five Centres Over Time



On the quality measure, Geneva leads, with London and Singapore a couple of rating points behind.

Chart 8 | Ratings For The Quality Dimension In The Top Five Centres Over Time



“A clear and supportive regulatory framework is essential for the growth of Green Finance. Policies such as sustainability disclosure requirements, green taxonomies, and incentives for green investments help build investor confidence and encourage the development of sustainable financial products.”

CHAIRMAN, FINTECH, MAURITIUS



Leading Financial Centres

It is notable that some leading financial centres perform less well than expected in the CCB GGFI, considering their performance in the [Global Financial Centres Index](#) (GFCI), which has been measuring financial centre competitiveness since 2007.

We can compare the centres which rank in the top 20 in the GFCI with their performance in the CCB GGFI. This shows some disconnection between the highest performing centres in the GFCI and performance on green finance in the CCB GGFI. In total, eight centres feature in the top 20 in both measures with London, Singapore, and Zurich featuring in the top 10 in both indices.

Table 3 | Leading Financial Centres - Comparison of CCB GGFI And GFCI Rankings

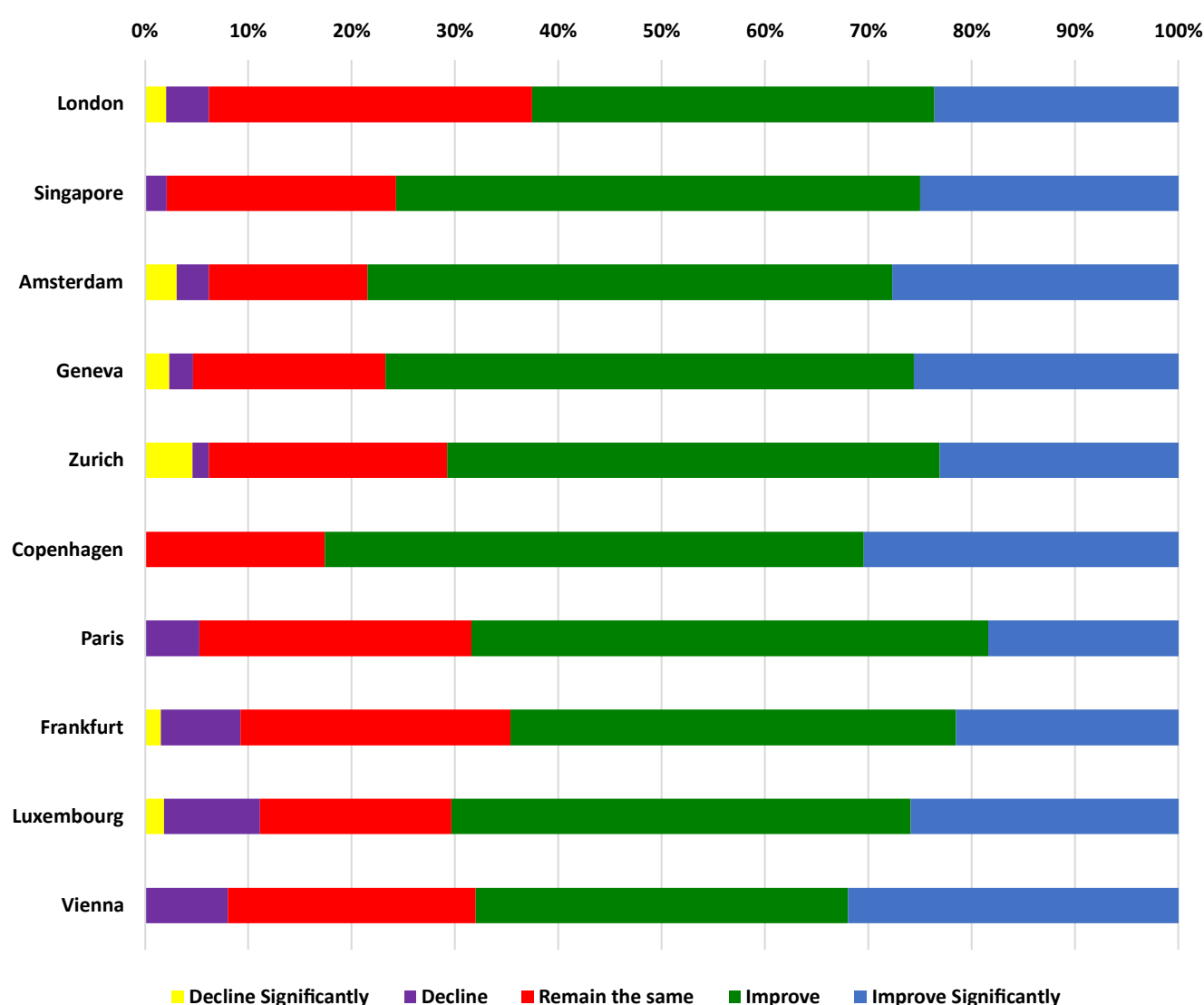
Centre	CCB Global Green Finance Index	Green Finance Depth	Green Finance Quality	Financial Centre Competitiveness
New York	19	12	28	1
London	1	1	2	2
Hong Kong	31	26	35	3
Singapore	2	4	2	4
Shanghai	24	26	19	5
Tokyo	14	16	12	6
Seoul	28	26	30	7
Shenzhen	35	43	25	8
Dubai	38	34	39	9
Zurich	5	10	4	10
San Francisco	23	26	17	11
Geneva	4	12	1	12
Abu Dhabi	60	60	57	13
Los Angeles	11	10	12	14
Chicago	42	42	39	15
Beijing	34	32	35	16
Luxembourg	9	12	5	17
Boston	59	55	60	18
Washington DC	13	4	19	19
Osaka	17	21	10	20
Source	CCB GGFI 18 Rank	CCB GGFI 18 Depth Rank	CCB GGFI 18 Quality Rank	GFCI 39 Rank

CCB GGFI 18 Further Analysis

Expected Change In Centres

We asked respondents whether the centres they rated would improve, decline, or stay the same in relation to their green finance offering over the next two to three years. The results for the top 10 centres are displayed in Chart 9, showing high levels of confidence, with the majority of respondents predicting an improvement by all centres in this group, and with very high levels of confidence in Copenhagen, Amsterdam, Geneva, and Singapore.

Chart 9 | Top 10 Centres - Expected Change In Green Finance Offering



“Improved ESG data quality and disclosure standards can enhance transparency and reduce greenwashing risks.”

BUSINESS ANALYST, BANK, HONG KONG

Instrumental Factors

The CCB GGFI is a factor assessment index, based on a worldwide survey of finance professionals' assessments on the quality and depth of green finance offerings in financial centres. These assessments are run through a statistical model which uses 129 instrumental factors relating to a range of aspects of financial centre competitiveness. These include measures of sustainability, the business environment, infrastructure, and human capital.

Table 4 shows the top 15 instrumental factors' correlation with the CCB GGFI ranking. The closest correlation is with the Urban Mobility Readiness Index, the IESE Cities In Motion Index, and the Global Cities Outlook Ranking.

Table 4 | Top 15 Instrumental Factors By R-Squared Correlation

Instrumental Factor	R Squared
Urban Mobility Readiness Index	0.689
IESE Cities In Motion Index	0.591
Global Cities Outlook ranking	0.571
Legatum Prosperity Index	0.570
Quality Of Living City Rankings	0.567
International IP Index	0.565
Global Innovation Index	0.557
The Future Growth Report	0.551
Energy Transition Index	0.516
Blavatnik Index Of Public Administration	0.512
Sustainable Cities Index	0.501
The Green Future Index	0.463
Adjusted Net National Income Per Capita	0.460
Cost Of Living City Rankings	0.456
Agility Emerging Markets Logistics Index	0.455

“Taxation policy can play an important role in supporting Green Finance by creating incentives for sustainable investment and reducing the cost of capital for green projects. Clear and stable tax treatment also helps improve market confidence and encourages broader participation.”

ASSISTANT MANAGER, BANK, HO CHI MINH CITY

Focusing only on the instrumental factors which relate to sustainability, the factors most closely correlated in terms of their R-Squared relationship with the CCB GGFI rankings are set out in Table 5. The leading factors continue to focus on cities as sustainable places and on the development of the green economy.

Table 5 | Top 15 Sustainability Instrumental Factors By R-Squared Correlation

Instrumental Factor	R Squared
Urban Mobility Readiness Index	0.689
IESE Cities In Motion Index	0.591
Quality Of Living City Rankings	0.567
The Future Growth Report	0.551
Energy Transition Index	0.516
Sustainable Cities Index	0.501
The Green Future Index	0.463
Global Green Growth Index	0.454
Percentage of SDG Achievement	0.423
The Global Green Economy Index	0.418
Energy Sustainability Index	0.405
Environmental Performance Index	0.400
Climate Finance Vulnerability Index	0.310
Global Sustainable Competitiveness Index	0.294
Quality Of Life Index	0.225

“Bridging the green skills gap through specialized university programs and professional certifications is vital to supply financial centres with the talent needed for complex climate risk assessment and green product innovation.”

RELATIONSHIP MANAGER, BANK, LOS ANGELES



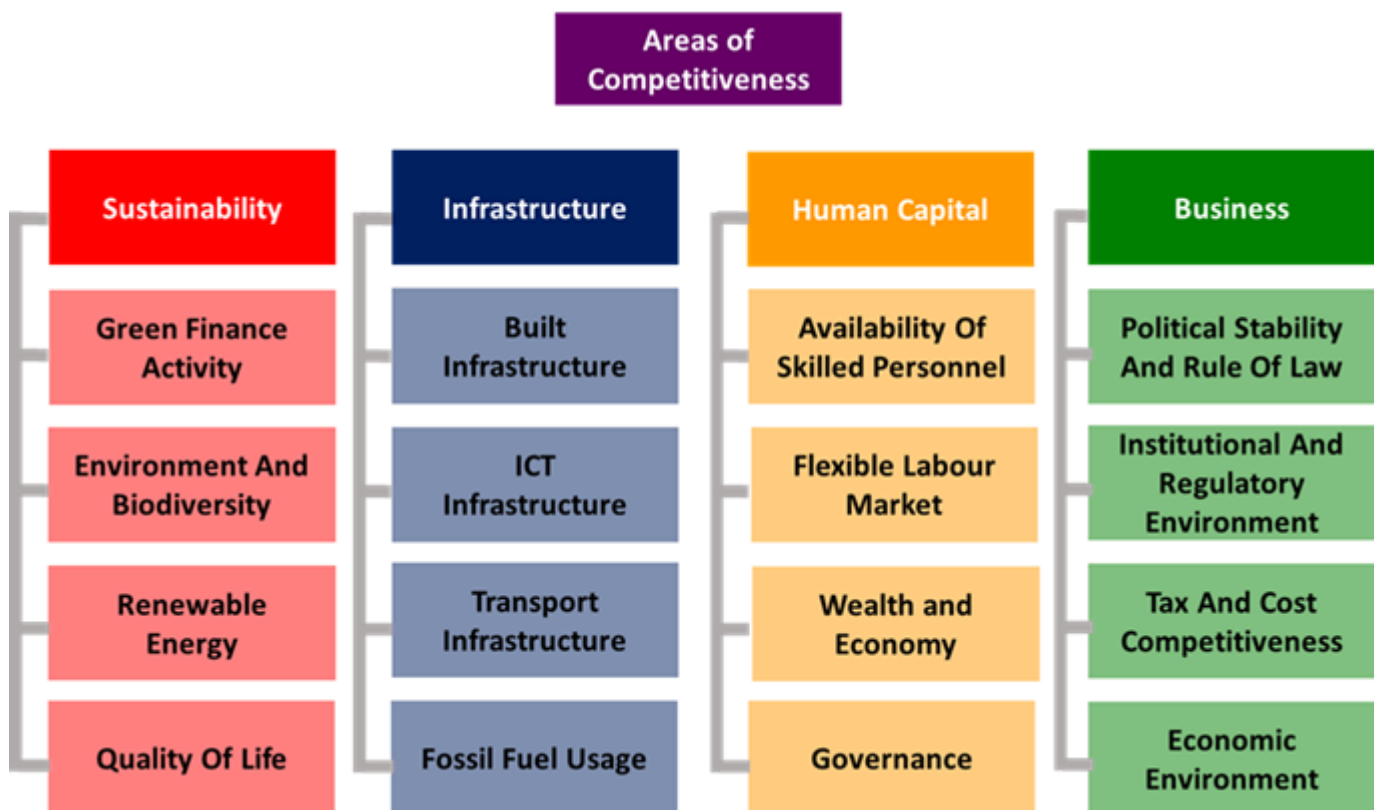
Areas Of Competitiveness

The instrumental factors used in the CCB GGFI model are grouped into four broad areas:

- Sustainability
- Infrastructure
- Human Capital
- Business

These areas, and the instrumental factor themes which comprise each area, are shown in Chart 10.

Chart 10 | CCB GGFI Areas Of Competitiveness



To assess how financial centres' green finance offerings perform against each of these areas, the CCB GGFI statistical model is run for each area of competitiveness separately, allowing a picture to be built of centres' strengths and weaknesses. The performance of the top ranked 15 centres in each of these areas is illustrated in table 6.

The leading centres in the index have strengths across all four areas of competitiveness, with London, Zurich, Singapore, Vienna, and Amsterdam sharing the top three positions. Some centres are strong in a particular area, for example, Vienna and Oslo in Sustainability, Amsterdam in Business, or Vienna and Frankfurt in Infrastructure.

Table 6 | Top 15 Centres By Area Of Competitiveness

Rank	Sustainability	Business	Human Capital	Infrastructure
1	London	Zurich	Zurich	London
2	Singapore	Singapore	London	Vienna
3	Zurich	Amsterdam	Singapore	Zurich
4	Vienna	London	Amsterdam	Frankfurt
5	Oslo	Vienna	Geneva	Paris
6	Paris	Paris	Paris	Washington DC
7	Luxembourg	Luxembourg	Stockholm	Singapore
8	Amsterdam	Washington DC	Frankfurt	Copenhagen
9	Geneva	Edinburgh	Vienna	Tokyo
10	Copenhagen	Geneva	Oslo	Oslo
11	Frankfurt	Frankfurt	Copenhagen	Amsterdam
12	Edinburgh	Minneapolis / St Paul	Luxembourg	Geneva
13	Washington DC	Osaka	Washington DC	Stockholm
14	Stockholm	Tokyo	Tokyo	Luxembourg
15	Minneapolis / St Paul	Stockholm	Los Angeles	Osaka

Index Ranking For Sustainability

We can compare the overall index ranking with the ranking based on the sustainability area of competitiveness, using only the instrumental factors that have a direct relationship to sustainability. This analysis produces slightly different results to the main index, as shown in the comparison in Table 7. The plus and minus figures show the difference between the main index and the index calculated using only sustainability factors.

Where only sustainability factors are included in the analysis, London, Singapore, and Washington DC retain their position. Oslo gains seven places, Vienna gains six, and Edinburgh gains four places, while Los Angeles and Tokyo drop out of the top 15.

Table 7 | Top 15 Centres Using All Factors And Only Sustainability Factors

Rank	All Factors	Sustainability Factors
1	London	London
2	Singapore	Singapore
3	Amsterdam	Zurich (+2)
4	Geneva	Vienna (+6)
5	Zurich	Oslo (+7)
6	Copenhagen	Paris (+1)
7	Paris	Luxembourg (+2)
8	Frankfurt	Amsterdam (-5)
9	Luxembourg	Geneva (-5)
10	Vienna	Copenhagen (-4)
11	Los Angeles	Frankfurt (-3)
12	Oslo	Edinburgh (+4)
13	Washington DC	Washington DC
14	Tokyo	Stockholm (+1)
15	Stockholm	Minneapolis / St Paul (+3)

“Targeted tax incentives - like green bonds tax relief, accelerated depreciation for sustainable assets, or carbon pricing mechanisms - significantly boost uptake by improving risk-adjusted returns. The absence of supportive fiscal policy makes green projects less competitive against traditional investments.”

CEO, FINTECH, GENEVA

Commentary On Factors

The CCB GGFI survey asks respondents to comment on factors that affect the uptake of green finance, and in particular on regulation, taxation, and the availability of skills. The responses are summarised in Table 8.

Table 8 | Commentary On Areas Of Competitiveness

Area Of Competitiveness	Number Of Mentions	Main Themes
Regulatory Environment	132	• Clear, consistent, and stable regulation is seen as the key enabler of green finance. • Taxonomies, disclosure standards, and sustainability reporting rules build investor confidence, reduce greenwashing and uncertainty, and encourage long-term capital flows. • More guidance and government support are needed. Including clearer definitions, incentives for green investment, and simpler, policy.
The Availability Of Skills In Green Finance	124	• A skills shortage is seen as a continuing difficulty for the development of green finance. There are too few professionals with depth and breadth of green finance expertise. • This skills gap may slow down market development even where regulation and tax incentives are strong. • There is a need for specialised university programmes, professional certification and training. Centres that invest in talent are likely to gain a competitive edge.
Taxation	124	• Tax incentives and exemptions relating to green finance investments can improve risk-adjusted returns, lower the cost of capital, and make green projects more competitive. • Some also argue for higher prices on carbon emissions to complement incentives.
Other	46	• Reliable ESG data and transparency are seen as key enablers. Better data quality and disclosure standards would improve transparency, reduce greenwashing risks, and build market confidence. • Wider market conditions also matter, and green finance success is dependent on investor demand, access to green capital, supporting market infrastructure, and professional networks.

Connectivity

One factor where financial centres' green finance performance differs is the extent to which centres are connected to other financial centres. One way of measuring this connectivity is to look at the number of assessments given to and received from other centres in the CCB GGFI survey. Charts 11 and 12 use New York and Washington DC as examples to contrast the different levels of connectivity that the two centres enjoy. New York has broad connections across all regions of the world, while Washington DC's connections are fewer and focused on smaller centres across emerging economies.

Chart 11 | CCB GGFI 18 Connectivity – New York

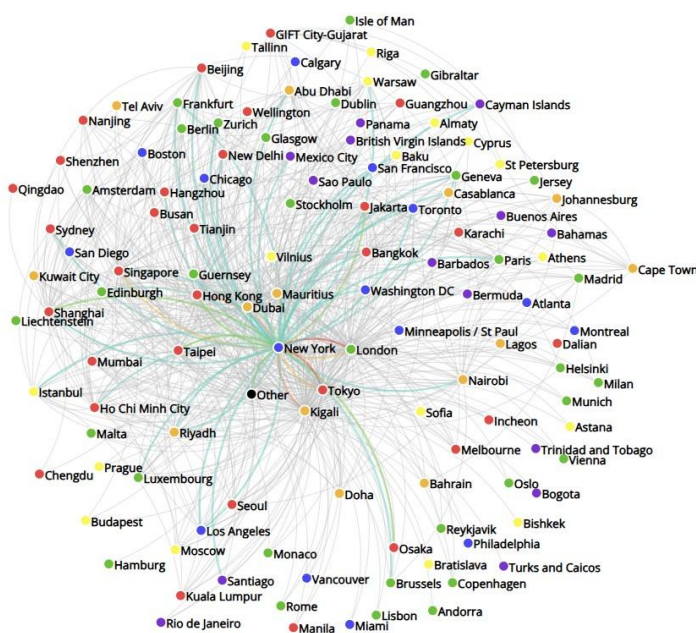
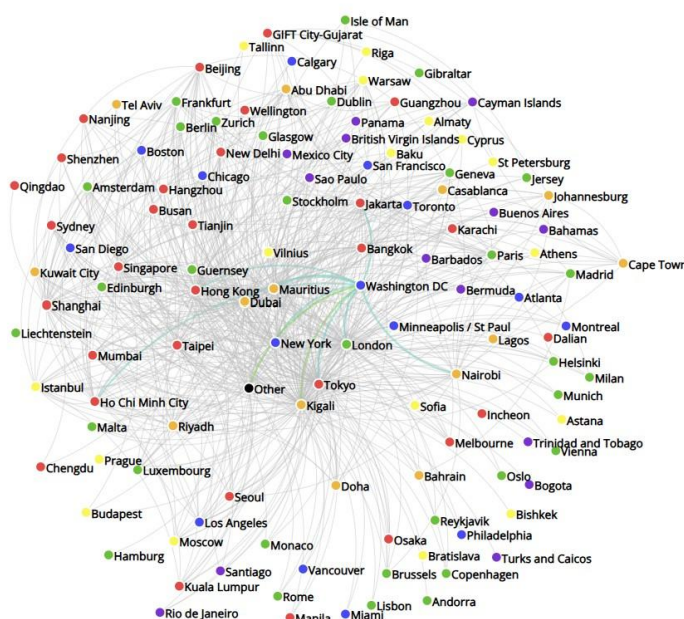


**Chart 12 | CCB
GGFI 18
Connectivity –
Washington DC**



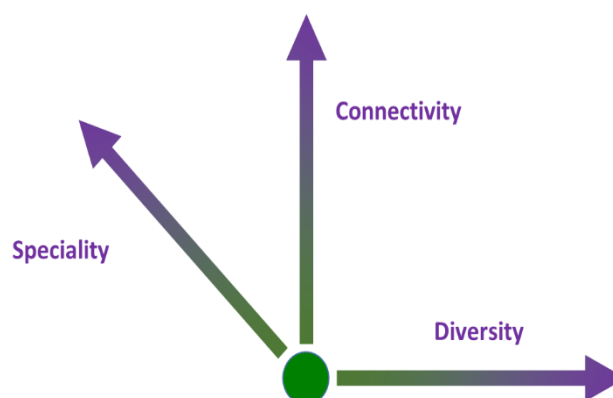
Financial Centre Profiles

We conduct further analyses based on three measures (axes) that determine a financial centre's profile in relation to three different dimensions.

'Connectivity' – the extent to which a centre is well known among CCB GGFI survey respondents, based on the number of 'inbound' assessment locations (the number of locations from which a particular centre receives assessments) and 'outbound' assessment locations (the number of other centres assessed by respondents from a particular centre).

'Diversity' – the instrumental factors used in the CCB GGFI model give an indication of a broad range of factors that influence the richness and evenness of factors that characterise any particular financial centre.

Chart 13 | CCB GGFI Dimensions



We consider this span of factors to be measurable in a similar way to that of the natural environment. We therefore use a combination of biodiversity indices (calculated on the instrumental factors) to assess a centre's diversity. This takes account of the range of factors against which the centre has been assessed – the 'richness' of the centre's business environment; and the 'evenness' of the distribution of that centre's scores. A high score means that a centre is well diversified; a low diversity score reflects a less rich business environment.

'Speciality' – the depth within a financial centre of green finance and sustainability. A centre's 'speciality' or performance is calculated from the difference between the overall index rating and the ratings when the model is calculated based only on sustainability factors.

In Table 9, 'Diversity' (Breadth) and 'Speciality' (Depth) are combined on one axis to create a two-dimensional table of financial centre profiles. The 94 centres in CCB GGFI 18 are assigned a profile on the basis of a set of rules for the three measures: how well connected a centre is, how broad its services are, and how specialised it is.

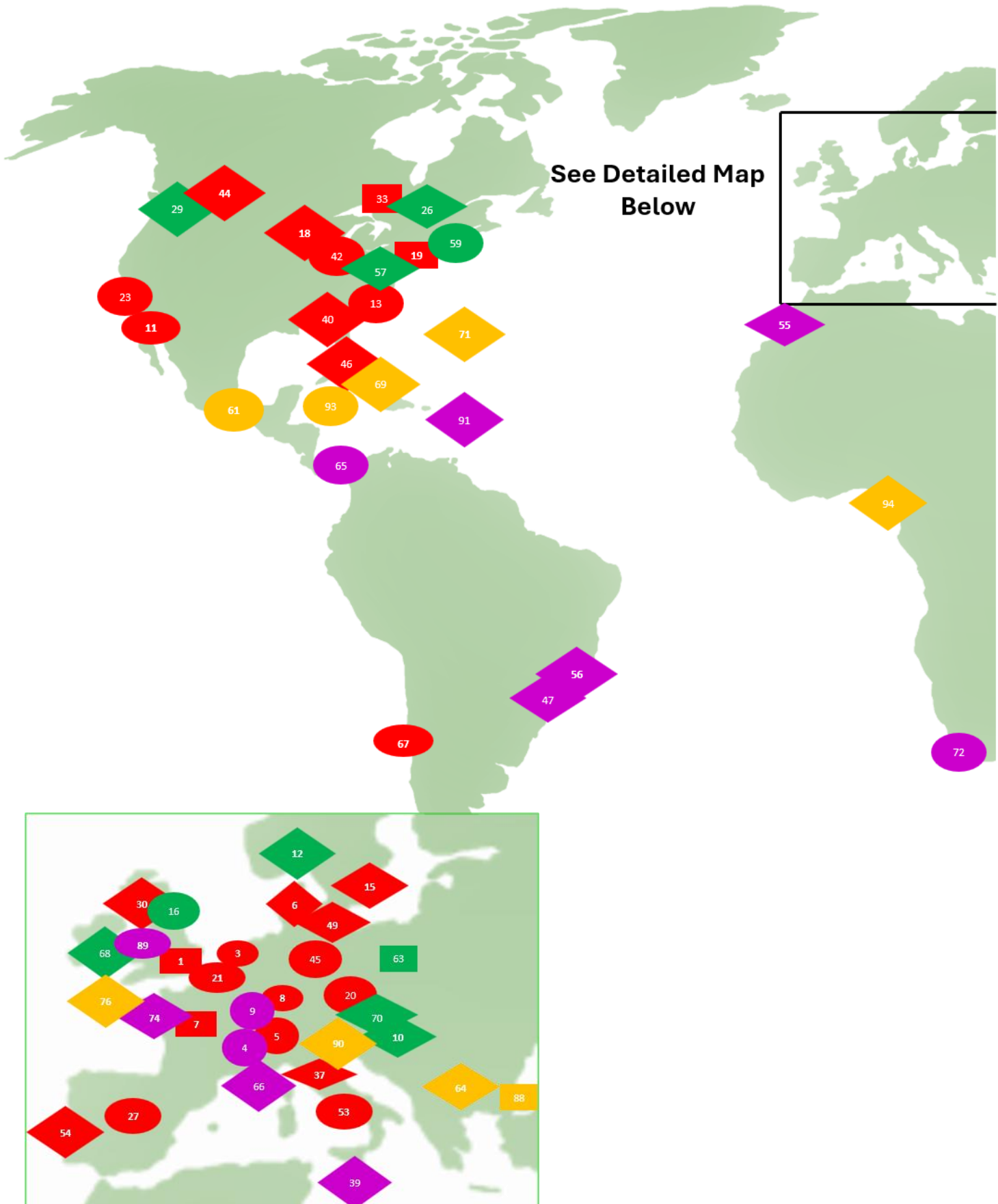
The Global Leaders (in the top left of the table) have both broad and deep green finance activity and are connected with a greater range of other financial centres. Other leading centres are profiled as Established International Centres.

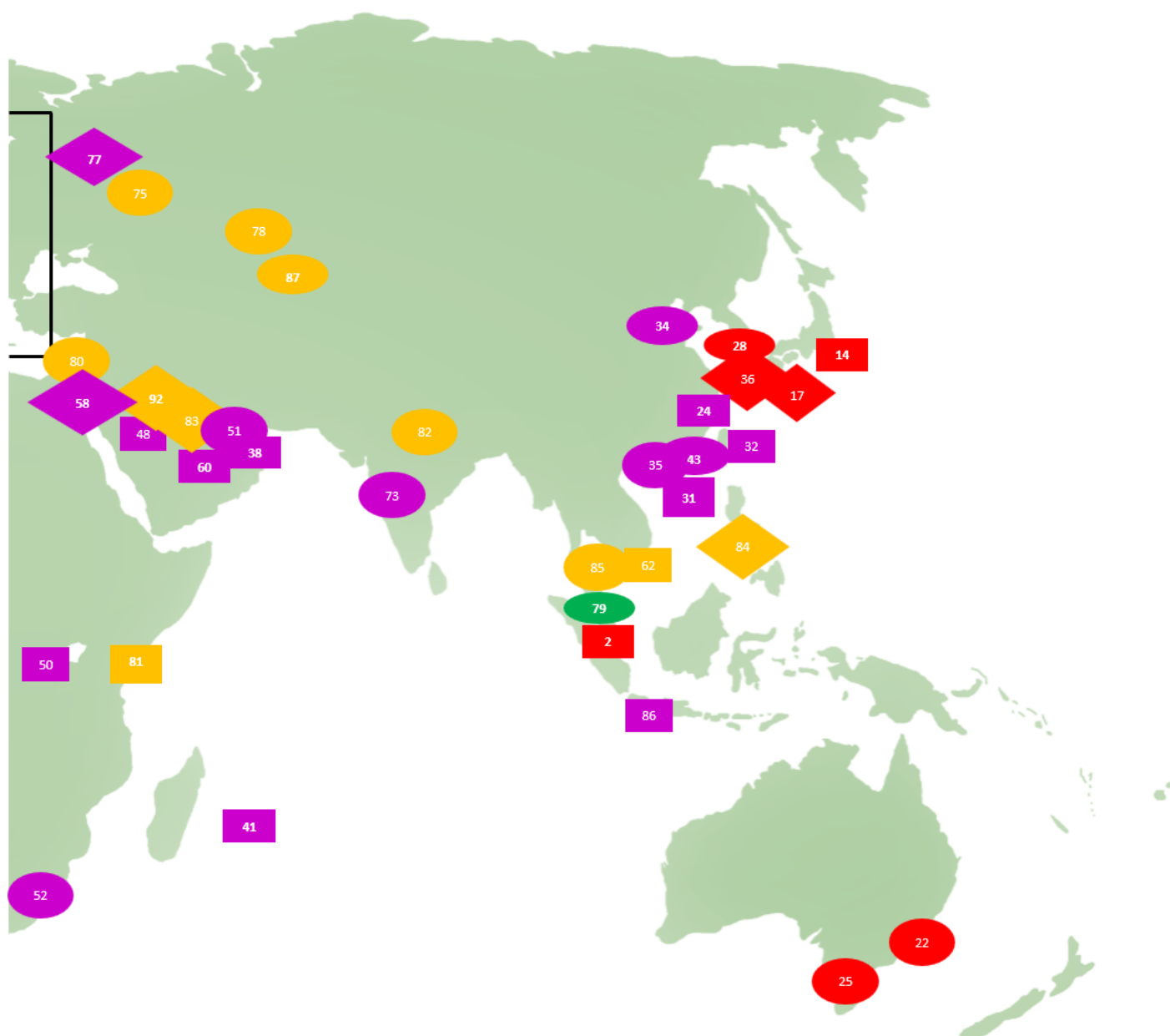
Table 9 | Financial Centre Profiling

	Broad and Deep	Relatively Broad	Relatively Deep	Emerging
	Global Leaders	Global Diversified	Global Specialists	Global Contenders
Global	London	Warsaw*	Shanghai	Ho Chi Minh City (New)
	Singapore		Hong Kong	Nairobi
	Paris		Taipei	Istanbul*
	Tokyo		Dubai	
	New York		Mauritius	
	Toronto		Riyadh*	
			Kigali*	
			Abu Dhabi*	
			Jakarta*	
	Established International	International Diversified	International Specialists	International Contenders
International	Amsterdam	Edinburgh*	Geneva	Mexico City
	Zurich*	Boston*	Luxembourg	Moscow
	Frankfurt	Kuala Lumpur*	Beijing	Astana
	Los Angeles		Shenzhen	Cyprus
	Washington DC		Guangzhou*	New Delhi
	Munich		Doha*	Bangkok*
	Brussels		Johannesburg*	Almaty
	Sydney		Panama	Cayman Islands*
	San Francisco		Cape Town*	
	Melbourne		Mumbai*	
	Madrid		Isle of Man*	
	Seoul			
	Chicago			
	Berlin			
	Rome			
	Santiago			
	Established Players	Local Diversified	Local Specialists	Evolving Centres
	Copenhagen*	Vienna	Malta	Sofia
	Stockholm	Oslo*	Sao Paulo	Bahamas*
	Osaka	Montreal*	Casablanca	Bermuda
Local	Minneapolis / St Paul	Vancouver*	Rio de Janeiro	Guernsey*
	Glasgow	Philadelphia*	Tel Aviv	Bahrain*
	Busan	Dublin*	Monaco	Manila
	Milan	Prague*	Jersey	Liechtenstein*
	Atlanta		St Petersburg	Kuwait City (New)
	Calgary		British Virgin Islands*	Lagos
	Miami			
	Hamburg			
	Lisbon			

* An asterisk denotes a change since CCB GGFI 17

The CCB GGFI 18 World – Centres In The Index





The numbers on the map indicate the CCB GGFI 18 rankings.

Broad and Deep		Relatively Broad		Relatively Deep		Emerging	
	Global Leaders		Global Diversified		Global Specialists		Global Contenders
	Established International		International Diversified		International Specialists		International Contenders
	Established Players		Local Diversified		Local Specialists		Evolving Centres

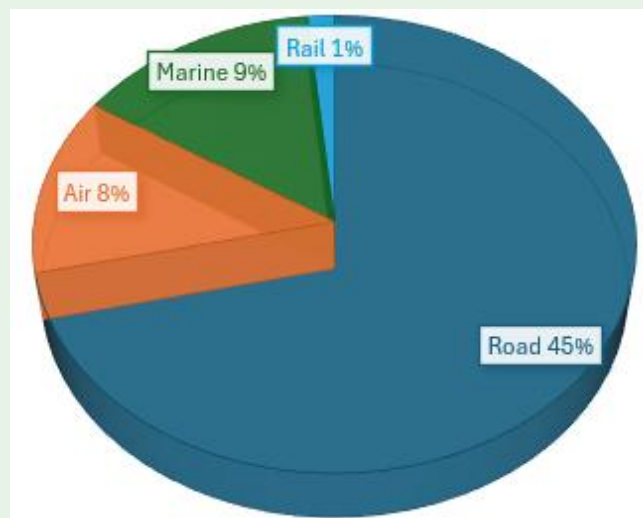
Changing Lanes For Transport – Technology, Geopolitics, And Financial Services

For millennia, the human race's horizons were limited to how far a man could ride a horse in a day. Even ocean-going sailing ships could only travel at 7 to 10 knots, meaning ocean voyages took months. All this changed in 1825 when George Stephenson built Locomotion No. 1 for the Stockton and Darlington Railway, carrying passengers on a public line for the first time. Steam ships quickly followed and, with transport harnessing fossil fuel energy, horizons started opening up, unleashing the industrial revolution and supercharging international trade.

At the turn of the twentieth century, the age of coal was superseded by the age of oil (oil having an energy density of approximately 12 kWh/kg compared to 9 kWh/kg for coal¹), and geopolitics and the global economy began to shape itself around this new fuel source.

Until very recently transport accounted for over 60% of global oil demand² (see figure 1) and about a quarter of global energy-related carbon dioxide emissions³.

Figure 1 | Oil Use (Actual) By Transport Type



However, the status quo, which had been cast in iron for over a century, is now diversifying at a pace that few forecasters anticipated even a decade ago, driven by:

- **Technological developments** — including battery chemistry, alternative fuels and propulsion systems.
- **Economic developments** — cost curves, novel financial instruments, industrial policy, and risk profiles.

¹ Layton B 2008 *A comparison Of Energy Densities Of Prevalent Energy Sources In Units Of Joules Per Cubic Meter* International Journal of Green Energy, 5: 438–455, 2008

https://drexel.edu/~media/Files/greatworks/pdf_sum10/WK8_Layton_EnergyDensities.ashx

² IEA 2026 *Sheltering from Oil Shocks Measures to reduce impacts on households and businesses*

<https://www.iea.org/reports/sheltering-from-oil-shocks/road-transport-fuels>

³ IPCC 2023 *IPCC Sixth Assessment Report* <https://www.ipcc.ch/assessment-report/ar6/>

- **Geopolitical developments** — regional instability, tariffs and export controls, and shifting critical mineral and manufacturing supply chains.
- **Climate Change** — international treaties, such as the Paris Agreement, and increasing pressure on policy makers as the impacts of climate change become increasingly apparent to the world's peoples.

Electric Avenue

The biggest change of the last decade has been the rapid roll-out of electrification in road transport. Global electric car sales rose from approximately 6.5 million in 2021 to over 20 million in 2025⁴. Although only around 5% of the global fleet is electric, in 2025 a quarter of all new cars sold worldwide were EVs, and the IEA believes this will reach 28% of sales by the end of 2026.

This marks a consistent trend that began after the Covid-19 pandemic and Russia's invasion of Ukraine, which saw a global spike in energy prices and, given the fallout from the US's current war in the Middle East, perhaps it is best understood through the lens of energy-security rather than climate change.

However, regardless of the cause the last five years have seen consumers embrace electric vehicles, with the result that the global fleet of electric vehicles displaced around 1.7 million barrels of oil per day (mb/d) in 2025 (this is equivalent to Indonesia's total annual oil demand⁵), up from 0.4 mb/d in 2020 - a more than fourfold increase in five years.

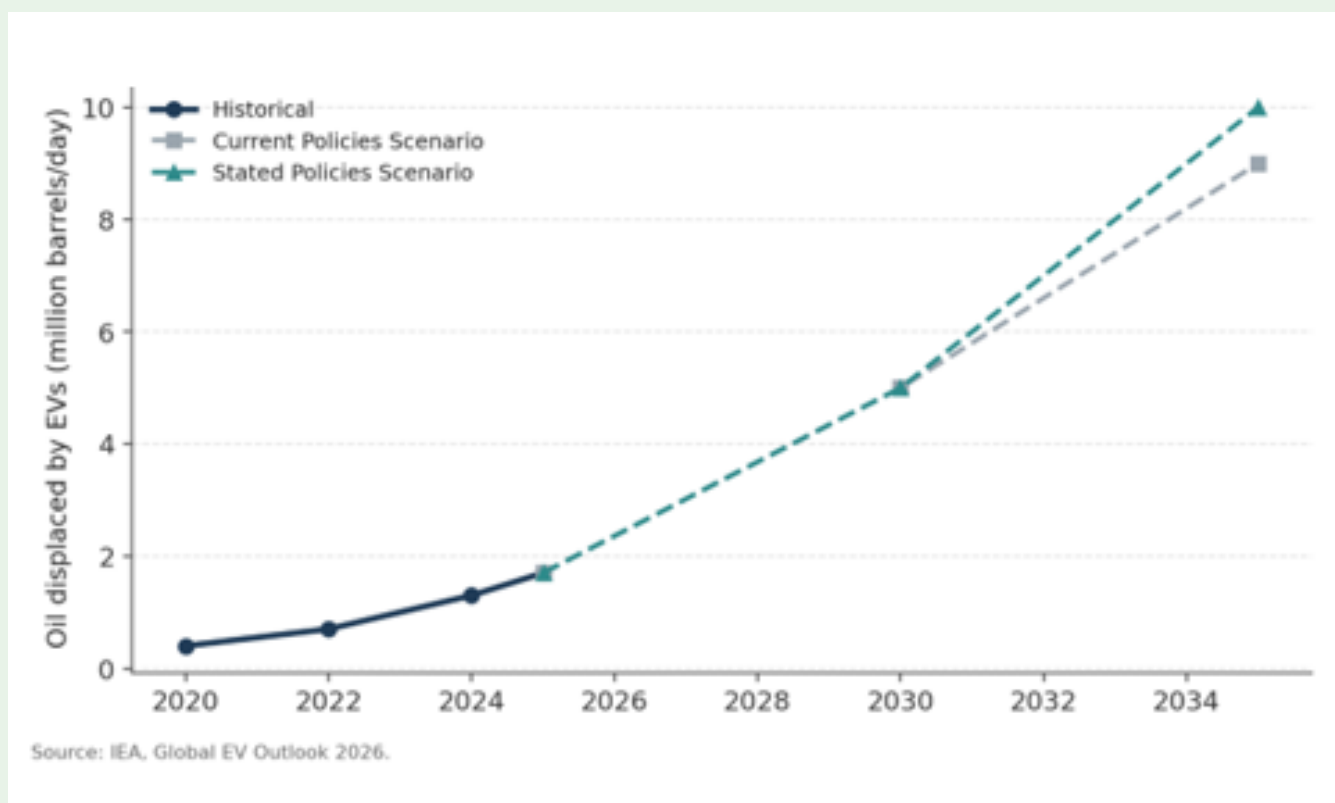
Under the IEA's "*Current Policies and Stated Policies Scenarios*", oil displacement from EVs is projected to almost triple to around 5 mb/d by 2030, and to reach between 9 and 10 mb/d by 2035 — roughly a fivefold increase from 2025 levels⁶. China, the world's largest oil importer, and also the world's largest EV market, has accounted for roughly 1 mb/d of the current displacement⁷ and its EV-driven oil savings are projected to reach 2.7 mb/d by 2030 and more than 4 mb/d by 2035 — roughly half the projected global total.

⁴ IEA 2026 *Global EV Outlook 2026 - Growing sales amid an energy crisis* <https://www.iea.org/reports/global-ev-outlook-2026/executive-summary>

⁵ USEIA 2025 *Country Analysis Brief: Indonesia* https://www.eia.gov/international/content/analysis/countries_long/Indonesia/Indonesia_2025.pdf

⁶ IntelliNews, 2026 *China-led EV boom cuts global oil demand by 1.7mn barrels a day* <https://www.intellinews.com/china-led-ev-boom-cuts-global-oil-demand-by-1-7mn-barrels-a-day-459769/>

⁷ Hellenic Shipping News 2026 *Global oil shock offers boost for EV switching, fossil phaseout* <https://www.hellenicshippingnews.com/?p=1143253>

Figure 2 | Project EV Oil Displacement

China's leading role in road transport electrification is not incidental, but a result of carefully considered policy:

- Beijing spent an estimated USD 231 billion between 2009 and 2023 supporting the EV sector through consumer rebates, tax exemptions, and direct grants to manufacturers such as BYD Auto and SAIC Motor⁸.
- The New Energy Vehicle (NEV) quota system forces automakers to meet strict production percentages for electric and hybrid vehicles or face penalties⁹.
- State backing has built the world's largest public charging network and heavily subsidized local battery giants like CATL.
- Whilst Consumer Incentives have included purchase tax exemptions, trade-in subsidies, free green license plates, and discounted charging rates.

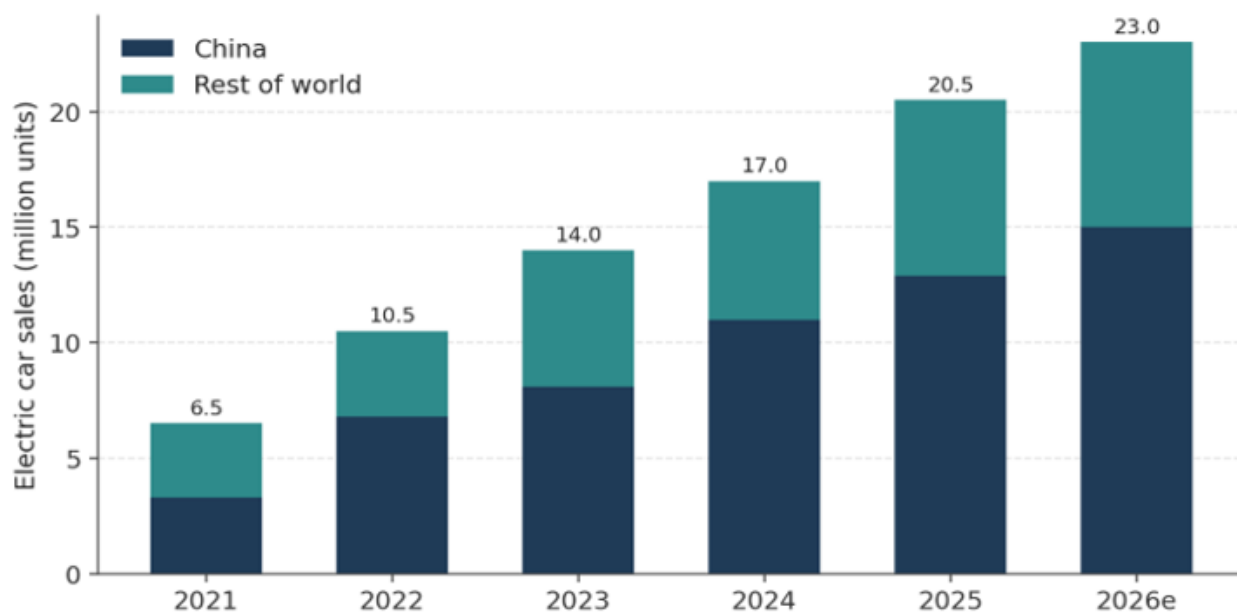
As a result, China overtook the EU as the world's largest car exporter in 2024, and by 2025 more than 35% of China's car exports were electric¹⁰. In 2025, electric cars captured more than half of all annual car sales in China, and Chinese manufacturers supplied nearly 60% of electric cars sold worldwide¹¹. Imports from China accounted for 55% of electric car sales outside Europe and the United States in 2025, up from less than 5% just five years earlier.

⁸ ALJ 2024 **How China rose to lead the world in electric vehicles** <https://alj.com/en/perspective/how-china-rose-to-lead-the-world-in-electric-vehicles/>

⁹ Inkwood Research (accessed 22 09 2026) **China's EV Revolution: Policy Insights and Market Growth** <https://www.inkwoodresearch.com/china-ev-revolution-policy-insight-and-market-growth/>

¹⁰ IEA 2026 **Global EV Outlook 2026** <https://iea.blob.core.windows.net/assets/857aa690-2a43-453f-9f12-147cc8f0a1dd/GlobalEVOutlook2026.pdf>

¹¹ IEA 2026 **Technology: Electric vehicles, Global Energy Review 2026**. <https://www.iea.org/reports/global-energy-review-2026/technology-electric-vehicles>

Figure 3 | China's Share Of The Global EV Market

Source: IEA, Global EV Outlook 2025 & 2026 (author estimates for regional split).

Electrification is also extending into heavier and smaller vehicle classes. Global electric truck sales more than doubled in 2025, reaching around 9% of total truck sales worldwide, with China accounting for the vast majority of this growth — in 2025, one in four trucks sold in China was electric¹². Two- and three-wheelers remain the most electrified road segment globally, with sales in Vietnam more than doubling and growth accelerating markedly in Africa, albeit from a low base¹³.

A Battery Of Tests

China's dominance has been supported by integrated domestic battery and component supply chain which is unmatched by any other nation: China accounts for more than 80% of global battery-cell production, with the result that it is responsible for 70% of electric-car production. In 2025, Chinese EV battery costs were 30% below those of North American and 35% below those of Europe¹⁴.

Contemporary Amperex Technology Co. Limited, (CATL), the Chinese battery manufacturer and technology company was only founded in 2011 but has grown to become the largest EV battery manufacturer in the world, holding nearly a 40% share of the global EV battery market¹⁵.

¹²IEA 2026 *Global EV Outlook 2026 Executive Summary* <https://www.iea.org/reports/global-ev-outlook-2026/executive-summary>

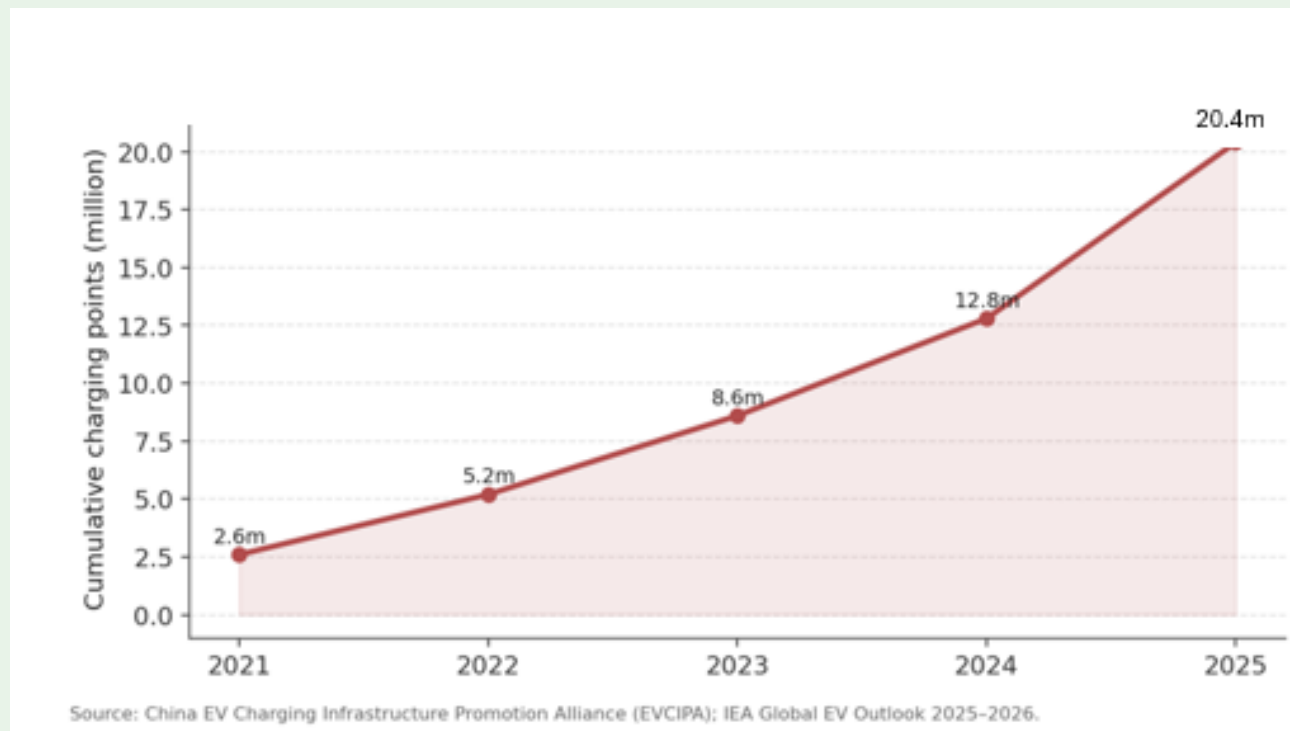
¹³IEA 2026 *Trends in other EV modes, Global EV Outlook 2026* <https://www.iea.org/reports/global-ev-outlook-2026/trends-in-other-ev-modes>

¹⁴GreentechLead 2026 *Top 10 EV and Battery Factories Challenging China's Manufacturing Dominance*. <https://greentechlead.com/electric-vehicle/top-10-ev-and-battery-factories-challenging-chinas-manufacturing-dominance-55192>

¹⁵SolarTechOnline 2025 *Chinese Electric EV Cars Market 2025: Complete Analysis & Growth* <https://solartechonline.com/blog/chinese-electric-ev-cars-market-analysis-2025/>

China's charging infrastructure has grown in step with vehicle sales, expanding from roughly 2.6 million points in 2021 to over 20 million by 2025, according to national and IEA data, contributing over 75% of global public charging point growth in 2025¹⁶.

Figure 4 | China's EV Charging Infrastructure



With respect to technology, Lithium iron phosphate (LFP) batteries dominate the market for trucks and mass-market cars, and while manufacturers continue to push the envelope on energy density, fast-charging performance, and longevity, the limits of current chemistry are being rapidly approached.

The most promising advancement in EV battery technology is the move from liquid-based lithium-ion to solid-state batteries which use a solid material to move lithium ions between electrodes instead of a liquid electrolyte. This has the triple advantages of higher energy density, faster charging, a lower risk of fire and a longer lifespan. However, lithium still remains the element of choice, as alternative media, such as Nickel-Cadmium-Aluminium and Nickel-Manganese Cobalt batteries are around 20% more expensive per kWh than LFP¹⁷.

As a result, global lithium-ion battery production capacity exceeded 2,500 GWh in 2025, and was valued at USD 68.6 billion. It is projected to reach USD 604 billion by 2035, with China controlling more than three-quarters of production¹⁸.

¹⁶GreentechLead 2026 **Global EV Charging Infrastructure Expands Rapidly as Ultra-Fast Chargers and Investments Surge**
<https://greentechlead.com/electric-vehicle/global-ev-charging-infrastructure-expands-rapidly-as-ultra-fast-chargers-and-investments-surge-53460>

¹⁷ Autodoc (accessed 22 09 2026) **LFP vs NMC Batteries: Which EV Battery Chemistry Is Right for You?**
<https://www.autodoc.co.uk/info/lfp-vs-nmc-batteries-which-ev-battery-chemistry-is-right-for-you>

¹⁸ Benchmark Minerals Global (accessed 22 09 2026) **lithium ion battery demand rose 29% in 2025**
<https://source.benchmarkminerals.com/article/global-lithium-ion-battery-demand-rose-29-in-2025>

The rest of the world has been slow off the mark:

- In the US, the Inflation Reduction Act had, prior to the change of US administration in 2025, triggered more than USD 100 billion in announced battery manufacturing investment across North America, including a USD 1.2 billion Kore Power facility in Arizona and a USD 2.6 billion Freyr project. These were subsequently cancelled following the election of the current administration, amid tariff uncertainty and policy reversal¹⁹.
- Morocco has emerged as a notable manufacturing hub, attracting more than USD 15 billion in announced lithium-processing and battery investment, underpinned by phosphate reserves for LFP production and free-trade access to the EU and US markets²⁰.
- The high-profile collapse of Britishvolt in January 2023 marked a major failure for the UK's electric vehicle battery manufacturing sector, driven by severe funding shortages, construction delays, and a lack of firm customer orders. AESC is the UK's longest-standing EV battery plant (1.8 GWh capacity) and is currently constructing a massive new gigafactory with a planned 15.8 GWh capacity backed by a GBP 1 billion investment²¹.

The Third Rail

Over 200 years since its beginnings, rail is still most energy-efficient major transport mode and it has also become the most electrified. Most of Europe's rail network has a high proportion of electrification, with Germany's electrification rate reaching approximately 62.4% in 2025 - 93.1% of Deutsche Bahn's passenger and freight activity is currently electrically operated²².

China's decades-long programme of high-speed and conventional rail construction has turned the country into an exemplar of rail's oil-saving potential, with its electrified railway network displacing approximately 1.5 million barrels of oil per day in 2024 by shifting passengers and freight away from oil-fuelled transport²³.

China plans to expand its high-speed rail network from around 48,000 km at the end of 2024 to 60,000 km by 2030, requiring continuous production of 150–200 CR400 and CR450 'Fuxing' trains per year from CRRC's Qingdao Sifang plant — the single largest volume of high-speed rolling stock production anywhere in the world²⁴.

Europe's high-speed market, by contrast, is driven by fleet renewal: the average age of the TGV, ICE, Frecciarossa, and AVE fleets is approaching the 30-year service-life threshold across France, Germany, Italy and Spain simultaneously, triggering large procurement orders for Alstom, Siemens, and Hitachi trains²⁵.

¹⁹ Marshall C 2025 **DOE cancels more than \$700M in battery, manufacturing projects** <https://www.eenews.net/articles/doe-cancels-more-than-700m-in-battery-manufacturing-projects/>

²⁰ Beyer M 2026 **Gotion High-Tech prepares Africa's first battery gigafactory in Morocco** <https://www.ess-news.com/2026/08/03/gotion-high-tech-prepares-africas-first-battery-gigafactory-in-morocco/>

²¹ AESC (accessed 22 09 2026) <https://aesc.co.uk/>

²² Spherical Insights & Consulting 2026 **World's Top 5 Fastest Railway Electrification Drive Markets**. <https://www.sphericalinsights.com/blogs/world-s-top-5-fastest-railway-electrification-drive-markets-in-the-coming-years-detailed-analysis-by-insights-by-spherical-insights-consulting>

²³ UIC 2025 **UIC strengthens global knowledge – IEA report shows that Chinese railway slashes the transport sector's demand for oil** <https://uic.org/com/enews/article/uic-strengthens-global-knowledge-iaa-report-shows-that-chinese-railway-slashes>

²⁴ Railway News 2026 **High Speed Trainset Market 2025-2035** <https://railwaynews.net/high-speed-trainset-market-2025-2035.html>

Over 70% of global rail lines remained non-electrified as of 2025, presenting a substantial opportunity for hydrogen fuel-cell and battery-electric trains, which can operate on existing diesel corridors without the capital cost of overhead electrification, particularly on geographically difficult routes²⁵.

The global hydrogen-powered train market was valued at approximately USD 1.9 billion in 2024 and is projected to reach USD 9.25 billion by 2030, a compound annual growth rate of 28.2% — faster than any other rail-technology segment, including high-speed trains²⁵.

The broader railway electrification systems market (including overhead catenary, third-rail, traction substations, and related equipment) was valued at approximately USD 28.6 to 52.5 billion in 2025, with projections to reach USD 52 to 80 billion by the early-to-mid 2030s²⁶. Third-rail systems continue to dominate legacy urban metro systems, particularly in cities where overhead-line conversion in deep-bore tunnels would be prohibitively expensive, while newer technologies such as Alstom's ground-level power supply (APS) system in Bordeaux and inductive wireless charging are gaining share in new urban transit builds²⁷.

Clear Air Turbulence

Aviation remains responsible for around 2.5% of global carbon emissions²⁸, but decarbonising the sector remains extremely challenging. Although some progress is being made in the development of electric planes, the focus has been on light aircraft. For larger and longer haul flights, hopes rest on Sustainable Aviation Fuel (SAF), which the International Air Transport Association (IATA) estimates could contribute up to 65% of the emissions reductions needed for the sector to reach net-zero by 2050²⁹. Although progress is being made and SAF production increased from 0.6 billion litres in 2022 to 2.4 billion litres in 2025, this still only represents 0.6% of global jet fuel consumption, with growth expected to slow to reach 2.4 million tonnes in 2026 — just 0.8% of consumption.^{30 31}

²⁵Next Move Strategy Consulting 2025 *Hydrogen-Powered Train Market Size, Share & Value Analysis* <https://www.nextmsc.com/report/hydrogen-powered-train-market-at3356>

²⁶Spherical Insights & Consulting 2026 *World's Top 5 Fastest Railway Electrification Drive Markets* <https://www.sphericalinsights.com/blogs/world-s-top-5-fastest-railway-electrification-drive-markets-in-the-coming-years-detailed-analysis-by-insights-by-spherical-insights-consulting>

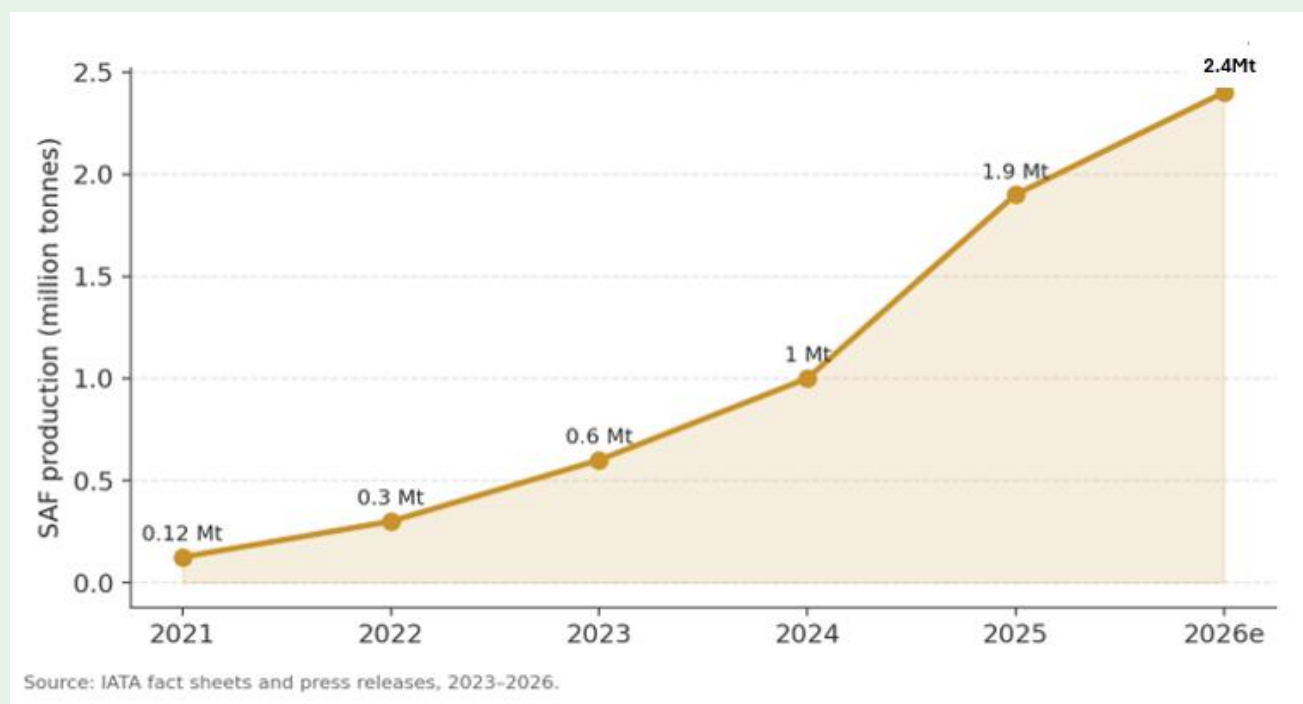
²⁷Dataintel 2026 *Railway Electrification Systems Market Research Report 2034* <https://dataintel.com/report/global-railway-electrification-systems-market>

²⁸Our World In Data (Accessed 22 09 2026) *Global Aviation Emissions* <https://ourworldindata.org/global-aviation-emissions>

²⁹IATA (Accessed 22 09 2026) *Sustainable Aviation Fuel (SAF)*. <https://www.iata.org/en/programs/sustainability/sustainable-aviation-fuel-saf/>

³⁰IATA 2026 *Sustainable Aviation Fuels (SAF)* <https://www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet-sustainable-aviation-fuels/>

³¹IATA 2025 *SAF Production Growth Rate is Slowing Down, Essential to Correct Course Ahead of e-SAF Mandates* <https://www.iata.org/en/pressroom/2025-releases/2025-12-09-04/>

Figure 5 | Global Sustainable Aviation Fuel (SAF) Production, 2021–2026e

The IATA has attributed the slow progress to policy failures rather than technology constraints, citing 'poorly designed' mandates in the European Union. The EU's ReFuelEU Aviation regulation requires a minimum 2% SAF blend from 2025, rising to 6% by 2030, 20% by 2035 and 70% by 2050, but IATA argues the mandate has pushed airline SAF costs to as much as five times the price of conventional jet fuel without expanding supply, adding an estimated USD 3.6 to 4.3 billion to global airline fuel costs in 2025–26³².

To achieve the 500 million tonnes of annual SAF supply required for net-zero by 2050 (more than 250 times current output) both bio-based SAF (derived from used cooking oil and biomass residues) and synthetic e-SAF, produced from renewable hydrogen and captured carbon, will be required at vastly greater scale³³.

Carbon offsetting under the ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) provides a complementary, market-based mechanism. CORSIA's pilot phase (2021–2023) generated no offsetting obligations, but its first phase (2024–2026) produced obligations of 55.6 million tonnes of CO₂ in 2024, rising to an estimated 59 to 82 million tonnes in 2025. The scheme becomes mandatory for all ICAO member states (with limited exemptions) from its second phase beginning in 2027³⁴ ³⁵. The European Union continues to operate a parallel and more stringent Emissions Trading System (ETS) for intra-European flights, which Transport & Environment estimates could have generated

³² NewKerala 2026 **SAF to Account for Under 1% of Aviation Fuel in 2026** <https://www.newkerala.com/news/a/sustainable-aviation-fuel-account-less-than-pc-fuel-305.htm>

³³ IATA 2026 (Accessed 22 09 2026) **Sustainable Aviation Fuel (SAF)**. <https://www.iata.org/en/programs/sustainability/sustainable-aviation-fuel-saf/>

³⁴ IATA 2026 **CORSIA** <https://www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet-corsia/>

³⁵ EASA 2026 (Accessed 22 09 2026) **ICAO Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)** <https://www.easa.europa.eu/en/domains/environment/icao-carbon-offsetting-and-reduction-scheme-international-aviation-corsia>

an additional EUR 7.5 billion in 2024 alone had its scope been extended to long-haul flights rather than deferred to CORSIA³⁶.

Choppy Waters

Global shipping causes about 3% of all global carbon dioxide and greenhouse gas emissions³⁷, even though international shipping is responsible for the carriage of roughly 80% of world trade by volume. Fuel prices and the inexorable logic of the market have meant that global shipping companies take fuel efficiency and, by extension, carbon emissions very seriously. As a result, the global shipping industry, in the form of the International Maritime Organisation, has move steadily, if unevenly, towards a binding global regulatory framework.

In April 2025, the IMO's Marine Environment Protection Committee (MEPC 83) approved the Net-Zero Framework (NZF), a set of amendments to MARPOL Annex VI³⁸ which combine mandatory greenhouse gas fuel-intensity (GFI) standards with an emissions-pricing and reward mechanism that is applicable to ocean-going ships above 5,000 gross tonnage. It is estimated that this will cover 85% of the sector's CO2 emissions³⁹.

However, formal adoption, which was originally scheduled for October 2025, was adjourned for a year amid inevitable pushback from the United States over the pricing mechanism and the speed of the transition. The IMO's official stance is that negotiations are "back on track," but the core mechanism of the framework relies on an agreed global carbon price - something the US administration fundamentally refuses to accept. Discussions will resume at MEPC 85 in late November 2026 and, in the unlikely event that the meeting survives wrecking tactics⁴⁰, binding application will be phased in from 2027⁴¹.

Politics aside, one potential flaw in the IMO's plans is that the framework's reward mechanism (which favours near-zero-emission fuels), effectively excludes transitional options such as LNG. Furthermore, the uncertainty around implementation has meant that insufficient green fuel production and bunkering infrastructure exists to meet the proposed timeline⁴².

The separate, already-binding EU FuelEU Maritime regulation, in force since January 2025, uses a similar well-to-wake methodology but applies only within EU/EEA waters, creating a period of regulatory overlap and complexity for shipowners.

³⁶Transport & Environment 2025 *European aviation set to spend billions on offsetting schemes*

<https://www.transportenvironment.org/articles/european-aviation-spending-billions-on-offsetting-schemes>

³⁷Transport & Environment (accessed 23 09 2026) *Ships* <https://www.transportenvironment.org/topics/ships>

³⁸International Maritime Organization 2026 *The IMO Net-Zero Framework – FAQs*

<https://www.imo.org/en/mediacentre/hottopics/pages/faqs-the-imo-net-zero-framework.aspx>

³⁹Turner, Mason & Company 2025 *IMO Greenlights Net-Zero Plan for Shipping Industry*

<https://www.turnermason.com/blog/imo-greenlights-net-zero-plan-for-shipping-industry/>

⁴⁰Shipping Telegraph 2026 *US wants IMO to scrap Net-Zero Framework after formal submission*

<https://shippingtelegraph.com/maritime-insurance-news/us-wants-imo-to-scrap-net-zero-framework-after-formal-submission/>

⁴¹Varuna Sentinels BV 2026 *What is the IMO Net-Zero Framework? Fuel Standard, GHG Fuel Intensity & Reward Mechanism Guide* <https://www.varuna-sentinels.com/what-is-imo-net-zero-framework>

⁴²Blank Rome LLP 2026 *IMO Net-Zero Shipping Framework: A Crossroads for Global Shipping Regulations*

<https://www.blankrome.com/publications/imo-net-zero-shipping-framework-crossroads-global-shipping-regulations>

Table 1 compares the four principal alternative marine fuels under consideration.

Table 1 | Comparison of Alternative Marine Fuels

Fuel	Maturity / Readiness	Lifecycle Greenhouse Gas Reduction Potential	Principal Constraint
LNG	Commercially mature; large existing orderbook	Modest (c.20% vs. Heavy Fuel Oil); methane slip a concern	Excluded from IMO reward mechanism as designed
Methanol	Increasingly mature for short-sea routes; growing newbuild orders	Up to c.65 to 90% if produced from renewables	Renewable methanol supply and bunkering scale-up
Ammonia	Early commercial deployment; primary long-term deep-sea candidate	Up to c.90% if 'green' hydrogen-based	Toxicity, safety standards, engine technology maturity
Hydrogen (liquid)	Pilot/early-stage	Very high if 'green'	Cryogenic storage, energy density, infrastructure

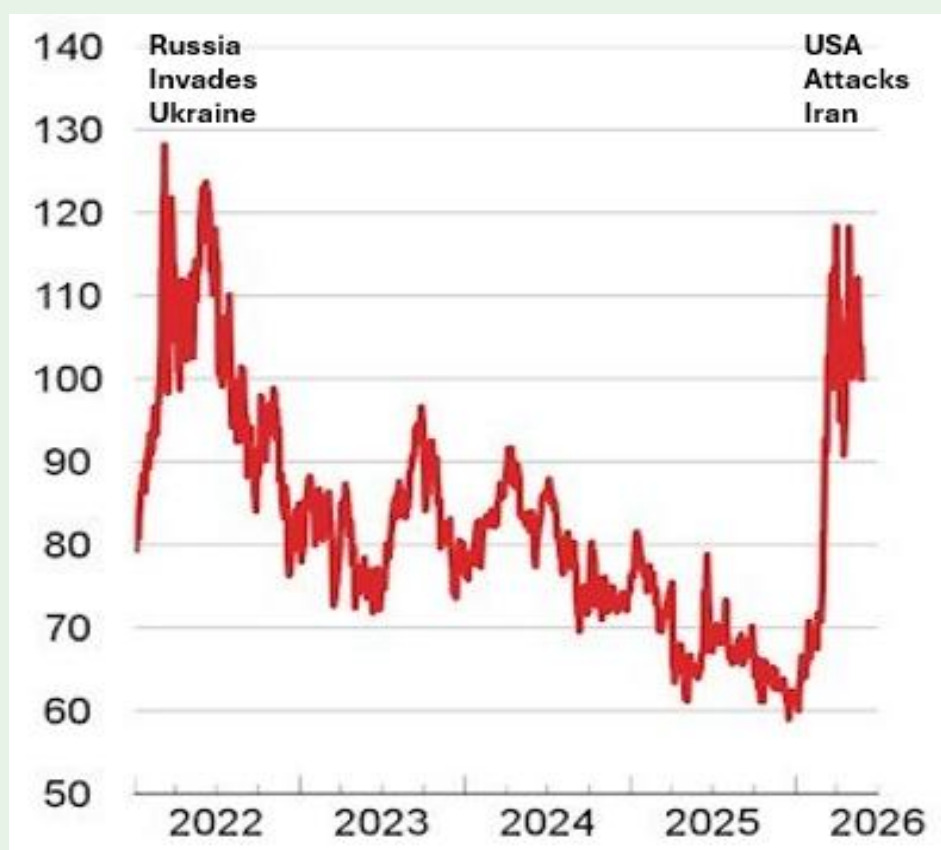
Source: adapted from MDPI (2026) techno-economic review of maritime fuel pathways.

Geopolitical Developments

The last five years have seen two regional conflicts which have made policy makers sit up and pay close attention to the issue of energy security:

- Russia's invasion of Ukraine, and the subsequent sanctions on Russia's oil and gas exports, further compounded by attacks on Russia's energy infrastructure.
- The United States' attack on Iran and the subsequent regional instability it has caused, has severely disrupted both the production and transportation of oil and gas.

As a result, global oil prices have soared, impacting inflation across a range of sectors, particularly transport.

Figure 6 | Brent Crude Oil Prices USD Per Barrel

Source: OECD Economic Outlook June 2026

However, despite the overwhelming case for decarbonisation of transport, from economic, security and existential perspectives, the transport energy transition has become deeply entangled with strategic competition between China and Western economies, particularly in relation to electric vehicles, batteries and critical minerals.

The United States raised Section 301 tariffs on Chinese-made electric vehicles from 25% to 100% in May 2024, alongside new 25% tariffs on Chinese EV batteries and battery critical minerals, framed explicitly as a response to China's industrial subsidies and non-market practices⁴³.

The European Union imposed additional tariffs on Chinese-made battery electric vehicles of between 7.8% (Tesla) and 35.3% (SAIC) from October 2024, on top of the pre-existing 10% tariff, for up to five years^{44 45}. Tariffs were also extended along the supply chain to cover aluminium, EV batteries, and key minerals⁴⁶.

⁴³ S&P Global Mobility 2024 *US raises tariffs on EV imports from China to 100% from 2024*

<https://autotechinsight.spglobal.com/news/5275782/us-raises-tariffs-on-ev-imports-from-china-to-100-from-2024>

⁴⁴ Wilson Center 2024 *The Imposition of EU Tariffs on Chinese-Made EVs May Do the Trick – but There is No Guarantee*

<https://www.wilsoncenter.org/article/imposition-eu-tariffs-chinese-made-evs-may-do-trick-there-no-guarantee>

⁴⁵ IISS 2024 *The EU's approach to tariffs on Chinese electric vehicles* <https://www.iiss.org/publications/strategic-comments/2024/10/the-eus-approach-to-tariffs-on-chinese-electric-vehicles/>

⁴⁶ The Fletcher Forum of World Affairs 2025 *What the tariffs on Chinese electric vehicles tell us about the differences in EU and U.S. trade policy*. <https://www.fletcherforum.org/home/07/22/what-chinese-ev-tariffs-tell-us>

By mid-2026, the EU was allegedly considering extending tariffs to cover plug-in hybrids, amid concern that PHEVs were becoming a means of circumventing existing duties⁴⁷.

In April 2025, China tightened export restrictions on the rare-earth magnets essential for EV motors and in the second half of 2025, it imposed export controls on critical EV battery technologies and manufacturing processes. Together these controls have reinforced China's position at the heart of the EV supply chain, with Chinese firms controlling 65% of global lithium processing capacity and over 70% of the global EV battery market⁴⁸.

However, instead of retreating from international markets in response to tariffs, Chinese EV and battery firms have focussed on manufacturing in third countries. Between 2014 and 2025, Chinese companies, led by CATL and BYD have invested USD 143 billion in foreign EV and battery ventures, and in 2024 they spent more on building EV supply chains abroad than domestically⁴⁹.

This capital is increasingly directed toward Asia, Africa, and Latin America rather than the United States or Europe, where trade barriers have made direct market access more difficult; Morocco's emergence as a battery-manufacturing hub, discussed earlier, is one example of this reorientation.

The cumulative effect of these measures, pushing against the twin headwinds of tariffs and increasingly bellicose policymaking from politicians strongly influenced by the fossil fuel lobby, is a shift from a globally integrated EV and battery supply chain toward a more regionally fragmented one. This is further compounded by battery production costs in Europe and the United States being as much as 50% higher than in China, even after accounting for public subsidy support⁵⁰.

The Role Of Financial Services In The Transport Energy Transition

The financial services sector sits at the nexus of the transport energy transition: it prices the cost of capital for investment in infrastructure such as gigafactories, ports, green fuel refineries, charging networks, and fleets. It establishes the disclosure and reporting standards against which corporate transition plans are judged. Finally, it insures companies and consumers using this new technology.

As a result, the financial services sector itself has increasingly become the focus of political pushback. The market for green, social, sustainability and sustainability-linked (GSS+) bonds has grown roughly threefold in the last five years. Climate Bonds Initiative data shows cumulative aligned GSS+ issuance rising from around USD 2.5 trillion at the end of 2021 to USD 6.8 trillion by the end of 2025, with annual aligned

⁴⁷EU Today 2026 *EU Prepares Hybrid-Car Tariffs as China Trade Pressure Reaches Leaders Table* <https://eutoday.net/eu-prepares-hybrid-car-tariffs/>

⁴⁸Battery Technology 2026 *China Imposes Export Controls on Critical EV Battery Technologies* <https://www.batterytechonline.com/battery-manufacturing/china-tightens-grip-on-ev-battery-tech-with-new-export-controls>

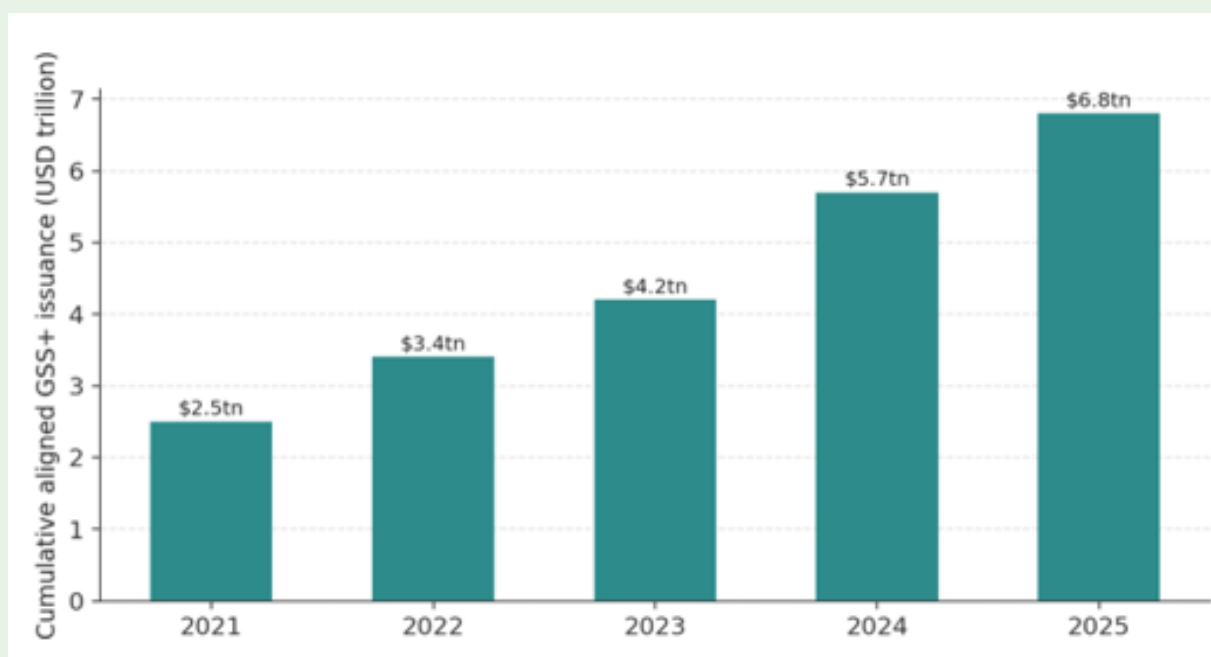
⁴⁹Rest of World 2025 *China invests \$143 billion to rewire the global EV industry* <https://restofworld.org/2025/china-ev-investment-global-expansion/>

⁵⁰GreentechLead 2026 *Top 10 EV and Battery Factories Challenging China's Manufacturing Dominance* <https://greentechlead.com/electric-vehicle/top-10-ev-and-battery-factories-challenging-chinas-manufacturing-dominance-55192>

issuance surpassing USD 1 trillion for the third consecutive year in 2025 and more than 400 new issuers entering the market that year alone⁵¹.

Europe continues to lead, accounting for 45% of total annual aligned GSS+ volume and USD 3 trillion cumulatively in 2025, while the United States remains the largest cumulative source of aligned issuance despite domestic political headwinds, followed by China and France⁵¹.

Figure 7 | Cumulative Aligned Sustainable Debt Issuance 2021 – 2025 (USD Trillion)



Source: Climate Bonds Initiative

Green bonds are the largest and most transport-relevant category, given their frequent use to finance rolling stock, EV charging networks, port electrification, and vehicle fleets. These uses accounted for around two-thirds of aligned GSS+ volume by the end of 2025. London Stock Exchange (LSEG) data corroborate this growth from a slightly different methodological base: total green bond outstanding stock exceeded USD 3 trillion for the first time by the end of Q3 2025, having grown at an approximate 30% compound annual rate over the preceding five years, even as year-to-date green bond issuance growth slowed to around 1% amid what LSEG described as 'macroeconomic, political polarisation and geopolitical' headwinds⁵².

⁵¹Climate Bonds Initiative 2026 **Sustainable Debt Market Nears USD7 Trillion in Aligned Issuance** <https://www.climatebonds.net/news-events/press-room/press-releases/sustainable-debt-market-nears-usd7-trillion-aligned-issuance-demonstrating-strong-global-momentum>

⁵²LSEG Insights 2025 **Green debt market passes \$3 trillion milestone**. <https://www.lseg.com/en/insights/green-debt-market-passes-3-trillion-milestone>

Transition Finance

Transition finance is the Heineken of green finance (it reaches the parts that other finance cannot reach) and has a particularly important role in the transport sector as it is directed toward activities that are not yet environmentally sustainable but are committed to credible, science-based decarbonisation pathways. This is particularly important for aviation, shipping, and heavy-duty road freight which cannot yet be financed as purely 'green' activities under most taxonomies but require large volumes of capital to transition.

A recent survey of over 1,000 financial-sector respondents found that 37% saw the primary benefit of transition finance as supporting innovation and competitiveness in low-carbon technologies, and 33% saw it as opening new business lines for financial institutions, even as respondents flagged data, standardisation, and legal-liability concerns as key obstacles⁵³.

Sustainability-linked bonds and loans, which tie the cost of capital to the achievement of pre-agreed decarbonisation targets rather than ring-fencing use of proceeds, recorded one of their strongest half-years on record in H1 2025 (USD 9.7 billion)⁵⁴. Whilst blended finance structures — combining public, private and philanthropic capital — and novel instruments such as transition credits (designed to accelerate the early retirement of high-emission assets, first developed for coal-fired power but conceptually extensible to shipping and aviation fleets) have also gained traction, particularly in Asia⁵⁵.

Development banks have become an increasingly important source of transport transition capital: the European Investment Bank was the leading single issuer of aligned green bonds in early 2025 with USD 9.9 billion across five deals, and development banks as a group crossed the USD 1 trillion cumulative aligned issuance threshold in mid-2025, joining governments, financial institutions and corporates as issuer categories each surpassing that mark^{56 57}.

Sector-Specific Frameworks

Shipping finance has the most mature sector-specific climate framework. The Poseidon Principles, launched in 2019 by 11 founding banks with a combined loan portfolio of approximately USD 100 billion (around 22% of global ship finance), require signatories to measure and disclose the climate alignment of their shipping loan portfolios against IMO decarbonisation trajectories on an annual basis⁵⁸. By December 2025, the initiative had grown to 36 signatory banks representing almost three-quarters of the global ship-finance portfolio, with 95% of eligible portfolio activity disclosed - up from 93% in 2024 - and average

⁵³Fintech News Hong Kong 2026 *Global Transition Finance Ecosystem Gains Momentum*

<https://fintechnews.hk/38537/green-finance/global-transition-finance-ecosystem-gains-momentum/>

⁵⁴Climate Bonds Initiative 2025 *Green Bonds Drive USD555bn Surge as Development Banks Join USD1tn Issuer Club*

<https://www.climatebonds.net/news-events/press-room/press-releases/green-bonds-drive-usd555bn-surge-development-banks-join-usd1tn-issuer-club>

⁵⁵ AMRO 2025 *Singapore's Leadership in Sustainable Finance*. <https://amro-asia.org/wp-content/uploads/2025/12/SI-2-2.pdf>

⁵⁶Climate Bonds Initiative 2025 *Sustainable Debt Global State of the Market 2024* <https://www.climatebonds.net/data-insights/publications/global-state-market-2024>

⁵⁷Climate Bonds Initiative 2025 *Green Bonds Drive USD555bn Surge as Development Banks Join USD1tn Issuer Club* <https://www.climatebonds.net/news-events/press-room/press-releases/green-bonds-drive-usd555bn-surge-development-banks-join-usd1tn-issuer-club>

⁵⁸Observer Research Foundation 2026 *Ship Finance and Decarbonisation: The Poseidon Principles in Context* <https://www.orfonline.org/expert-speak/ship-finance-and-decarbonisation-the-poseidon-principles-in-context>

portfolio misalignment against the IMO's 'minimum trajectory' narrowing from just over 19% to just under 12% year-on-year⁵⁹. In December 2025, the initiative further expanded to admit private equity, hedge funds, and capital-markets underwriters as associate members, extending climate-transparency norms beyond traditional secured ship lending⁶⁰.

Aviation lacks an equivalent bank-led financing framework, and its principal market-based climate mechanism, CORSIA, operates through carbon-offset purchase obligations on airlines rather than through lender disclosure. This gap is notable: unlike shipping, where financiers face direct disclosure obligations tied to portfolio-level decarbonisation trajectories, aviation's financiers, such as aircraft leasing companies, export credit agencies, and capital-markets investors in enhanced equipment trust certificates, remain largely outside specific climate-alignment regimes, leaving airlines to absorb SAF and offset costs directly⁶¹.

Carbon Risk Exposure

Carbon risk - the threat that fossil-fuel assets, carbon-intensive loan books, and stranded infrastructure pose to financial stability, was first flagged by Z/Yen in 2011 and followed up in the second edition of the Global Green Finance Index⁶². And in an article, 'What Happens If We 'Burn All The Carbon'? Carbon Reserves, Carbon Budgets, And Policy Options For Governments' published by the Royal Society Of Chemistry⁶³. Over the last five years the issue has moved from a niche ESG concern to a mainstream systemic risk.

The core danger is straightforward: as the world transitions toward net-zero emissions, assets tied to coal, oil, and gas extraction, as well as carbon-intensive manufacturing and energy, could lose much of their value rapidly rather than gradually. Because major banks, insurers, pension funds, and stock exchanges in leading financial centres hold or underwrite huge volumes of these assets, a disorderly transition ("carbon bubble" deflation) could trigger cascading losses, credit downgrades, and even solvency crises well beyond the energy sector itself. As discussed earlier in this report, transport is responsible for consuming around 60% of current oil production, but as the pace of electrification increases, this will fall exponentially.

In our 2018 report, we flagged New York, Moscow, Paris, Shanghai, and London as the financial centres with the highest volumes of disclosed GHG emissions among listed companies, followed closely by

⁵⁹Ship & Bunker 2025 *Poseidon Principles Report Shows Ship Finance Moving Closer to IMO Net-Zero Pathway* <https://shipandbunker.com/news/world/922796-poseidon-principles-report-shows-ship-finance-moving-closer-to-imo-net-zero-pathway>

⁶⁰Riviera Maritime Media, 'Ship banking's emissions tracking scheme expands to include private lenders', 15 December 2025. <https://www.rivieramm.com/news-content-hub/news-content-hub/ship-bankings-emissions-tracking-scheme-expands-to-include-private-lenders-87159>

⁶¹IATA, Fact Sheet – CORSIA, June 2026. <https://www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet-corsia/>

⁶²Z/Yen Group 2018 *GGFI Second Edition* <https://www.longfinance.net/programmes/financial-centre-futures/global-green-finance-index/ggfi-publications/global-green-finance-index-2/>

⁶³Royal Society Of Chemistry 2024 **What happens if we 'burn all the carbon'? Carbon reserves, carbon budgets, and policy options for governments** https://rscj.silverchair-cdn.com/rscj/content_public/journal/ea/4/4/10.1039_d3ea00107e/1/d3ea00107e.pdf?Expires=1793272461&Signature=JOFu~-67QUrXhchW-Pmz6hOu7XicaUivqwaHAMwlycTa8G6DVAau~Kc-L-eSCBP8E1XnzzQSt2UdhbeRuB1SsBoaGIDo5DPN5HeYwyDN6CTpHIR5mUrY9oGkuchPFjFoAcS9C6-SyZBUaVGSiZmY7WpP1fQnY6HP4vEVcu8SkpVT4W7Z5H3WOA5rdzceT7tM6Jx1hZ2fZOGafdbO2GMBUNUMleWAMaoLJzSV-LHhQkwQfC0krmTJQt6FKLJbQL4QJyaPlzme2YjFkaSzyW-l2RYxvQU55ymJMvpuLEurMlK0tFi-nOvwYitn3lZS2mlj8wf3EGc9MWjk0wLz~7-hw_&Key-Pair-Id=APKAIE5G5CRDK6RD3PGA

Frankfurt, Milan, Tokyo, Madrid, and Sao Paulo. In the intervening period regulators have moved from voluntary guidance to formal supervisory tools:

- **Climate stress tests.** The Bank of England launched its Climate Biennial Exploratory Scenario (CBES) programme in 2021, running the main exercise in 2022, while the ECB conducted its first climate stress test, followed by a second in 2022 and continued supervisory reviews into 2023⁶⁴.
- **Ongoing expansion.** By 2025, the Bank of England, ECB, and several Asian central banks had moved into a further wave of climate stress testing, modelling 30-year scenarios against high-emission sector exposure, carbon pricing, and physical disaster risk, with results showing that institutions still tend to underestimate long-term transition risk, particularly banks with heavy fossil-fuel exposure and no clear transition strategy⁶⁵.
- **Disclosure mandates.** Frameworks such as the EU's Sustainable Finance Disclosure Regulation⁶⁶ and TCFD⁶⁷-aligned scenario analysis have pushed carbon-risk reporting into standard supervisory and investor practice.

Despite this progress, most measures remain exploratory rather than binding on capital requirements, and as noted in our earlier papers, the alignment between financial-centre competitiveness and carbon exposure reduction *"will have to change if... the carbon risk... is to be addressed."*

Leading Financial Centres

Three financial centres stand out as hubs for transport-relevant sustainable finance, each with a distinct positioning.

London

The London Stock Exchange positions itself as the leading global venue for sustainable debt and equity issuance spanning Europe, the Americas, China, Africa, and Asia-Pacific, hosting over 500 green, sustainability and social bonds that have collectively raised more than GBP 210 billion, alongside more than 100 companies and funds carrying its 'Green Economy Mark' classification⁶⁸. London was the first stock exchange to launch a dedicated Green Bond Segment and, reflecting Europe's continued dominance of global GSS+ issuance (45% of the 2025 total), remains the natural listing venue for European transport-sector green bonds, including rail infrastructure and EV-charging network financing.

Hong Kong

Hong Kong has consolidated its position as Asia's leading green and sustainable bond centre, ranking first in the region since 2018 and issuing a cumulative HKD 250 billion equivalent (around USD 32 billion) under its Government Green Bond Programme by November 2025, spanning HKD, RMB, USD, and EUR tranches, including tokenised green bonds issued between 2023 and 2025⁶⁹. As of the end of August 2025, Hong Kong's Green and Sustainable Finance Grant Scheme had approved grants of over HKD 370 million supporting more than 600 green and sustainable debt instruments with total underlying issuance

⁶⁴ Square Management 2024 **Action Plan For Central Banks** <https://www.square-management.com/articles/action-plan-for-central-banks/>

⁶⁵ GenESG 2026 **Climate Risk Stress Testing Gains Momentum in Central Banking** <https://genesg.fh-joanneum.at/uncategorized/climate-risk-stress-testing-gains-momentum-in-central-banking/>

⁶⁶ Europa 2023 **Implementing and delegated acts - SFDR** https://finance.ec.europa.eu/regulation-and-supervision/financial-services-legislation/implementing-and-delegated-acts/sustainable-finance-disclosures-regulation_en

⁶⁷ Task Force On Climate Related Financial Disclosures (accessed 23 09 2026) <https://www.fsb-tcfd.org/>

⁶⁸ LSEG 2026 **Sustainable Finance for Green Companies**. <https://solutions.lseg.com/sustainablefinance>

⁶⁹ HKFSTB 2025 **Green and Sustainable Finance** https://www.fstb.gov.hk/en/financial_ser/green-and-sustainable-finance.htm

exceeding USD 167 billion⁷⁰. Hong Kong has also positioned itself as a bridge for cross-border, transport-relevant transition finance into mainland China and the Global South, hosting a dedicated workshop on Dim Sum, Panda, and Free Trade Zone bonds in November 2025 and publishing Phase 1 of a Hong Kong Taxonomy for Sustainable Finance in May 2024 that explicitly covers transportation alongside power generation, construction, and water and waste management, designed to interoperate with mainland Chinese and EU taxonomies⁷¹.

Singapore

Singapore has pursued a more explicitly transition-oriented strategy through the Monetary Authority of Singapore's Finance for Net Zero (FiNZ) Action Plan, launched in April 2023 as an expansion of its 2019 Green Finance Action Plan. FiNZ is designed to mobilise green and transition financing for carbon-intensive sectors — including regional shipping and logistics — via blended finance, transition credits for the early retirement of high-emission assets, and de-risking tools such as currency hedging and insurance intended to draw private capital into decarbonisation projects across Southeast Asia, where green infrastructure remains comparatively underfunded⁷².

China

China itself, while not organised around a single financial centre in the same way, has become one of the largest sources of aligned green bond issuance globally (ranking behind only the United States cumulatively) and is host to leading domestic issuers such as China Minsheng Banking Corp. The People's Bank of China has highlighted the country's progress in developing transition-finance taxonomies specifically to support decarbonisation while accommodating continued industrialisation^{73 74}.

Political Backlash

Since late 2024, financial services' role in the transport (and broader) energy transition has been complicated by a significant political backlash in the United States. The backlash was prompted by the fears of the fossil fuel sector that finance was becoming increasingly expensive for them due to the Environmental, Social, and Governance (ESG) mandates of major lenders.

Lobbyists captured policy makers in the Senate, the House of Representatives, and financial institutions, who argued that ESG-aligned lending criteria could expose banks to antitrust and fiduciary-duty legal liability and threatened to exclude non-compliant firms from state business⁷⁵.

⁷⁰HK Government 2025 *Green Bond Report 2025*

https://www.hkgb.gov.hk/en/others/documents/FSTB_GreenBond25_eBooklet_EN.pdf

⁷¹Climate Bonds Initiative 2025 *Expanding Green Finance in Asia* <https://www.climatebonds.net/news-events/blog/expanding-green-finance-asia>

⁷² AMRO 2025, *Singapore's Leadership in Sustainable Finance*. <https://amro-asia.org/wp-content/uploads/2025/12/SI-2-2.pdf>

⁷³Climate Bonds Initiative 2025 *Sustainable Debt Global State of the Market 2024*. <https://www.climatebonds.net/data-insights/publications/global-state-market-2024>

⁷⁴Climate Bonds Initiative 2025 *Asia's Sustainable Finance in Action: Highlights from Climate Bonds CONNECT APAC 2025* <https://www.climatebonds.net/news-events/blog/asias-sustainable-finance-action-highlights-climate-bonds-connect-apac-2025>

⁷⁵Asuene 2025 *Why Big Banks Are Leaving the Net-Zero Banking Alliance* <https://asuene.com/us/blog/why-big-banks-are-leaving-the-net-zero-banking-alliance>

All six of the largest US banks, including Goldman Sachs, Wells Fargo, JPMorgan Chase, Bank of America, Citigroup, and Morgan Stanley withdrew from the UN-backed Net-Zero Banking Alliance (NZBA) within a matter of weeks, followed shortly afterward by Canada's 'Big Six' banks, and, in July 2025, by HSBC⁷⁶ ⁷⁷.

The departing US banks represented a 22% decline in the total assets of NZBA member institutions, and on 3 October 2025 the NZBA's remaining members voted to dissolve the alliance's membership structure entirely, converting it into a non-binding guidance framework with no formal membership⁷⁸.

The NZBA's collapse illustrates a broader tension in transport-sector climate finance: coordinated, sector-wide commitments of the kind exemplified by the NZBA face growing legal and political exposure in some jurisdictions. Narrower, technically grounded, and disclosure-based frameworks such as the Poseidon Principles have to date proved more resilient, in part because they are framed around portfolio measurement and transparency rather than binding lending commitments⁷⁹.

Fundamentally, however, economic realities, geopolitical instability, and changing technology trump political grandstanding. For transport, the practical consequence has been a bifurcation: European and Asian banks and financial centres (London, Hong Kong, Singapore, and mainland China) continue to expand dedicated green and transition-finance instruments for rail, shipping, and EV infrastructure, while US bank engagement with formal, sector-wide climate coalitions has receded, even as individual US institutions continue to finance EV, battery, and infrastructure projects on a deal-by-deal, rather than alliance-governed, basis⁸⁰.

Outlook and Conclusion

The last five years point to a transport energy transition that is rapid in road transport, and slow but directionally clear in aviation and shipping. The IEA's own scenarios suggest that, even under current policies, oil displacement from electric vehicles alone will roughly triple by 2030 and increase more than fivefold by 2035, with China accounting for around half of the global total throughput⁸¹. Rail electrification will continue to advance steadily, complemented by a fast-growing but still niche hydrogen and battery-train segment addressing the 70% of global track-km that remains non-electrified⁸².

Aviation and shipping face a genuinely harder physics and economics problem, and the next several years will be shaped less by technology than by regulatory resolution: whether the IMO's Net-Zero Framework is formally adopted at MEPC 85 in October 2026 on workable terms, and whether SAF policy in the EU and

⁷⁶KICLEI 2025 *The Fall of the Net-Zero Banking Alliance: What Comes Next for Climate Finance?*

<https://kiclei.substack.com/p/the-fall-of-the-net-zero-banking>

⁷⁷Green Central Banking 2025 *NZBA: US bank exodus questions voluntary climate commitments*

<https://greencentralbanking.com/2025/01/20/jp-morgan-nzba-voluntary-climate-change-commitments/>

⁷⁸ESG Today 2025 *Net Zero Banking Alliance Ceases Operations* <https://www.esgtoday.com/net-zero-banking-alliance-ceases-operations/>

⁷⁹Observer Research Foundation 2026 *Ship Finance and Decarbonisation: The Poseidon Principles in Context*

<https://www.orfonline.org/expert-speak/ship-finance-and-decarbonisation-the-poseidon-principles-in-context>

⁸⁰The Invading Sea, 'Banks retreat from climate change commitments – but it's business more than politics', 13 October 2025.

<https://www.theinvadingsea.com/2025/10/13/net-zero-banking-alliance-sustainable-investing-climate-change-greenhouse-gas-emissions-esg/>

⁸¹bne IntelliNews, 'China-led EV boom cuts global oil demand by 1.7mn barrels a day', 7 August 2026.

<https://www.intellinews.com/china-led-ev-boom-cuts-global-oil-demand-by-1-7mn-barrels-a-day-459769/>

⁸²Next Move Strategy Consulting, 'Hydrogen-Powered Train Market Size, Share & Value Analysis', 9 February 2026.

<https://www.nextmsc.com/report/hydrogen-powered-train-market-at3356>

UK is redesigned to close the gap between mandated blending targets and available production capacity, will matter more to the pace of decarbonisation in these sectors over the next five years than any single technological breakthrough^{83 84}.

Table 2 | The Pace And Character Of Change Across Four Transport Modes

Mode	Dominant Technology Shift	Pace Of Change	Principal Constraint
Road	Battery-electric and plug-in hybrid cars, trucks and two/three-wheelers; rapid Chinese export growth	Fast — 25% of global car sales electric in 2025	Charging infrastructure, grid capacity, battery chemistry & trade barriers
Rail	Continued electrification of core corridors; hydrogen and battery trains for branch lines	Moderate — c.70% of lines still non-electrified	Capital cost of electrification in low-density corridors
Aviation	Sustainable Aviation Fuel (SAF) blending; carbon offsetting under CORSIA	Slow — SAF c.0.8% of jet fuel use in 2026	Feedstock and production capacity; policy fragmentation
Shipping	Methanol/ammonia/LNG dual-fuel newbuilds; IMO Net-Zero Framework	Slow-to-moderate — framework adoption delayed to 2026–27	Bunkering infrastructure; regulatory uncertainty

Geopolitically, the trajectory of the past two years — regional instability, layered tariffs, export controls, and an increasingly regionalised battery and EV supply chain — shows few signs of reversing, and financial institutions will need to navigate an increasingly fragmented policy landscape in which sustainability commitments popular in one jurisdiction attract legal and political risk in another. The durability of disclosure-based, technically grounded frameworks such as the Poseidon Principles, relative to broader alliance structures such as the now-dissolved Net-Zero Banking Alliance, may offer the most instructive template for how transport-sector climate finance evolves through the remainder of the decade.

The transport energy mix of 2026 already looks materially different from that of 2021, and the direction of technological travel, toward electrification in road and rail, and toward alternative fuels in aviation and shipping, seems well established. What remains genuinely uncertain is the pace, the distribution of industrial and financial benefit between China and the rest of the world, and the extent to which financial markets can be mobilised to fund the multi-trillion-dollar capital requirements the transition still demands or will be constrained by political and other factors.

⁸³Varuna Sentinels BV, 'What is the IMO Net-Zero Framework? Fuel Standard, GHG Fuel Intensity & Reward Mechanism Guide', 22 April 2026. <https://www.varuna-sentinels.com/what-is-imo-net-zero-framework>

⁸⁴International Airport Review, 'IATA warns SAF mandates in EU and UK fail to boost sustainable aviation fuel production', 29 March 2026. <https://www.internationalairportreview.com/iata-warns-saf-mandates-in-eu-and-uk-fail-to-boost-sustainable-aviation-fuel-production/541479.article>

Regional Analysis

In our analysis of the CCB GGFI data, we look at six regions of the world to explore their financial centres' green finance depth and quality.

Alongside the ranks and ratings of centres, we investigate the average assessments received by regions and centres in more detail.

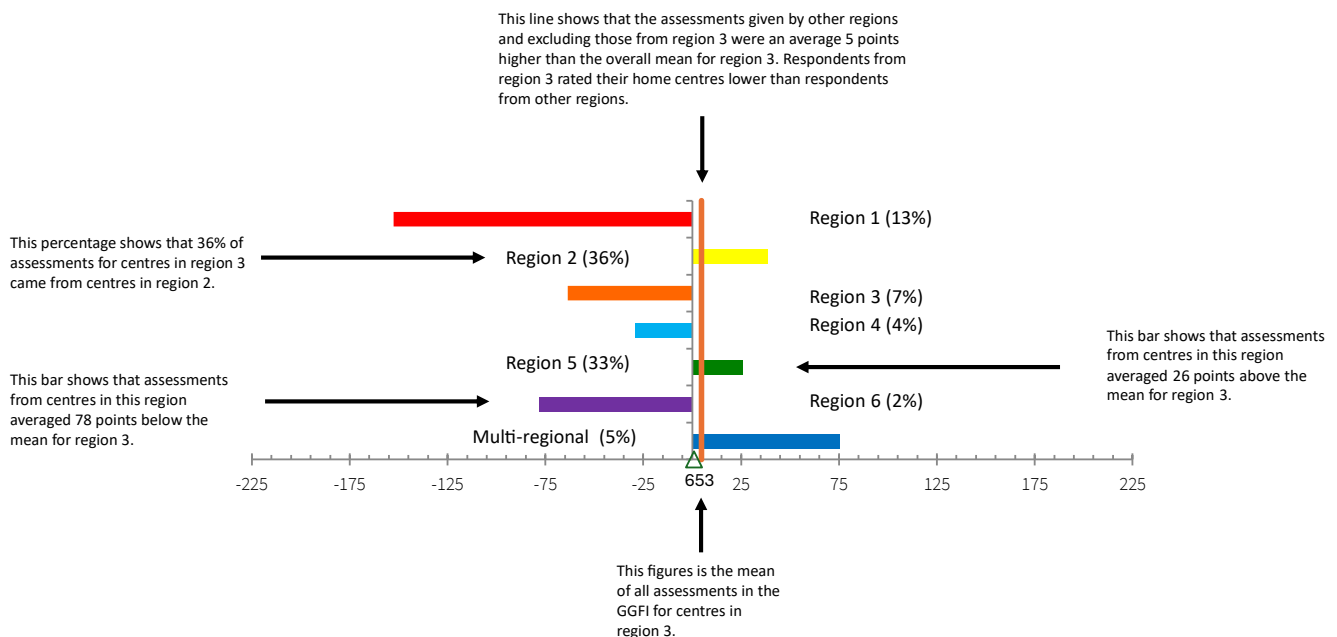
We display this analysis in charts, either for a region or an individual centre. These charts show:

- the mean assessment provided to that region or centre;
- the difference in the mean assessment when home region assessments are removed from the analysis;
- the difference between the mean and the assessments provided by other regional centres; and
- the proportion of assessments provided by each region.

Chart 14 shows an example of this analysis. Coloured bars to the left of the vertical axis indicate that respondents from that region gave lower than average assessments. Bars to the right indicate respondents from that region gave higher than average assessments. Assessments given to a centre by people based in that centre are excluded to remove 'home' bias.

The additional vertical axis (in orange) shows the mean of assessments when assessments from the home region are removed. The percentage figure noted by each region indicates the percentage of the total number of assessments that are from that region.

Chart 14 | Example: Assessments Compared With The Mean For A Region



North America

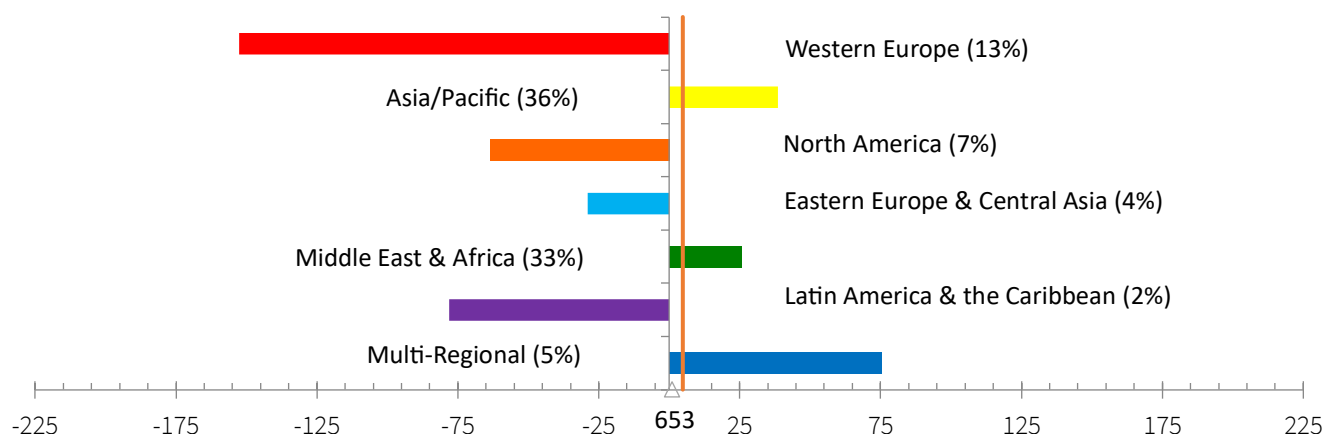
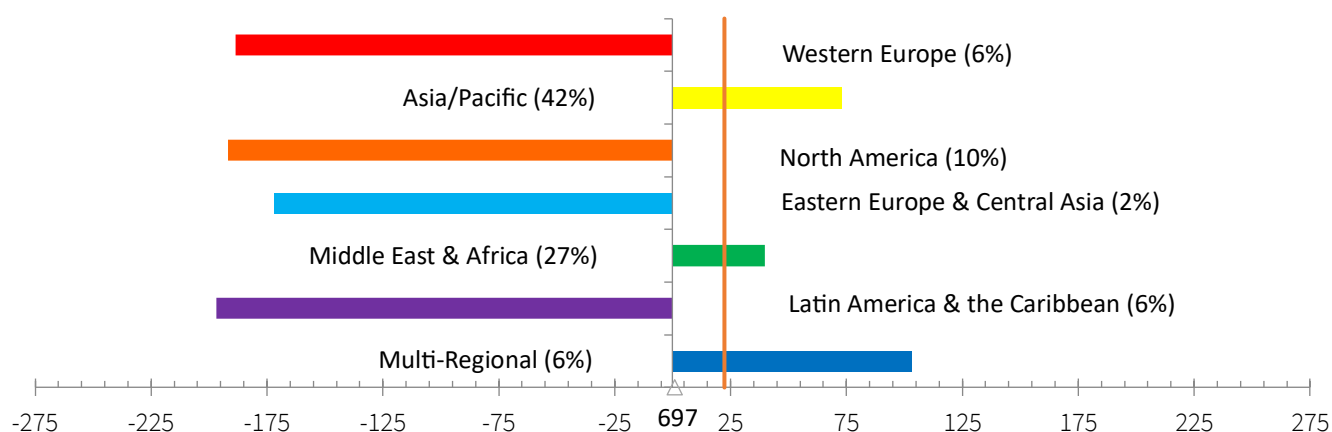
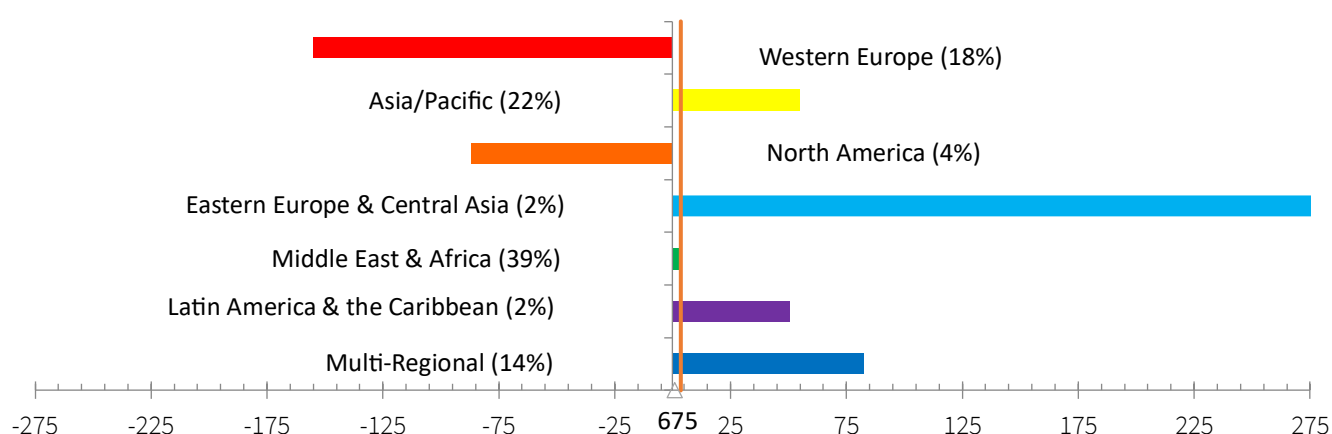
- Los Angeles and Washington DC took the leading positions in the region, with Minneapolis/St Paul in third place.
- Toronto fell 16 rank places, while other North American centres had mixed results.
- North American centres were rated above average by people from Asia/Pacific and the Middle East & Africa and those with a multi-regional presence.

Table 10 | North American Centres In CCB GGFI 18

Centre	CCB GGFI 18		CCB GGFI 17		Change In Rank	Change In Rating
	Rank	Rating	Rank	Rating		
Los Angeles	11	615	12	591	▲ 1	▲ 24
Washington DC	13	613	26	577	▲ 13	▲ 36
Minneapolis / St Paul	18	608	13	590	▼ 5	▲ 18
New York	19	607	21	582	▲ 2	▲ 25
San Francisco	23	603	28	575	▲ 5	▲ 28
Montreal	26	600	19	584	▼ 7	▲ 16
Vancouver	29	597	20	583	▼ 9	▲ 14
Toronto	33	593	17	586	▼ 16	▲ 7
Atlanta	40	586	44	559	▲ 4	▲ 27
Chicago	42	584	39	564	▼ 3	▲ 20
Calgary	44	582	37	566	▼ 7	▲ 16
Miami	46	580	50	553	▲ 4	▲ 27
Philadelphia	57	569	64	539	▲ 7	▲ 30
Boston	59	567	60	543	▲ 1	▲ 24

Chart 15 | Top Five North American Centres Ratings Over Time



Chart 16 | North American Regional Assessments - Difference From The Mean**Chart 17 | Regional Assessments For Los Angeles - Difference From The Mean****Chart 18 | Regional Assessments For Washington DC - Difference From The Mean**

Middle East & Africa

- Dubai leads in the region while Mauritius takes the second place in the Middle East & Africa.
- Most leading centres in the region improved in the rankings, with Johannesburg up 10 places.
- Kuwait City joined the index for the first time.
- Respondents from Asia/Pacific and Eastern Europe & Central Asia, along with those with a multi-regional background rated Middle East & African centres higher than average.

Table 11 | Middle Eastern & African Centres In CCB GGFI 18

Centre	CCB GGFI 18		CCB GGFI 17		Change In Rank	Change In Rating
	Rank	Rating	Rank	Rating		
Dubai	38	588	36	567	▼2	▲21
Mauritius	41	585	46	557	▲5	▲28
Riyadh	48	578	55	548	▲7	▲30
Kigali	50	576	58	545	▲8	▲31
Doha	51	575	56	547	▲5	▲28
Johannesburg	52	574	62	541	▲10	▲33
Casablanca	55	571	51	552	▼4	▲19
Tel Aviv	58	568	53	550	▼5	▲18
Abu Dhabi	60	566	54	549	▼6	▲17
Cape Town	72	554	70	533	▼2	▲21
Nairobi	81	545	73	530	▼8	▲15
Bahrain	83	543	87	516	▲4	▲27
Kuwait City	92	534	New	New	New	New
Lagos	94	524	90	513	▼4	▲11

Chart 19 | Top Five Middle East & Africa Centre Ratings Over Time

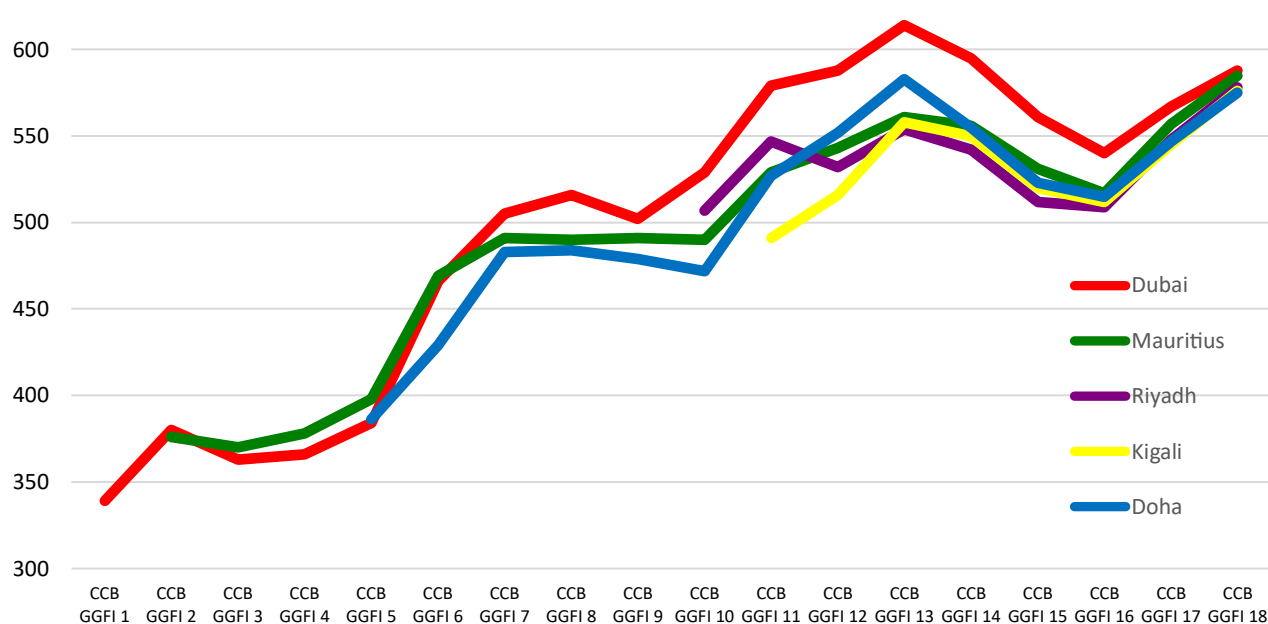
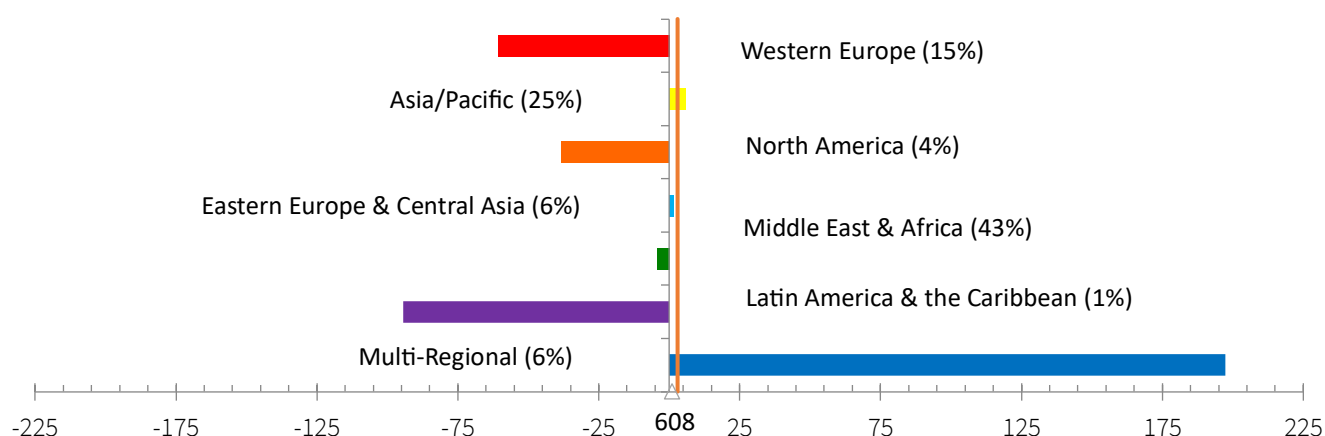
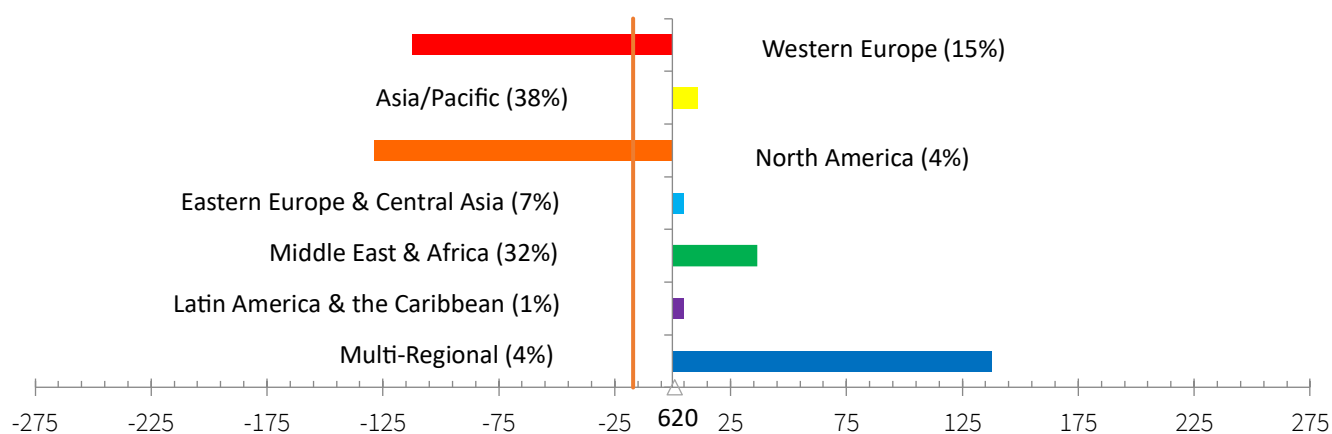
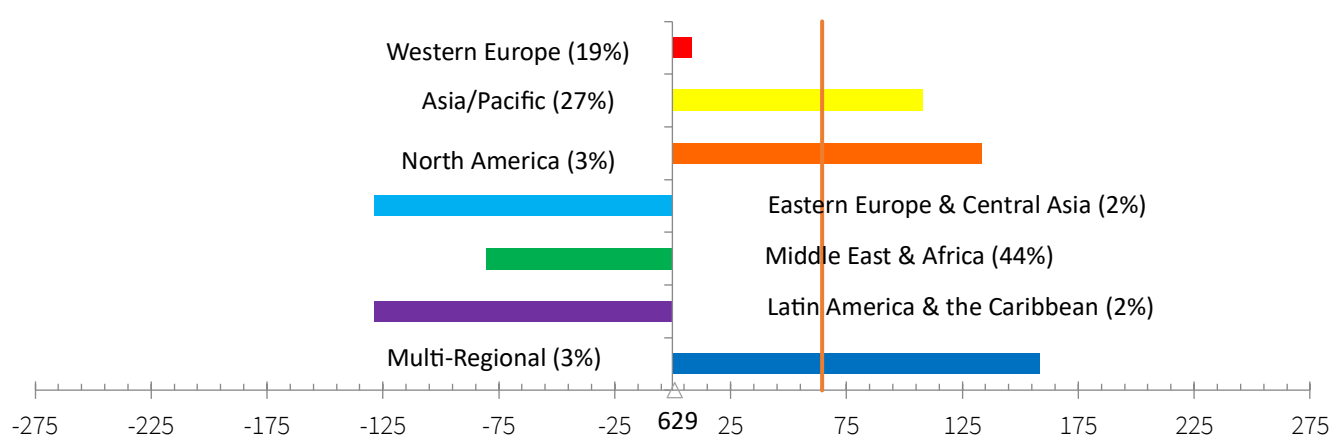


Chart 20 | Middle East & Africa Regional Assessments - Difference From The Mean**Chart 21 | Regional Assessments For Dubai - Difference From The Mean****Chart 22 | Regional Assessments For Mauritius - Difference From The Mean**

Asia/Pacific

- Singapore continued to lead the region, now in second place globally. Tokyo and Osaka are second and third in the region.
- Osaka, Hong Kong, and Mumbai all improved 10 or more places, while Ho Chi Minh City entered the index for the first time.
- Respondents from Western Europe and those from a multi-regional background rated centres in Asia/Pacific below average.

Table 12 | Top 15 Asia/Pacific Centres In CCB GGFI 18

Centre	CCB GGFI 18		CCB GGFI 17		Change In	
	Rank	Rating	Rank	Rating	Rank	Rating
Singapore	2	624	2	607	0	▲ 17
Tokyo	14	612	18	585	▲ 4	▲ 27
Osaka	17	609	30	573	▲ 13	▲ 36
Sydney	22	604	24	579	▲ 2	▲ 25
Shanghai	24	602	25	578	▲ 1	▲ 24
Melbourne	25	601	31	572	▲ 6	▲ 29
Seoul	28	598	23	580	▼ 5	▲ 18
Hong Kong	31	595	45	558	▲ 14	▲ 37
Taipei	32	594	40	563	▲ 8	▲ 31
Beijing	34	592	38	565	▲ 4	▲ 27
Shenzhen	35	591	32	571	▼ 3	▲ 20
Busan	36	590	29	574	▼ 7	▲ 16
Guangzhou	43	583	42	561	▼ 1	▲ 22
Ho Chi Minh City	62	564	New	New	New	New
Mumbai	73	553	83	520	▲ 10	▲ 33

Chart 23 | Top Asia/Pacific Centre Ratings Over Time

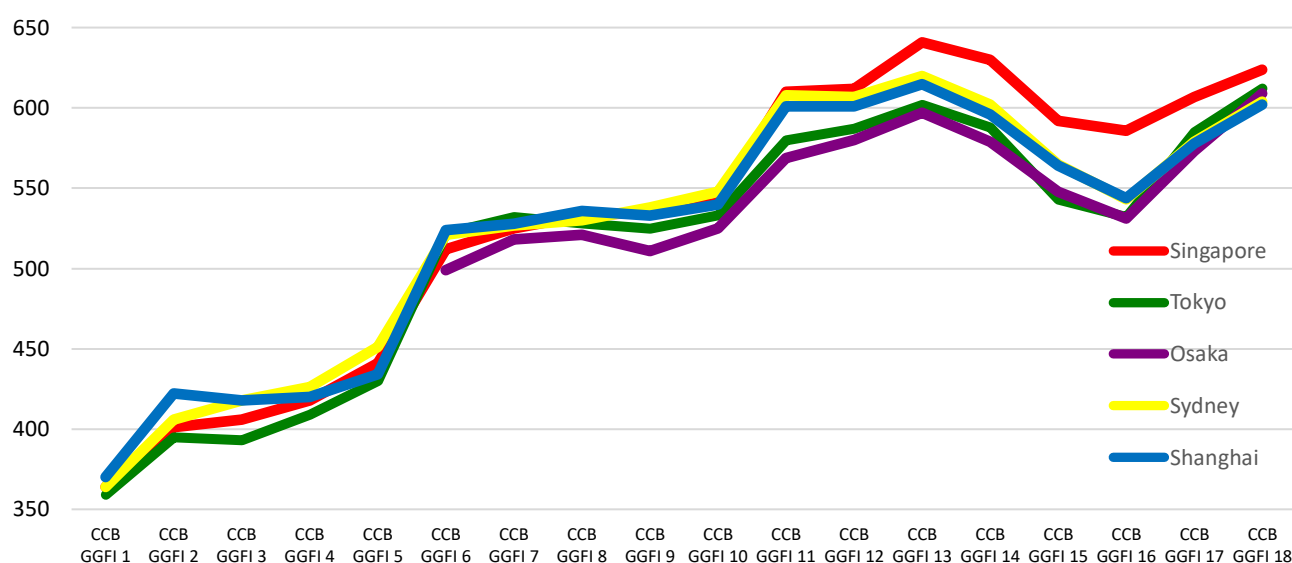
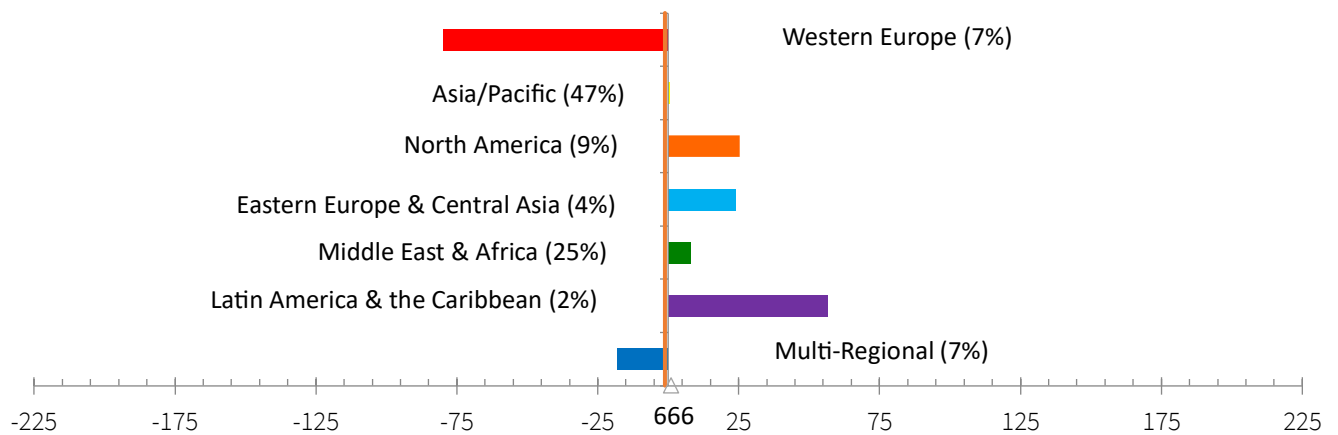
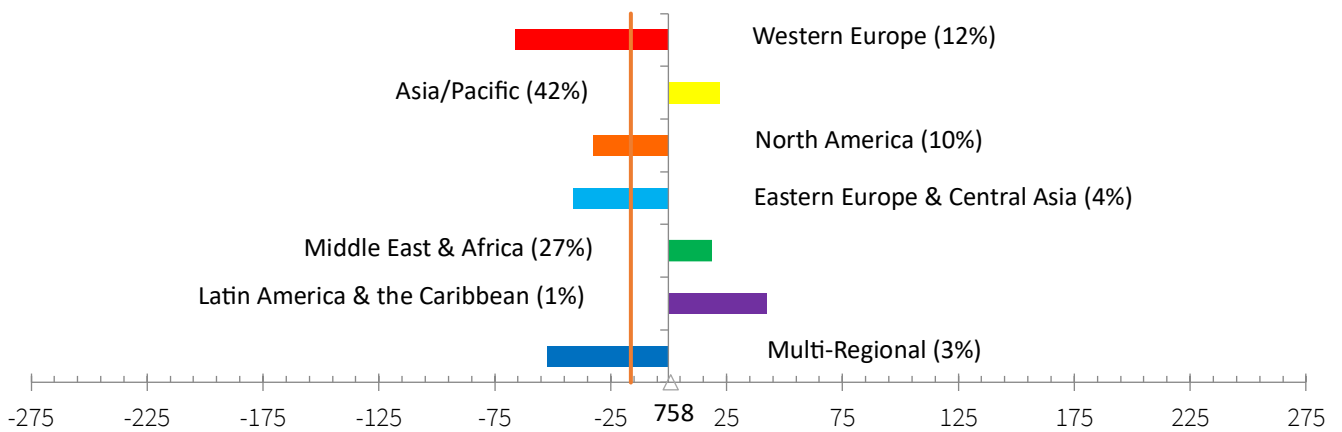
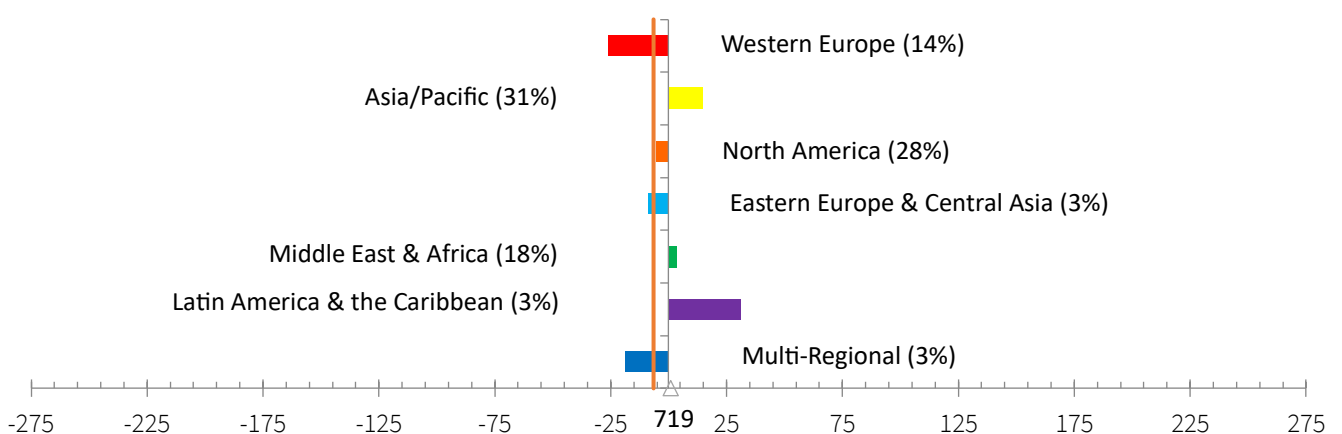


Chart 24 | Asia/Pacific Regional Assessments - Difference From The Mean**Chart 25 | Regional Assessments For Singapore - Difference From The Mean****Chart 26 | Regional Assessments For Tokyo - Difference From The Mean**

Eastern Europe & Central Asia

- Warsaw held onto its lead in the region but fell 6 rank places. Sofia has overtaken Prague to take second position.
- The majority of centres in the region fell in the CCB GGFI ranking.
- Respondents from Eastern Europe & Central Asia and the Middle East and Africa, and those from a multi-regional background rated Eastern European & Central Asia centres above the global average.

Table 13 | Eastern European & Central Asia Centres In CCB GGFI 18

Centre	CCB GGFI 18		CCB GGFI 17		Change In Rank	Change In Rating
	Rank	Rating	Rank	Rating		
Warsaw	63	563	57	546	▼ 6	▲ 17
Sofia	64	562	66	537	▲ 2	▲ 25
Prague	70	556	63	540	▼ 7	▲ 16
Moscow	75	551	75	528	0	▲ 23
St Petersburg	77	549	80	523	▲ 3	▲ 26
Astana	78	548	71	532	▼ 7	▲ 16
Cyprus	80	546	76	527	▼ 4	▲ 19
Almaty	87	539	82	521	▼ 5	▲ 18
Istanbul	88	538	84	519	▼ 4	▲ 19

Chart 27 | Top Five Eastern Europe & Central Asia Centre Ratings Over Time

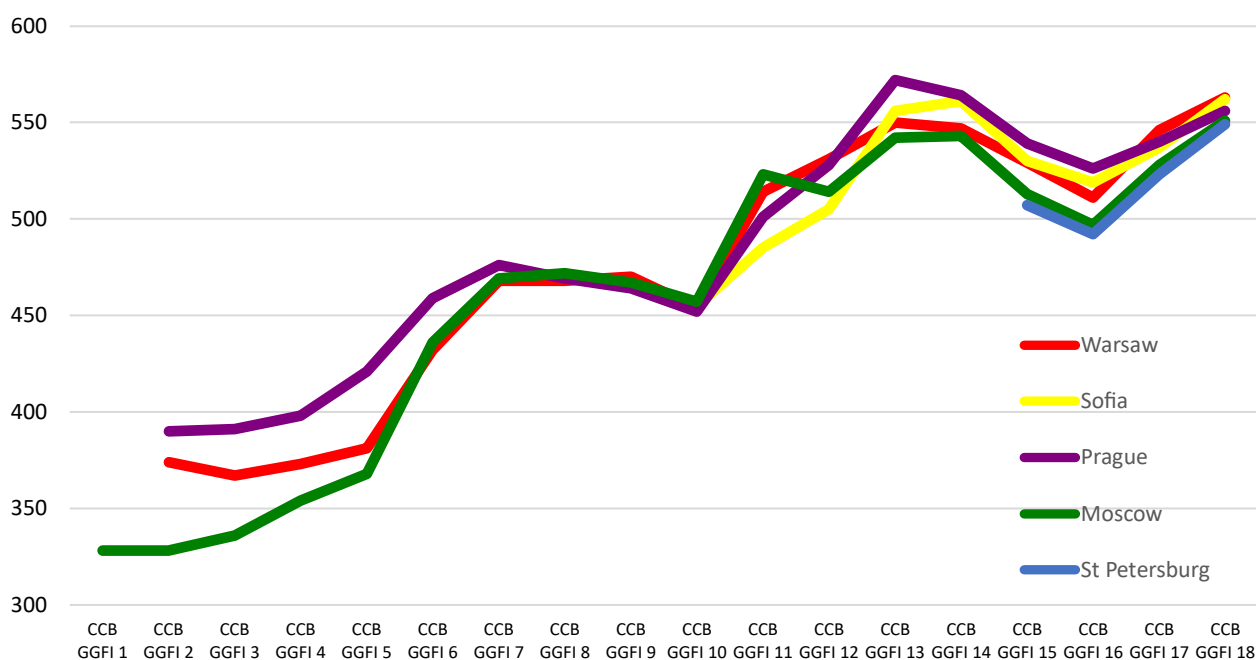
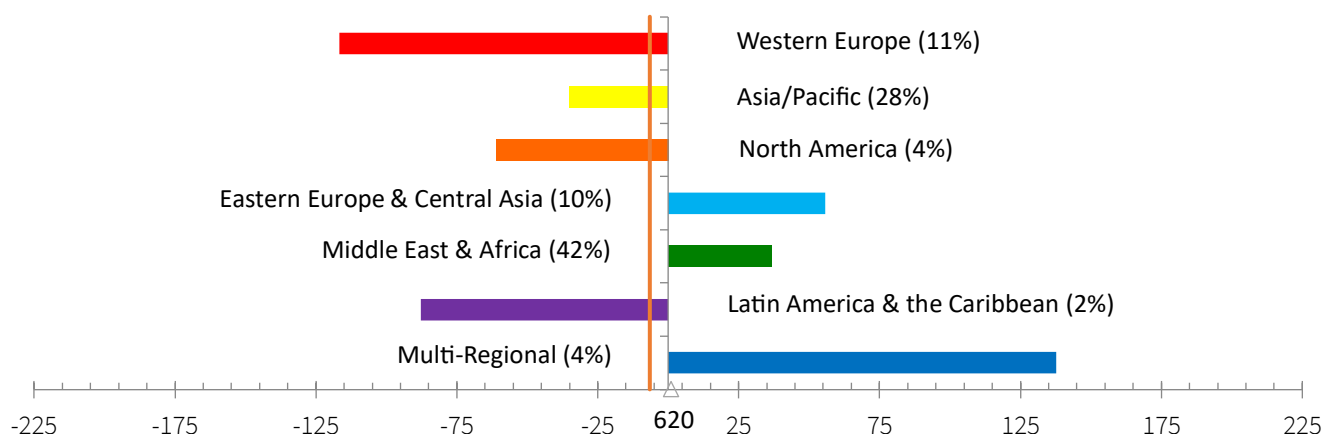
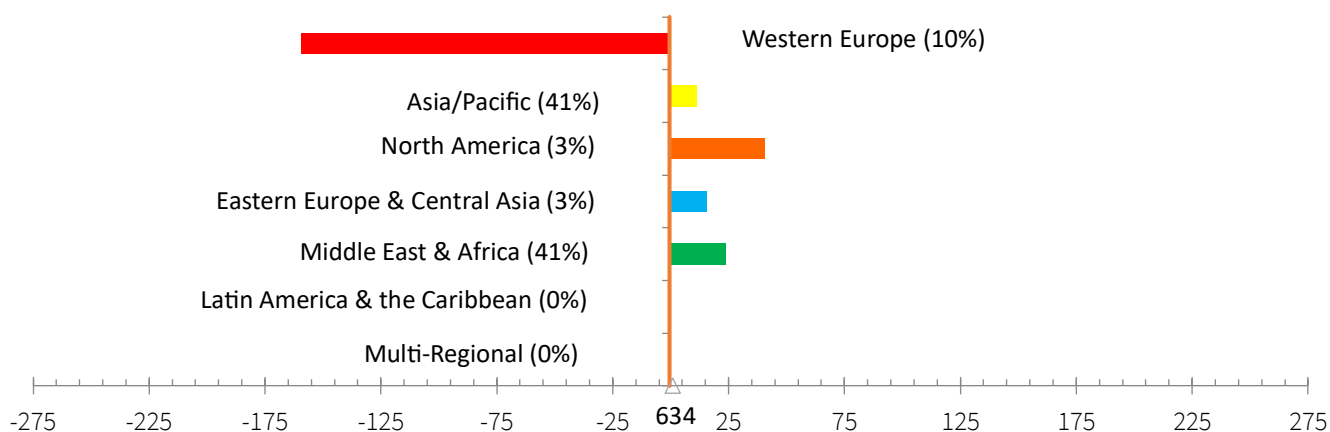
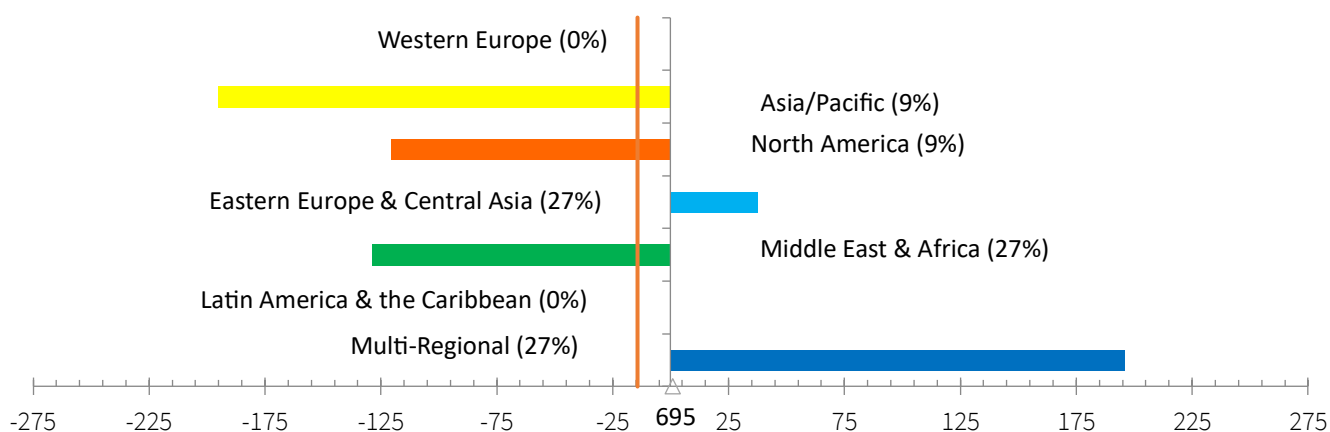


Chart 28 | Eastern Europe & Central Asia Regional Assessments - Difference From The Mean**Chart 29 | Regional Assessments For Warsaw - Difference From The Mean****Chart 30 | Regional Assessments For Sofia - Difference From The Mean**

Latin America & The Caribbean

- Sao Paulo took first place in the region, with Rio de Janeiro and Mexico City in second and third place.
- Bahamas and Bermuda both rose 10 or places in the rankings, while Panama fell 16 places.
- Respondents from Western Europe, Asia/Pacific, and North America rated Latin America & The Caribbean centres below average.

Table 14 | Latin American & Caribbean Centres In CCB GGFI 18

Centre	CCB GGFI 18		CCB GGFI 17		Change In	Change In
	Rank	Rating	Rank	Rating	Rank	Rating
Sao Paulo	47	579	52	551	▲ 5	▲ 28
Rio de Janeiro	56	570	61	542	▲ 5	▲ 28
Mexico City	61	565	68	535	▲ 7	▲ 30
Panama	65	561	49	554	▼ 16	▲ 7
Santiago	67	559	59	544	▼ 8	▲ 15
Bahamas	69	557	79	524	▲ 10	▲ 33
Bermuda	71	555	85	518	▲ 14	▲ 37
British Virgin Islands	91	535	92	511	▲ 1	▲ 24
Cayman Islands	93	532	89	514	▼ 4	▲ 18

Chart 31 | Top Five Latin American & Caribbean Centre Ratings Over Time

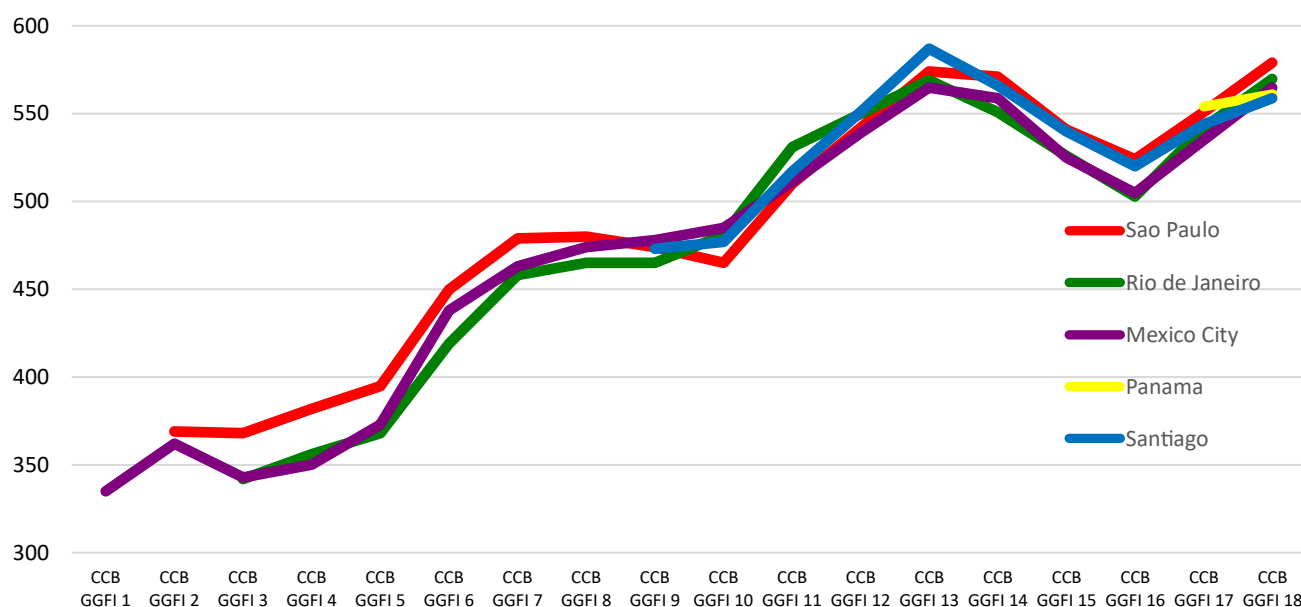
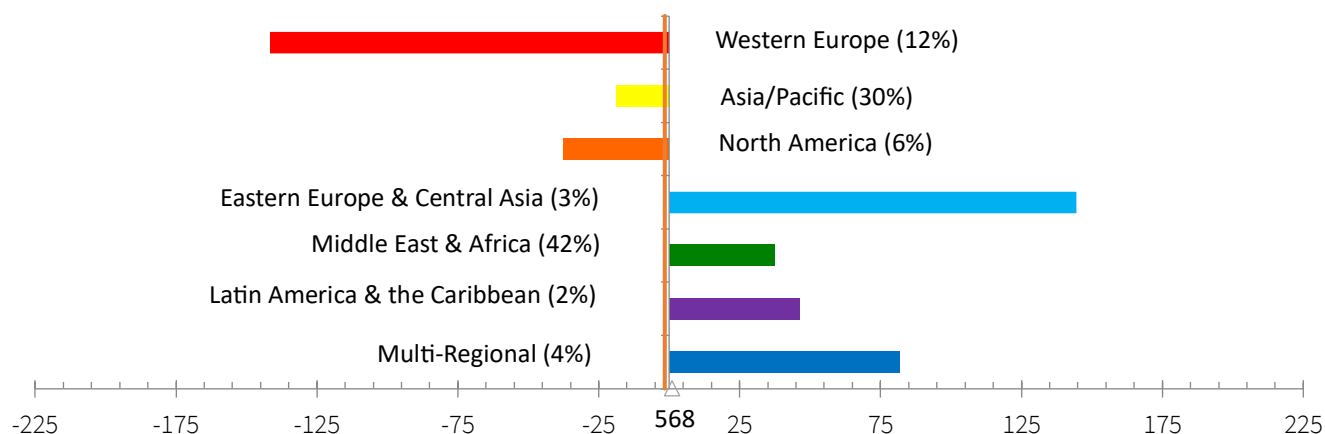
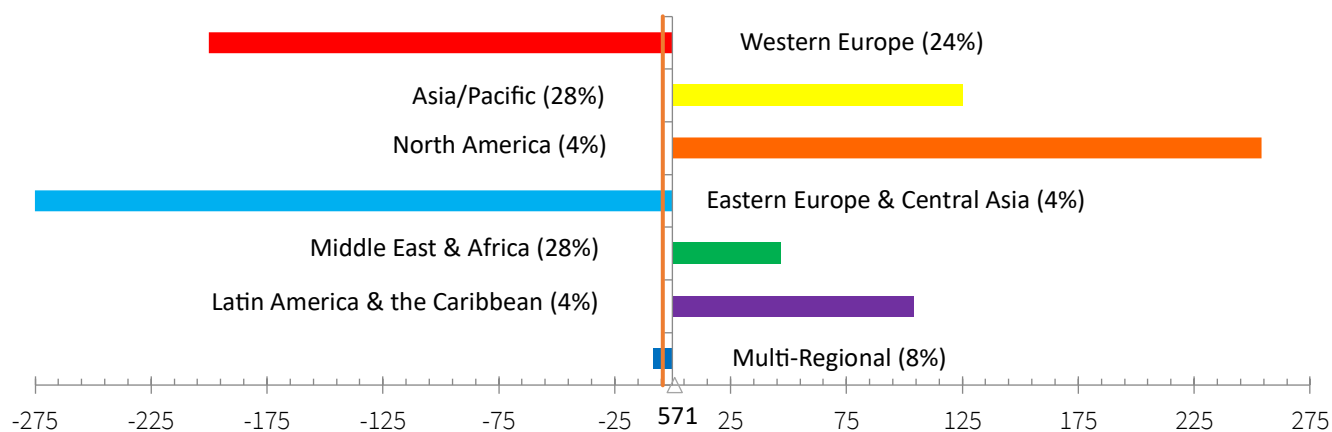
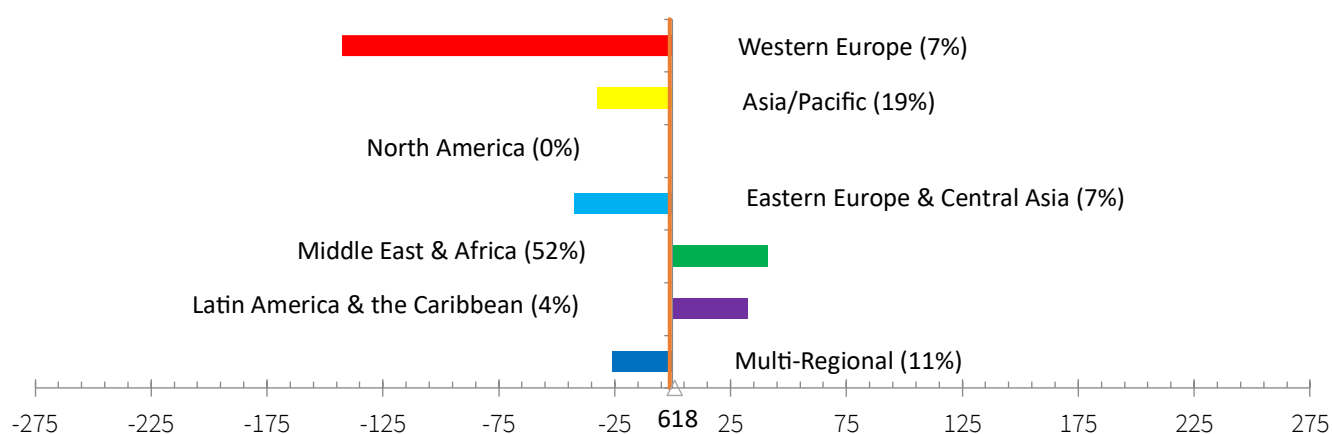


Chart 32 | Latin American & Caribbean Regional Assessments - Difference From The Mean**Chart 33 | Regional Assessments For Sao Paulo - Difference From The Mean****Chart 34 | Regional Assessments For Rio de Janeiro - Difference From The Mean**

Western Europe

- London takes the top place in the region and world, with Amsterdam and Geneva in second and third places in the region.
- Oslo, Stockholm, Edinburgh, and Munich also feature in the world top 20.
- Respondents from Western Europe and people with a multi-regional presence rated Western European centres lower than average.

Table 15 | Top 15 Western European Centres In CCB GGFI 18

Centre	CCB GGFI 18		CCB GGFI 17		Change In Rank	Change In Rating
	Rank	Rating	Rank	Rating		
London	1	626	1	617	0	▲ 9
Amsterdam	3	623	4	599	▲ 1	▲ 24
Geneva	4	622	5	598	▲ 1	▲ 24
Zurich	5	621	3	602	▼ 2	▲ 19
Copenhagen	6	620	8	595	▲ 2	▲ 25
Paris	7	619	6	597	▼ 1	▲ 22
Frankfurt	8	618	9	594	▲ 1	▲ 24
Luxembourg	9	617	7	596	▼ 2	▲ 21
Vienna	10	616	10	593	0	▲ 23
Oslo	12	614	16	587	▲ 4	▲ 27
Stockholm	15	611	11	592	▼ 4	▲ 19
Edinburgh	16	610	27	576	▲ 11	▲ 34
Munich	20	606	14	589	▼ 6	▲ 17
Brussels	21	605	15	588	▼ 6	▲ 17
Madrid	27	599	22	581	▼ 5	▲ 18

Chart 35 | Top Five Western European Centre Ratings Over Time

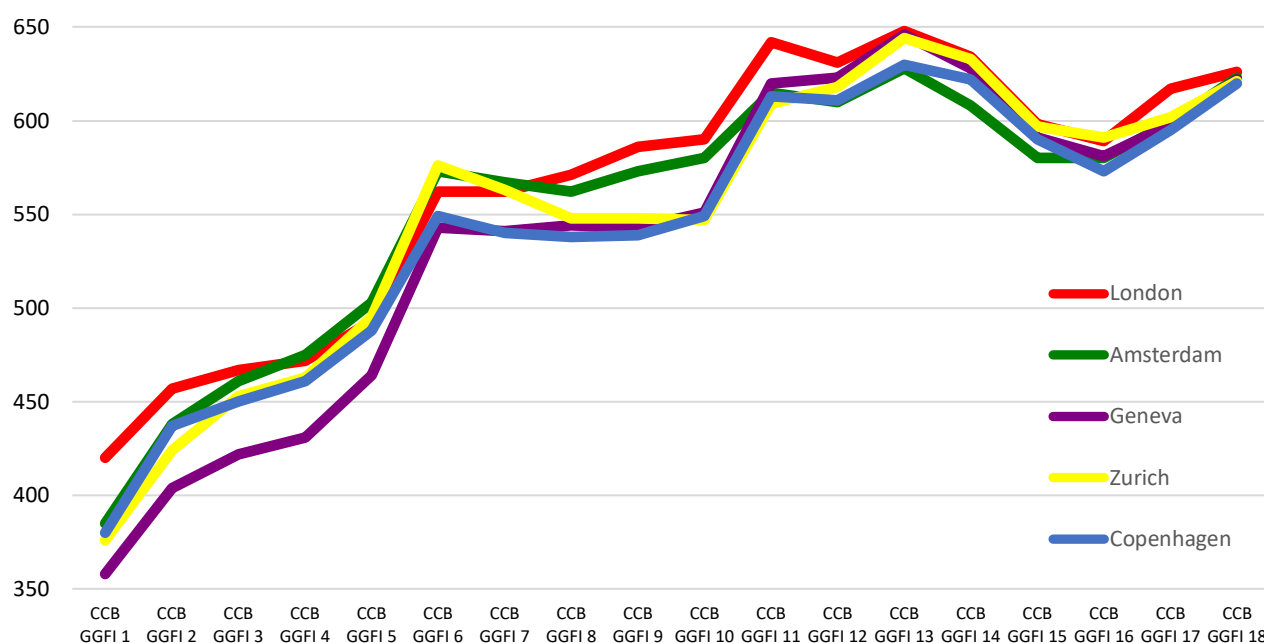
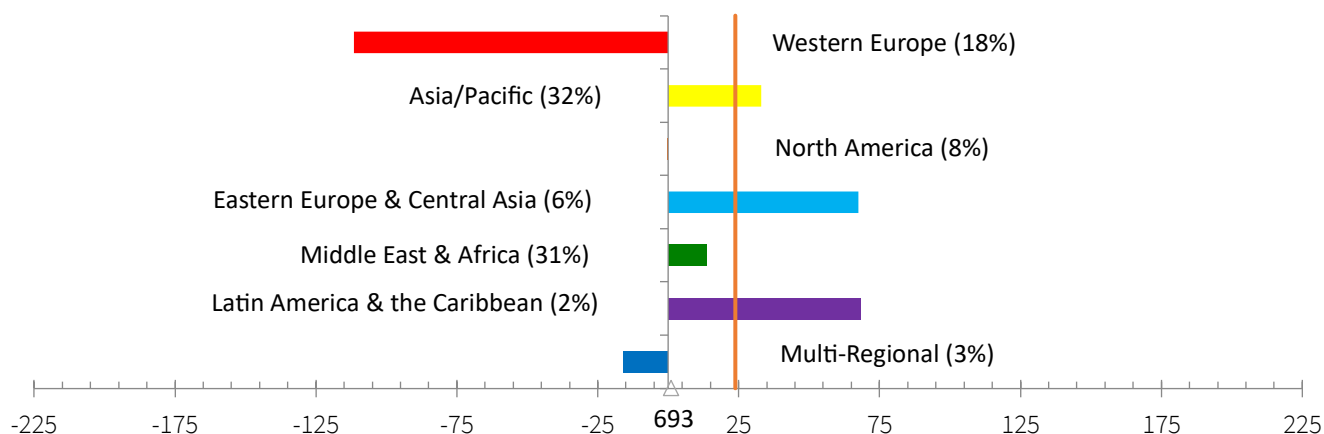
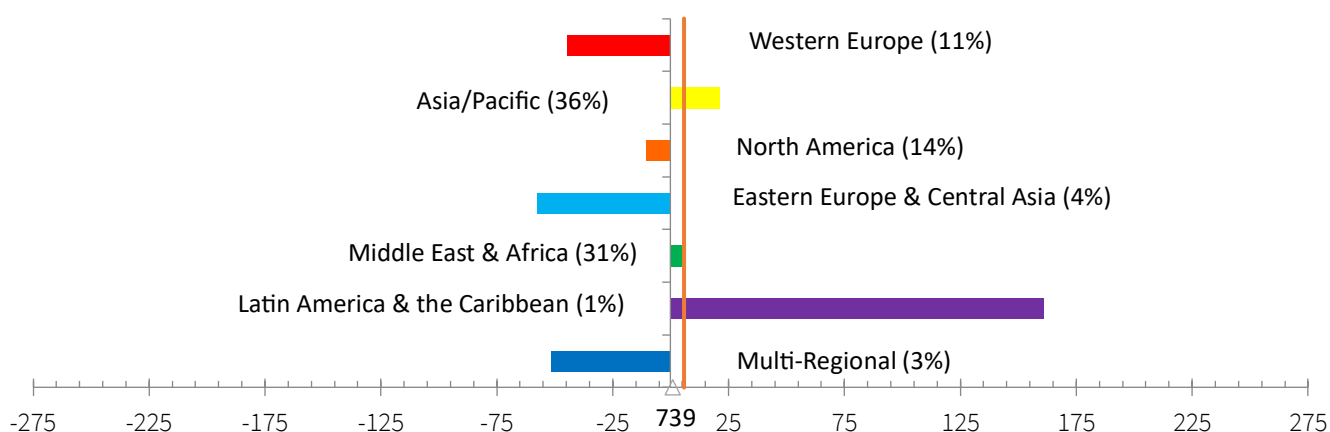
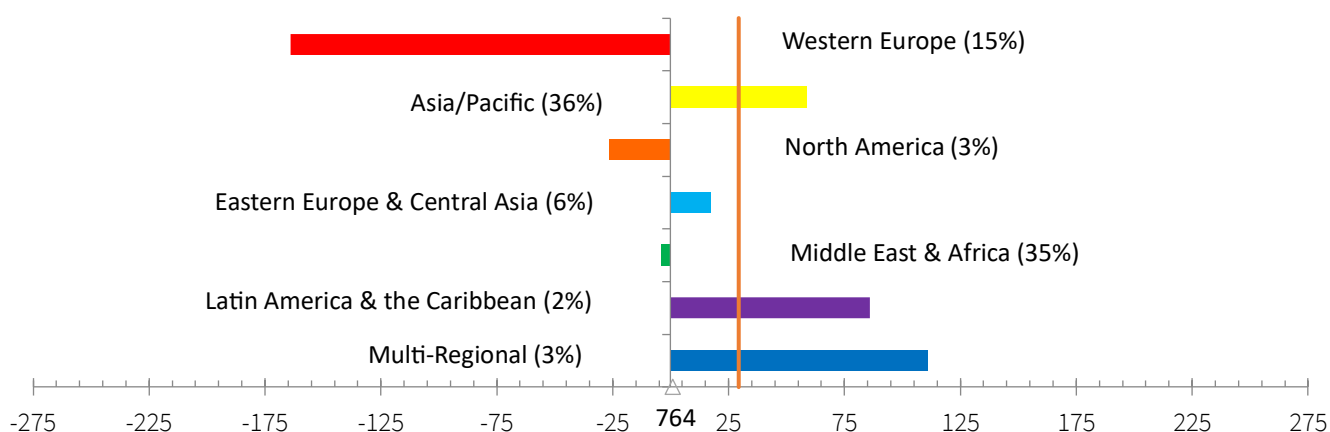


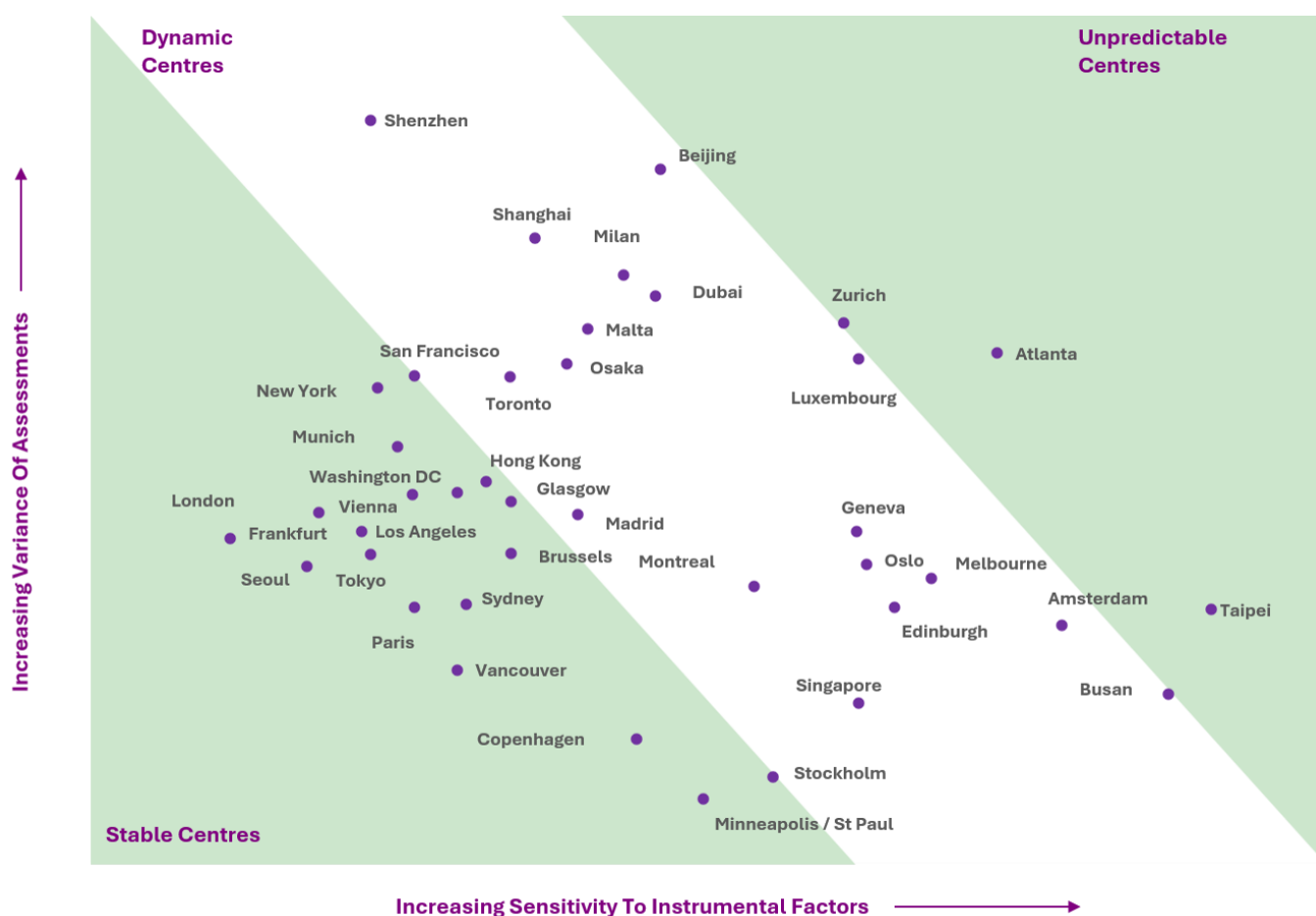
Chart 36 | Western European Regional Assessments - Difference From The Mean**Chart 37 | Regional Assessments For London - Difference From The Mean****Chart 38 | Regional Assessments For Amsterdam - Difference From The Mean**

Stability

The CCB GGFI model allows for an analysis of the stability of financial centres in the index, which can be useful for centres when assessing their development strategies. Chart 39 contrasts the ‘spread’ or variance of the individual assessments given to the top 40 centres in CCB GGFI 18, with sensitivity to changes in the instrumental factors.

The chart shows three bands of financial centres. Most centres in the top 40 fall in the stable or dynamic areas. The stable centres in the bottom left have a lower sensitivity to change and demonstrate greater consistency in their CCB GGFI ratings.

Chart 39 | Stability In Assessments And Instrumental Factors



“The regulatory environment is arguably the most critical enabler or barrier for green finance in any financial centre. A robust framework provides the clarity, standardisation, and credibility that investors need to allocate capital confidently.”

SENIOR MANAGER, BANK, SHANGHAI

Industry Sectors

We can analyse the differing assessments provided by respondents working in various industry sectors by building the index separately using the responses provided only from those industries. This analysis allows a relative measure of the sectoral strengths and weaknesses for each centre.

Table 16 illustrates separate sub-indices for the Policy, Knowledge, Banking, and Professional Services sectors. The table shows how the index ranking varies according to industry sector. The leading centres in the index generally feature in the higher ranks of the industry sector sub-indices. However, Zurich leads in the policy and knowledge sub-indices, London leads for those in the banking sector, and Singapore in the professional services sub-index.

Table 16 | CCB GGFI 18 Industry Sector Sub-Indices - Top 15

Rank	Industry Sub-Sector			
	Policy	Knowledge	Banking	Professional Services
1	Zurich	Zurich	London	Singapore
2	Paris	Amsterdam	Paris	London
3	Frankfurt	Luxembourg	Frankfurt	Frankfurt
4	Luxembourg	Paris	Singapore	Amsterdam
5	London	London	Geneva	Geneva
6	Geneva	Oslo	Los Angeles	Los Angeles
7	Washington DC	Vienna	Vienna	Copenhagen
8	Singapore	Singapore	Amsterdam	New York
9	Amsterdam	Geneva	Copenhagen	Washington DC
10	Copenhagen	Brussels	Osaka	Zurich
11	Los Angeles	Stockholm	Washington DC	Luxembourg
12	Munich	Copenhagen	Zurich	Paris
13	Tokyo	Frankfurt	Edinburgh	Vienna
14	Stockholm	Los Angeles	Oslo	Stockholm
15	New York	Edinburgh	Stockholm	Oslo



Taking the sectoral analysis further, we can also calculate the index using the responses only from those working directly in green finance in financial services organisations. The results are shown in table 17.

Table 17 | CCB GGFI 18 Using Responses Only From Respondents Working Directly In Green Finance

Centre	Rating	Adjusted Rank	CCB GGFI 18 Rank	Difference
London	627	3	1	-2
Singapore	634	1	2	1
Amsterdam	627	3	3	0
Geneva	622	8	4	-4
Zurich	622	8	5	-3
Copenhagen	615	15	6	-9
Paris	620	10	7	-3
Frankfurt	626	5	8	3
Luxembourg	624	6	9	3
Vienna	630	2	10	8
Los Angeles	613	16	11	-5
Oslo	620	10	12	2
Washington DC	619	12	13	1
Tokyo	607	20	14	-6
Stockholm	617	14	15	1
Edinburgh	618	13	16	3
Osaka	607	20	17	-3
Minneapolis / St Paul	604	24	18	-6
New York	607	20	19	-1
Munich	623	7	20	13
Brussels	602	27	21	-6
Sydney	600	30	22	-8
San Francisco	601	28	23	-5
Shanghai	598	32	24	-8
Melbourne	612	17	25	8
Montreal	611	18	26	8
Madrid	604	24	27	3
Seoul	600	30	28	-2
Vancouver	610	19	29	10
Glasgow	593	37	30	-7
Hong Kong	596	35	31	-4
Taipei	601	28	32	4
Toronto	607	20	33	13
Beijing	603	26	34	8
Shenzhen	588	42	35	-7
Busan	592	38	36	-2
Milan	598	32	37	5
Dubai	575	54	38	-16
Malta	589	41	39	-2
Atlanta	584	44	40	-4
Mauritius	573	61	41	-20
Chicago	579	48	42	-6
Guangzhou	575	54	43	-11
Calgary	595	36	44	8
Berlin	598	32	45	13
Miami	581	46	46	0
Sao Paulo	577	53	47	-6

Centre	Rating	Adjusted Rank	CCB GGFI 18 Rank	Difference
Riyadh	573	61	48	-13
Hamburg	591	39	49	10
Kigali	578	50	50	0
Doha	570	68	51	-17
Johannesburg	563	79	52	-27
Rome	574	58	53	-5
Lisbon	574	58	54	-4
Casablanca	557	87	55	-32
Rio de Janeiro	572	63	56	-7
Philadelphia	580	47	57	10
Tel Aviv	572	63	58	-5
Boston	578	50	59	9
Abu Dhabi	557	87	60	-27
Mexico City	570	68	61	-7
Ho Chi Minh City	572	63	62	-1
Warsaw	575	54	63	9
Sofia	561	82	64	-18
Panama	579	48	65	17
Monaco	591	39	66	27
Santiago	562	80	67	-13
Dublin	588	42	68	26
Bahamas	575	54	69	15
Prague	571	66	70	4
Bermuda	566	74	71	-3
Cape Town	553	93	72	-21
Mumbai	561	82	73	-9
Jersey	584	44	74	30
Moscow	564	77	75	-2
Guernsey	574	58	76	18
St Petersburg	564	77	77	0
Astana	566	74	78	4
Kuala Lumpur	571	66	79	13
Cyprus	568	71	80	9
Nairobi	560	84	81	-3
New Delhi	567	72	82	10
Bahrain	556	89	83	-6
Manila	565	76	84	8
Bangkok	562	80	85	5
Jakarta	567	72	86	14
Almaty	558	86	87	1
Istanbul	560	84	88	4
Isle of Man	555	91	89	-2
Liechtenstein	578	50	90	40
British Virgin Islands	569	70	91	21
Kuwait City	549	94	92	-2
Cayman Islands	554	92	93	1
Lagos	556	89	94	5

CCB GGFI 18 Interest, Impact, And Drivers Of Green Finance

In addition to requesting ratings of depth and quality for financial centres, the CCB GGFI questionnaire asks additional questions concerning the development of green finance. Among the topics covered are:

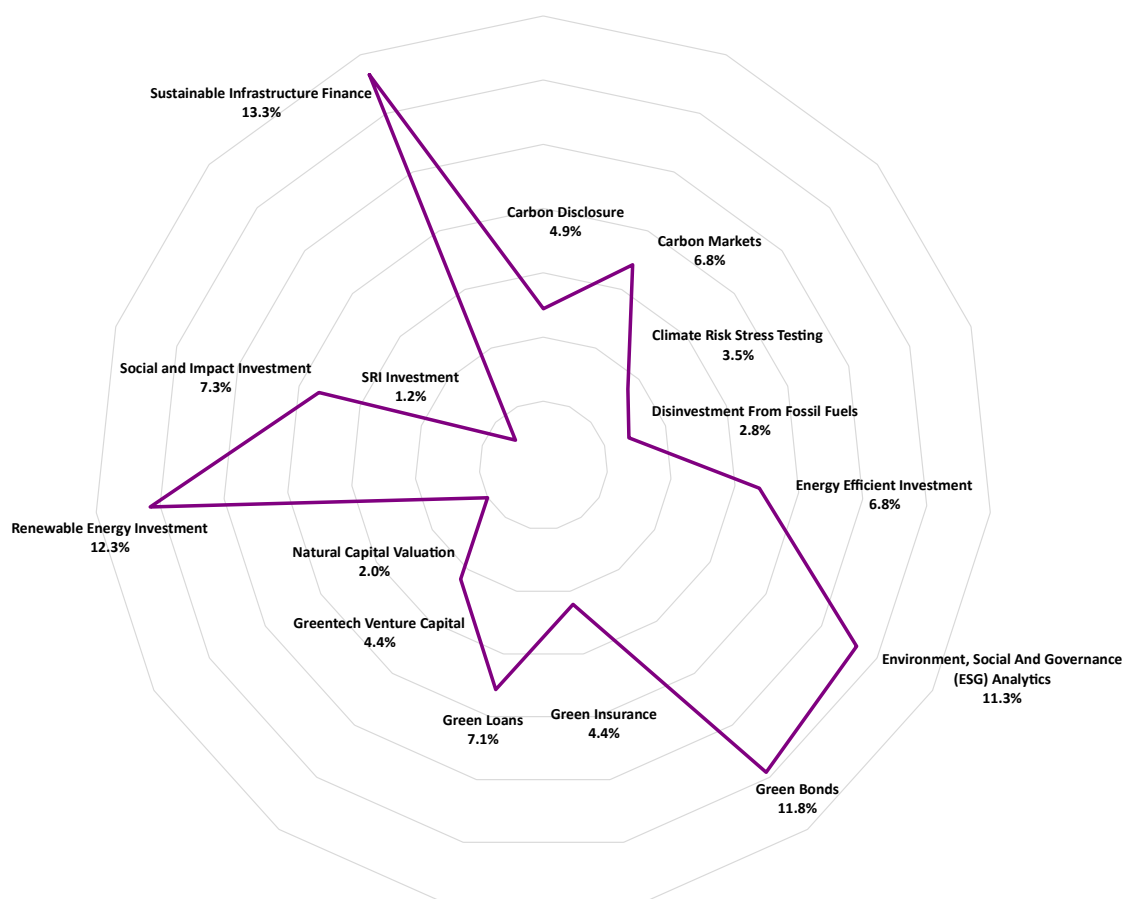
- The areas of green finance considered most interesting by respondents;
- The areas of green finance which respondents consider to have the greatest impact on sustainability; and
- Factors driving the development of green finance.

Areas Of Interest In Green Finance And Areas With The Most Impact

We asked respondents to identify the areas of green finance which they considered most interesting and separately the areas of green finance they consider have the most impact on sustainability. The results are shown in Charts 40 and 41.

With respect to interest, Sustainable Infrastructure Finance, Renewable Energy Investment, and Green Bonds are the leading issues mentioned by our respondents. The areas considered least interesting are SRI Investment and Natural Capital Valuation.

Chart 40 | Interest - Percentage Of Total Mentions



Sustainable Infrastructure Finance, Renewable Energy Investment, and Environment, Social And Governance (ESG) Analytics are rated as the areas of green finance with most impact. Again, SRI Investment and Natural Capital Valuation are ranked lowest on this measure by our respondents.

Chart 41 | Impact - Percentage Of Total Mentions

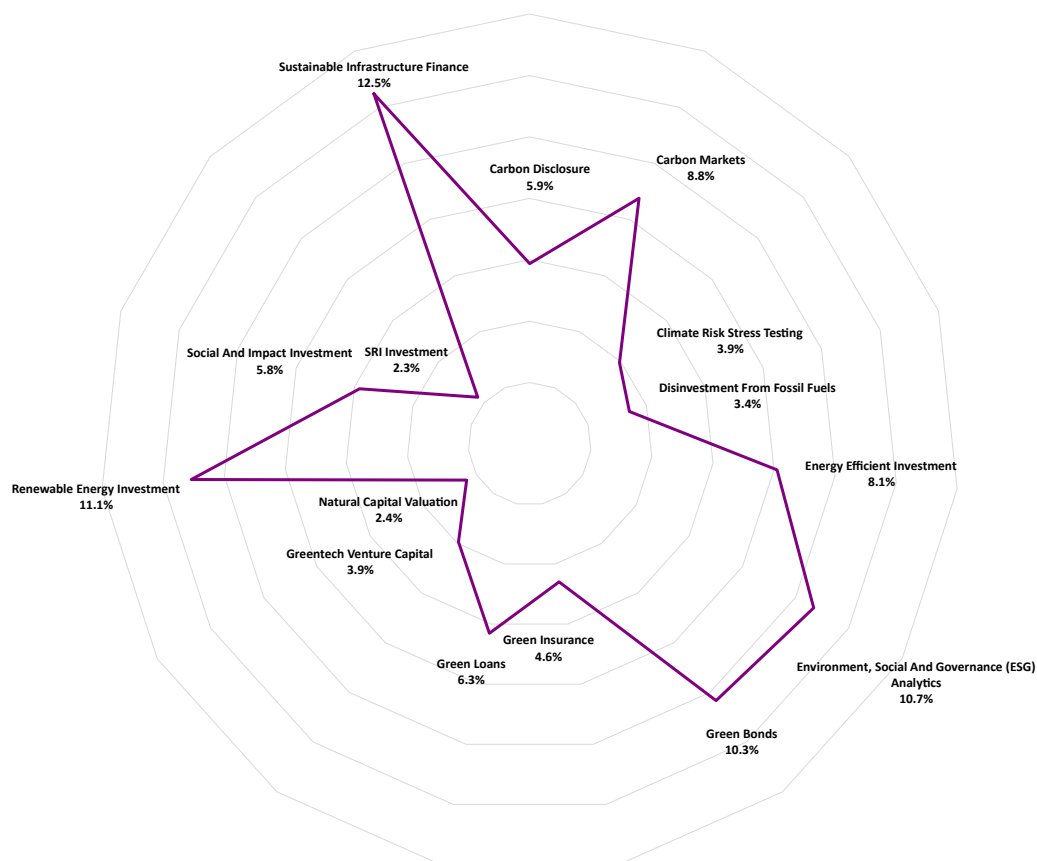
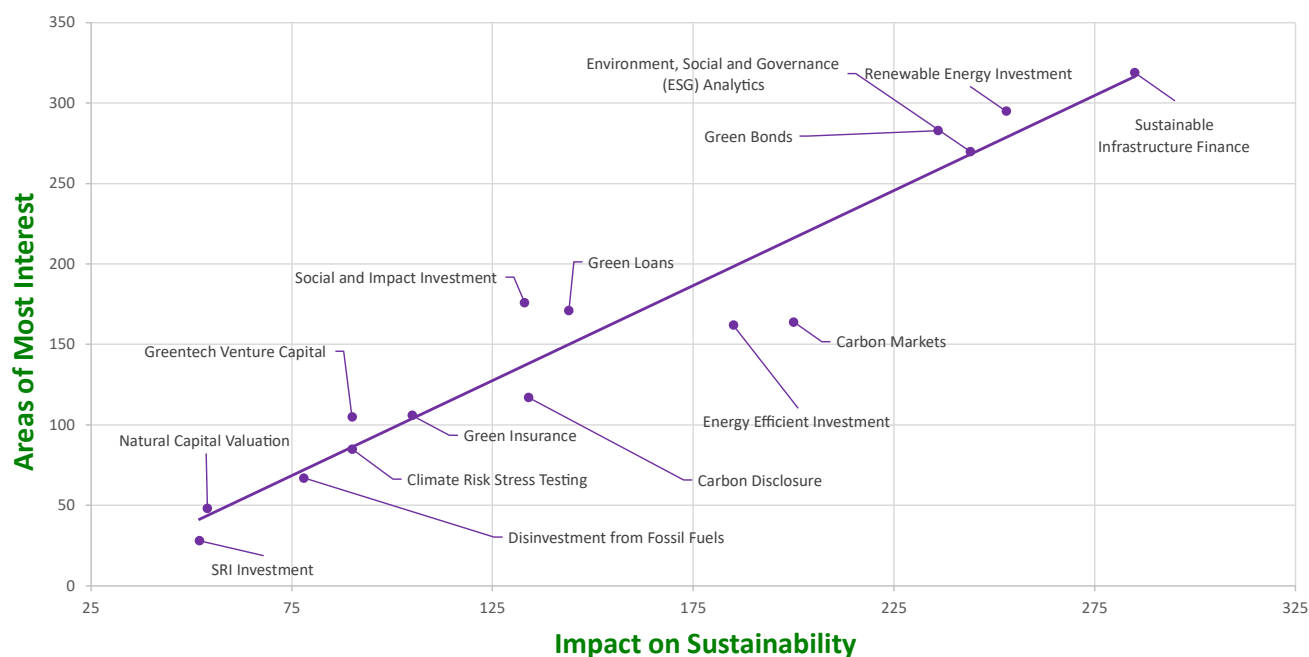
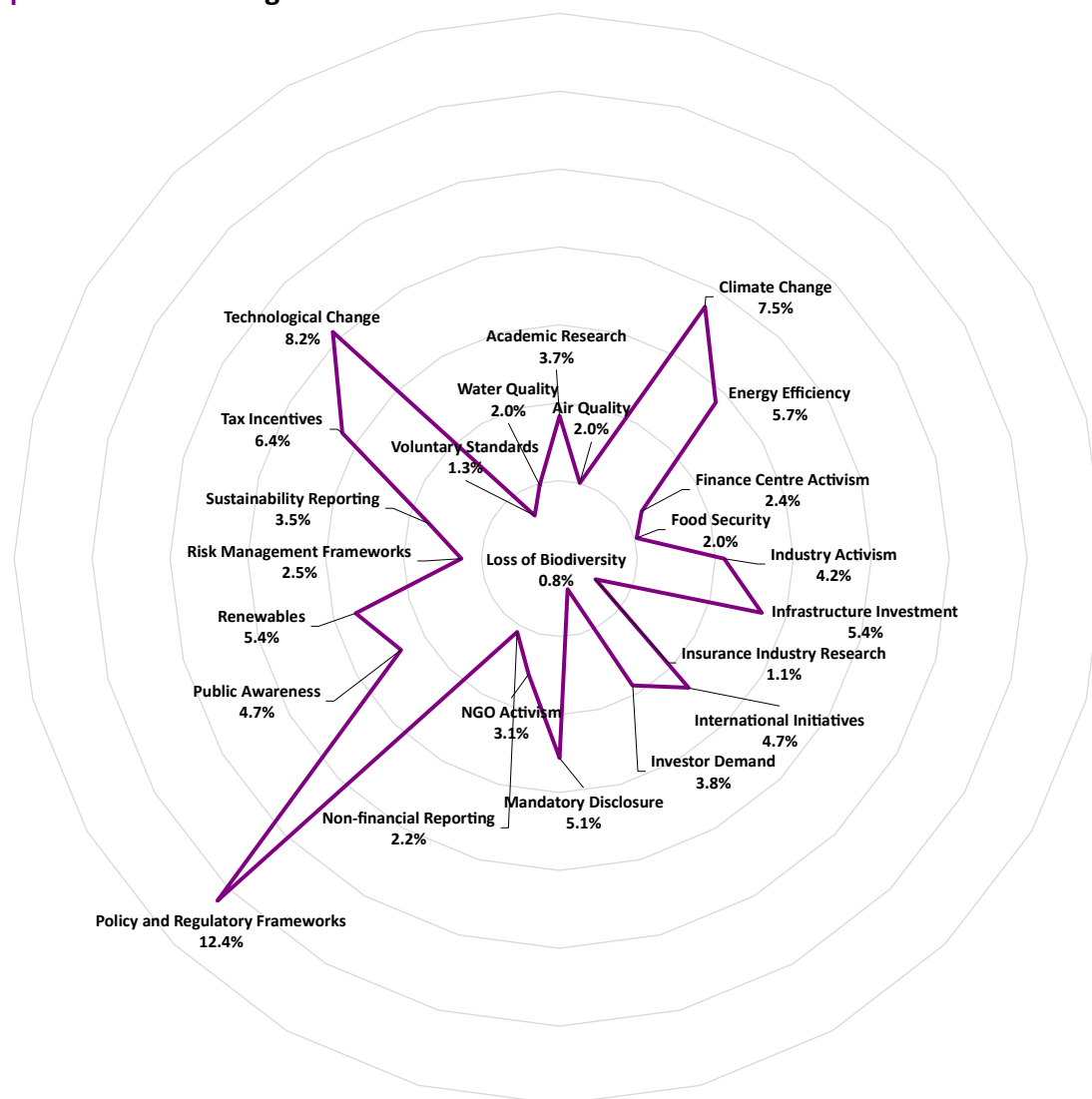


Chart 42 | The Correlation Between Interest And Impact



Policy and Regulatory Frameworks is clearly seen as the most important factor driving green finance. Technological Change, Climate Change, and Tax Incentives are also seen as important drivers. Loss of Biodiversity, Insurance Industry Research, and Voluntary Standards are mentioned least frequently. These results underline the continuing importance of regulatory frameworks in the development of green finance.

Chart 43 | Drivers - Percentage Of Total Mentions

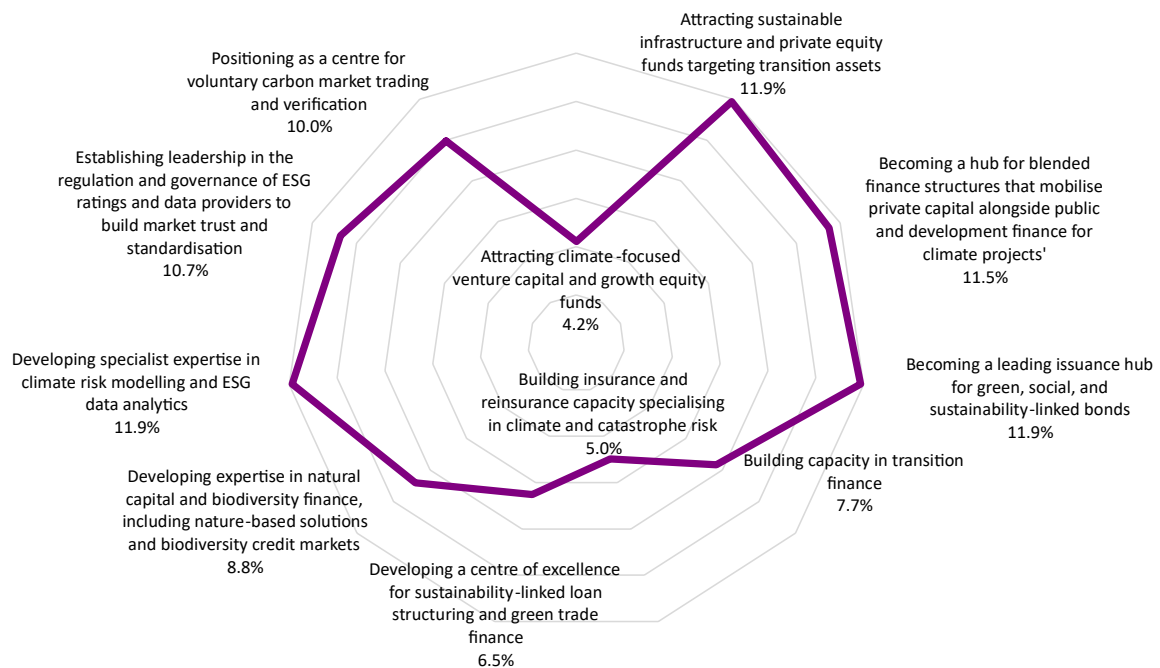


Financial Centre Strategies To Address Sustainability

International financial centres are key to the provision of finance to address sustainability. We asked respondents to the CCB GGFI survey for to identify which strategies they believe represents the greatest opportunities for international financial centres in the transition to a low-carbon economy.

The results are set out in Chart 44.

Chart 44 | Opportunities for Financial Centres To Address Sustainability



The top three strategies that were identified by respondents were:

- Attracting sustainable infrastructure and private equity funds targeting transition assets.
- Becoming a leading issuance hub for green, social, and sustainability-linked bonds.
- Developing specialist expertise in climate risk modelling and ESG data analytics.

Each of these were mentioned by 11.9% of those responding.

At the other end of the spectrum, two strategies were mentioned by 5% or fewer of respondents:

- Building insurance and reinsurance capacity specialising in climate and catastrophe risk.
- Attracting climate-focused venture capital and growth equity funds.

Appendix 1: Assessment Details

Table 18 | Details Of CCB GGFI 18 Assessments By Centre

Centre	CCB GGFI 18		Assessments		
	Rank	Rating	Number	Average	Std Dev
London	1	626	196	739	197
Singapore	2	624	144	758	173
Amsterdam	3	623	66	764	184
Geneva	4	622	43	734	198
Zurich	5	621	65	708	230
Copenhagen	6	620	23	778	167
Paris	7	619	77	703	187
Frankfurt	8	618	65	704	201
Luxembourg	9	617	54	692	225
Vienna	10	616	25	698	204
Los Angeles	11	615	48	697	198
Oslo	12	614	10	735	193
Washington DC	13	613	51	675	204
Tokyo	14	612	152	719	195
Stockholm	15	611	16	709	161
Edinburgh	16	610	33	645	187
Osaka	17	609	32	682	224
Minneapolis / St Paul	18	608	15	723	158
New York	19	607	165	636	220
Munich	20	606	27	642	211
Brussels	21	605	36	607	195
Sydney	22	604	48	717	187
San Francisco	23	603	40	634	222
Shanghai	24	602	73	660	243
Melbourne	25	601	27	681	191
Montreal	26	600	24	671	190
Madrid	27	599	28	646	201
Seoul	28	598	46	625	193
Vancouver	29	597	28	683	177
Glasgow	30	596	20	636	203
Hong Kong	31	595	144	640	206
Taipei	32	594	86	798	187
Toronto	33	593	54	654	222
Beijing	34	592	93	652	253
Shenzhen	35	591	38	661	261
Busan	36	590	14	645	174
Milan	37	589	19	650	237
Dubai	38	588	150	620	234
Malta	39	587	15	673	229
Atlanta	40	586	23	676	225
Mauritius	41	585	63	629	222
Chicago	42	584	45	629	226
Guangzhou	43	583	28	659	228
Calgary	44	582	16	617	236
Berlin	45	581	49	690	217
Miami	46	580	19	608	203
Sao Paulo	47	579	25	571	235
Riyadh	48	578	58	608	246
Hamburg	49	577	13	662	136
Kigali	50	576	61	762	201
Doha	51	575	60	627	226
Johannesburg	52	574	40	596	192
Rome	53	573	22	631	221
Lisbon	54	572	12	627	216
Casablanca	55	571	25	513	215
Rio de Janeiro	56	570	27	618	251
Philadelphia	57	569	13	660	179
Tel Aviv	58	568	21	579	246
Boston	59	567	36	648	230
Abu Dhabi	60	566	103	616	243
Mexico City	61	565	43	610	208
Ho Chi Minh City	62	564	30	603	198
Warsaw	63	563	29	634	194
Sofia	64	562	11	695	197
Panama	65	561	25	633	258
Monaco	66	560	21	649	192
Santiago	67	559	22	614	205
Dublin	68	558	23	601	234
Bahamas	69	557	25	568	251
Prague	70	556	23	603	211
Bermuda	71	555	16	617	193
Cape Town	72	554	36	563	183
Mumbai	73	553	45	603	225
Jersey	74	552	15	605	180
Moscow	75	551	44	680	189
Guernsey	76	550	14	493	186
St Petersburg	77	549	22	716	229
Astana	78	548	12	523	189
Kuala Lumpur	79	547	45	581	154
Cyprus	80	546	31	560	216
Nairobi	81	545	49	594	222
New Delhi	82	544	37	574	254
Bahrain	83	543	35	528	199
Manila	84	542	21	560	228
Bangkok	85	541	62	577	213
Jakarta	86	540	26	514	225
Almaty	87	539	14	586	258
Istanbul	88	538	64	593	200
Isle of Man	89	537	11	584	237
Liechtenstein	90	536	12	642	242
British Virgin Islands	91	535	31	524	253
Kuwait City	92	534	25	530	187
Cayman Islands	93	532	39	459	231
Lagos	94	524	15	483	254

Table 19 | Details Of Ratings For The CCB GGFI Dimensions By Centre

Centre	Overall Rank	Depth Rating	Quality Rating
London	1	308	318
Singapore	2	306	318
Amsterdam	3	308	315
Geneva	4	302	320
Zurich	5	304	317
Copenhagen	6	305	315
Paris	7	305	314
Frankfurt	8	306	312
Luxembourg	9	302	315
Vienna	10	307	309
Los Angeles	11	304	311
Oslo	12	299	315
Washington DC	13	306	307
Tokyo	14	301	311
Stockholm	15	305	306
Edinburgh	16	302	308
Osaka	17	297	312
Minneapolis / St Paul	18	298	310
New York	19	302	305
Munich	20	296	310
Brussels	21	299	306
Sydney	22	297	307
San Francisco	23	295	308
Shanghai	24	295	307
Melbourne	25	299	302
Montreal	26	293	307
Madrid	27	292	307
Seoul	28	295	303
Vancouver	29	296	301
Glasgow	30	289	307
Hong Kong	31	295	300
Taipei	32	290	304
Toronto	33	297	296
Beijing	34	292	300
Shenzhen	35	285	306
Busan	36	295	295
Milan	37	289	300
Dubai	38	290	298
Malta	39	285	302
Atlanta	40	288	298
Mauritius	41	282	303
Chicago	42	286	298
Guangzhou	43	285	298
Calgary	44	290	292
Berlin	45	284	297
Miami	46	290	290
Sao Paulo	47	284	295

Centre	Overall Rank	Depth Rating	Quality Rating
Riyadh	48	282	296
Hamburg	49	288	289
Kigali	50	276	300
Doha	51	285	290
Johannesburg	52	281	293
Rome	53	276	297
Lisbon	54	281	291
Casablanca	55	280	291
Rio de Janeiro	56	282	288
Philadelphia	57	279	290
Tel Aviv	58	273	295
Boston	59	280	287
Abu Dhabi	60	277	289
Mexico City	61	284	281
Ho Chi Minh City	62	280	284
Warsaw	63	278	285
Sofia	64	277	285
Panama	65	276	285
Monaco	66	273	287
Santiago	67	273	286
Dublin	68	276	282
Bahamas	69	273	284
Prague	70	272	284
Bermuda	71	276	279
Cape Town	72	270	284
Mumbai	73	275	278
Jersey	74	274	278
Moscow	75	275	276
Guernsey	76	270	280
St Petersburg	77	270	279
Astana	78	270	278
Kuala Lumpur	79	267	280
Cyprus	80	268	278
Nairobi	81	265	280
New Delhi	82	268	276
Bahrain	83	265	278
Manila	84	266	276
Bangkok	85	265	276
Jakarta	86	261	279
Almaty	87	268	271
Istanbul	88	267	271
Isle of Man	89	261	276
Liechtenstein	90	264	272
British Virgin Islands	91	266	269
Kuwait City	92	259	275
Cayman Islands	93	261	271
Lagos	94	255	269

Appendix 2: Interest, Impact, And Drivers Details

Table 20 | Areas Of Green Finance With The Greatest Impact

Area Of Green Finance	Number Of Mentions	Percentage Of Total
Sustainable Infrastructure Finance	285	12.5
Renewable Energy Investment	253	11.1
Environment, Social And Governance (ESG) Analytics	244	10.7
Green Bonds	236	10.3
Carbon Markets	200	8.8
Energy Efficient Investment	185	8.1
Green Loans	144	6.3
Carbon Disclosure	134	5.9
Social And Impact Investment	133	5.8
Green Insurance	105	4.6
Climate Risk Stress Testing	90	3.9
Greentech Venture Capital	90	3.9
Disinvestment From Fossil Fuels	78	3.4
Natural Capital Valuation	54	2.4
SRI Investment	52	2.3
Totals	2,283	100.0

Table 21 | Areas Of Green Finance Of Most Interest To Respondents

Area Of Green Finance	Number Of Mentions	Percentage Of Total
Sustainable Infrastructure Finance	319	13.3
Renewable Energy Investment	295	12.3
Green Bonds	283	11.8
Environment, Social And Governance (ESG) Analytics	270	11.3
Social and Impact Investment	176	7.3
Green Loans	171	7.1
Carbon Markets	164	6.8
Energy Efficient Investment	162	6.8
Carbon Disclosure	117	4.9
Green Insurance	106	4.4
Greentech Venture Capital	105	4.4
Climate Risk Stress Testing	85	3.5
Disinvestment From Fossil Fuels	67	2.8
Natural Capital Valuation	48	2.0
SRI Investment	28	1.2
Totals	2,396	100.0

Table 22 | Drivers Of Green Finance

Driver	Number of Mentions	Percentage Of Total
Policy and Regulatory Frameworks	291	12.4
Technological Change	193	8.2
Climate Change	175	7.5
Tax Incentives	151	6.4
Energy Efficiency	133	5.7
Renewables	127	5.4
Infrastructure Investment	126	5.4
Mandatory Disclosure	120	5.1
International Initiatives	110	4.7
Public Awareness	110	4.7
Industry Activism	99	4.2
Investor Demand	88	3.8
Academic Research	86	3.7
Sustainability Reporting	81	3.5
NGO Activism	72	3.1
Risk Management Frameworks	59	2.5
Finance Centre Activism	57	2.4
Non-financial Reporting	51	2.2
Food Security	48	2.0
Air Quality	47	2.0
Water Quality	46	2.0
Voluntary Standards	30	1.3
Insurance Industry Research	25	1.1
Loss of Biodiversity	19	0.8
Totals	2,344	100.0



Appendix 3: Respondents' Details

Table 23 | Respondents By Industry Sector

Industry Sector	Number Of Respondents	Percentage Of Respondents
Banking	198	32.14%
Debt Capital Market	23	3.73%
Equity Capital Markets	10	1.62%
Insurance	31	5.03%
Investment	52	8.44%
Knowledge	64	10.39%
Local Green Initiatives	29	4.71%
Policy and Public Finance	23	3.73%
Professional Services	55	8.93%
Trading	94	15.26%
Other	37	6.01%
Total	616	100.00%

Table 24 | Respondents By Engagement In Green Finance

Engagement In Green Finance	Number Of Respondents	Percentage Of Respondents
Working Full-time On Green Finance	142	23.05%
Working Part-time On Green Finance	108	17.53%
Interested in Green Finance	321	52.11%
Other/not given	45	7.31%
Total	616	100.00%

Table 25 | Respondents By Region

Region	Number Of Respondents	Percentage Of Respondents
Asia/Pacific	219	35.55%
Western Europe	84	13.64%
Eastern Europe and Central Asia	23	3.73%
North America	63	10.23%
Middle East and Africa	169	27.44%
Latin America and the Caribbean	11	1.79%
Multi-Regional	47	7.63%
Total	616	100.00%

Table 26 | Respondents By Size Of Organisation

Size Of Organisation	Number Of Respondents	Percentage Of Respondents
<100	171	27.76%
100-500	82	13.31%
500-1000	31	5.03%
1000-2000	30	4.87%
2000-5000	40	6.49%
>5000	212	34.42%
Other/not given	50	8.12%
Total	616	100.00%

Table 27 | Respondents By Gender

Gender	Number Of Respondents	Percentage Of Respondents
Female	144	23.38%
Male	432	70.13%
Other	2	0.32%
Prefer not to say/not given	38	6.17%
Total	616	100.00%

Table 28 | Respondents By Age

Age Band	Number Of Respondents	Percentage Of Respondents
18-30	88	14.29%
30-45	256	41.56%
45-60	190	30.84%
60+	45	7.31%
Other/not given	37	6.01%
Total	616	100.00%

Appendix 4: Methodology

The CCB GGFI provides ratings of the green finance offering of financial centres. The process involves taking two sets of ratings – one from survey respondents and one generated by a statistical model – and combining them into a single rating.

For the first set of ratings, the financial centre assessments, respondents use an [online questionnaire](#) to rate the depth and quality of each financial centre's green finance offering, using a 10-point scale ranging from little depth/very poor to mainstream/excellent. Responses are sought from a range of individuals drawn from the financial services sector, non-governmental organisations, regulators, universities, and trade bodies.

For the second set of ratings, we use a database of indicators, or Instrumental Factors, that contain quantitative data about each financial centre. We use a machine learning algorithm to investigate the correlation between the financial centre assessments and these Instrumental Factors, to predict how each respondent would have rated the financial centres they do not know. These 129 Instrumental Factors draw on data from a range of different sources covering sustainability, business, human capital, and infrastructure, including telecommunications and public transport. A full list of the Instrumental Factors used in the model is in Appendix 5.

The respondents' actual ratings as well as their predicted ratings for the centres they did not rate, are then combined into a single table to produce the ranking. We add the results for depth and quality to produce the CCB GGFI.

Factors Affecting The Inclusion Of Centres In The CCB GGFI

The questionnaire lists a total of 130 financial centres which can be rated by respondents. The questionnaire also asks whether there are financial centres that will improve their green finance offering significantly over the next two to three years. Centres which are not currently within the questionnaire, and which receive a number of mentions in response to this question will be added to the questionnaire for future editions.

We give a financial centre an initial CCB GGFI rating and ranking if it receives a statistically significant minimum number of assessments from individuals based in other geographical locations - at least 25 in CCB GGFI 18 and retain the centre in the index if it receives at least 10 assessments in each edition. This means that not all 130 centres in the questionnaire receive a ranking.

We also remove centres from the rankings, if over a 24-month period, a centre has not received a minimum number of assessments.

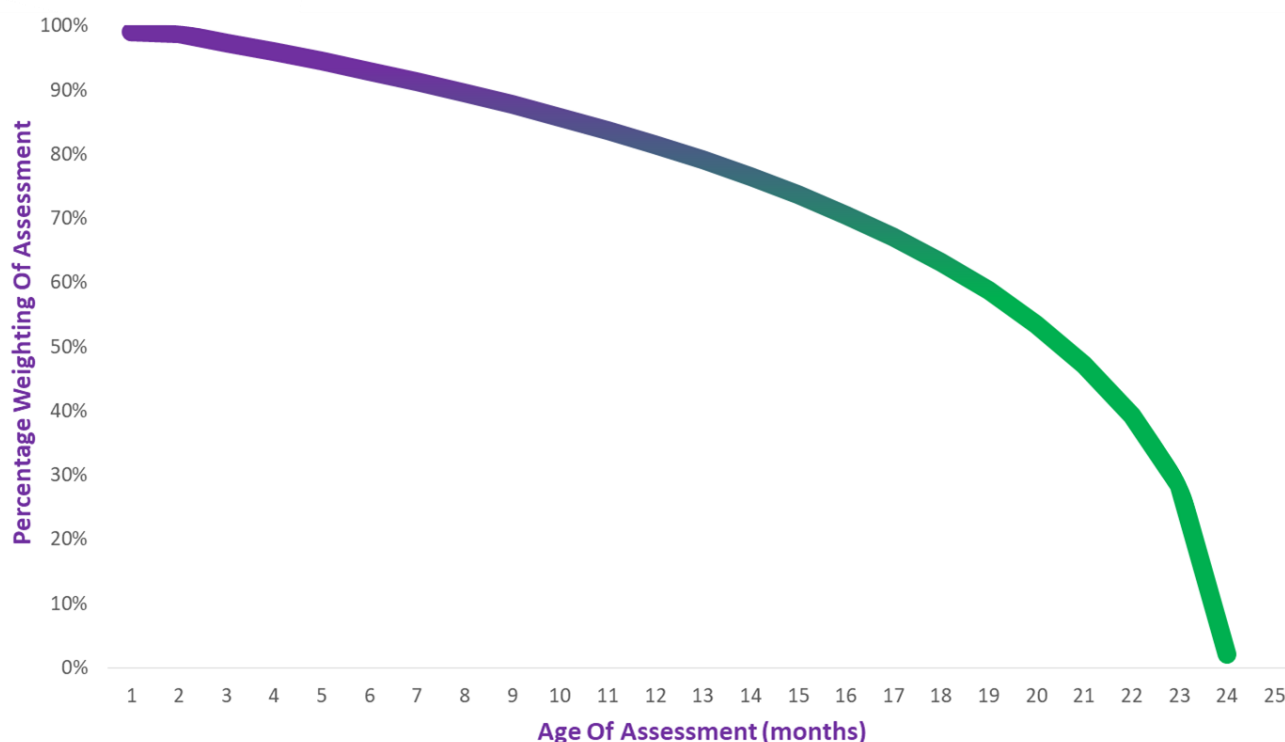
Financial Centre Assessments

Financial centre assessments are collected via an online questionnaire which runs continuously, and which is at greenfinanceindex.net/survey/. A link to this questionnaire is emailed to a target list of respondents at regular intervals. Other interested parties can complete the questionnaire by following the link given in CCB GGFI publications.

In calculating the CCB GGFI:

- the score given by a respondent to their home centre, and scores from respondents who do not specify a home centre, are excluded from the model – this is designed to prevent home bias;
- financial centre assessments are included in the CCB GGFI model for 24 months after they have been received – we consider that this is a period during which assessments maintain their validity; and
- financial centre assessments from the month when the CCB GGFI is created will be given full weighting with earlier responses given a reduced weighting on a logarithmic scale as shown in Chart 45 - this recognises that older ratings, while still valid, are less likely to be up to date.

Chart 45 | Reduction In Weighting As Assessments Get Older



Instrumental Factor Data

For the instrumental factors, we have the following data requirements:

- data series should come from a reputable body and be derived by a sound methodology; and
- data series should be readily available (ideally in the public domain) and be regularly updated.

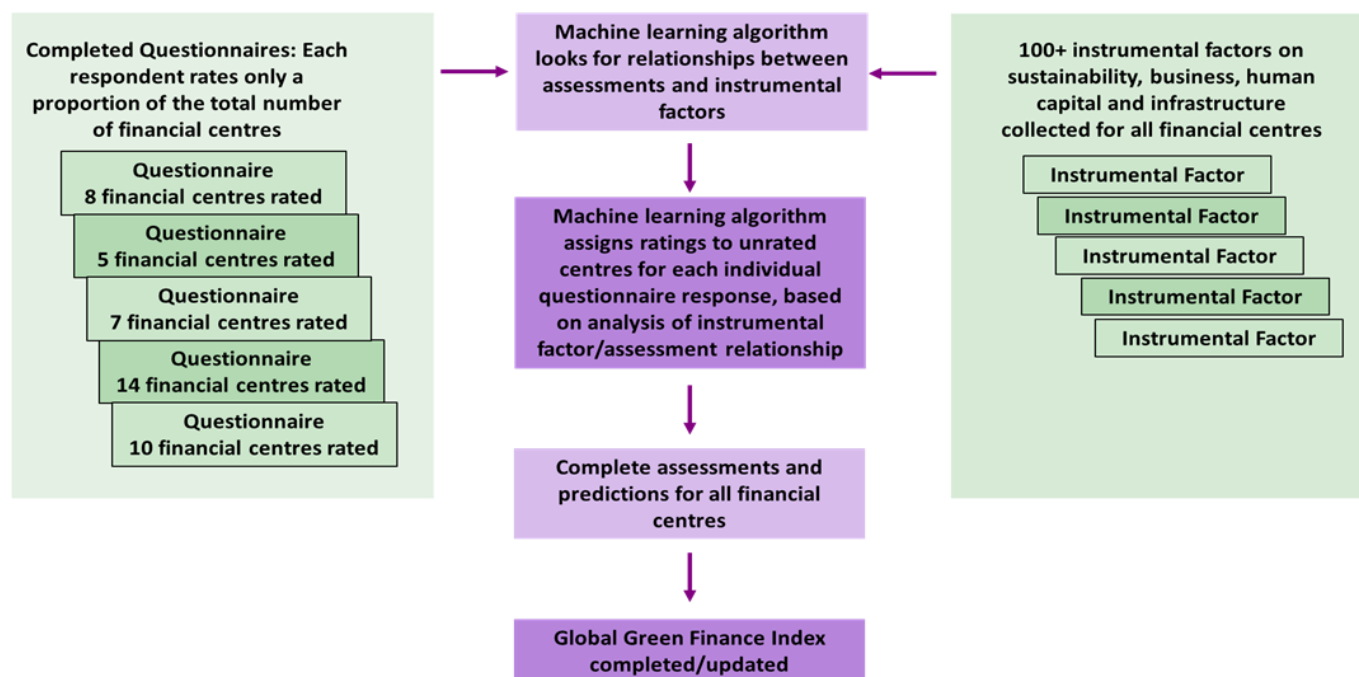
The rules on the use of instrumental factor data in the model are as follows:

- updates to the indices are collected and collated every six months;
- no weightings are applied to indices;
- indices are entered into the CCB GGFI model as directly as possible, whether this is a rank, a derived score, a value, a distribution around a mean or a distribution around a benchmark;
- if a factor is at a national level, the score will be used for all centres in that country; nation-based factors will be avoided if financial centre (city)-based factors are available;
- if an index has multiple values for a city or nation, the most relevant value is used;
- if an index is at a regional level, the most relevant allocation of scores to each centre is made (and the method for judging relevance is noted); and
- if an index does not contain a value for a particular financial centre, a blank is entered against that centre (no average or mean is used).

The details of the methodology can be accessed at <https://www.longfinance.net/programmes/financial-centre-futures/global-green-finance-index/ggfi-methodology/>.

The process of creating the CCB GGFI is outlined in Chart 46.

Chart 46 | The CCB GGFI Process



Appendix 5: Instrumental Factors

Table 29 | Sustainability Instrumental Factor Correlation With CCB GGFI 18 Ratings

Instrumental Factors	R-squared
Urban Mobility Readiness Index	0.689
IESE Cities In Motion Index	0.591
Quality Of Living City Rankings	0.567
The Future Growth Report	0.551
Energy Transition Index	0.516
Sustainable Cities Index	0.501
The Green Future Index	0.463
Global Green Growth Index	0.454
Percentage Of SDG Achievement	0.423
The Global Green Economy Index	0.418
Energy Sustainability Index	0.405
Environmental Performance Index	0.400
Climate Finance Vulnerability Index	0.310
Global Sustainable Competitiveness Index	0.294
Quality Of Life Index	0.225
Share Of Wind And Solar In Electricity Production	0.205
Pollution Index	0.182
City Commitment To Carbon Reduction (Individual Action)	0.106
Share Of Renewables In Electricity Production	0.098
Energy Intensity Of GDP	0.086
Proportion Of Population Using Safely-Managed Drinking-Water Services (%)	0.080
Protected Land Area % Of Land Area	0.040
Forestry Area	0.030
Buildings Energy Efficiency Policies Database (Y/N)	0.029
Territorial Per capita (tCO ₂ /person)	0.020
City Commitment To Carbon Reduction (Cooperative Action)	0.001
Sustainable Stock Exchanges (Y/N)	0.000
Average Precipitation In Depth (mm Per Year)	0.000

Table 30 | All Instrumental Factor Correlation With CCB GGFI 18 Ratings - Highest 30 Factors

Instrumental Factors	R-squared
Urban Mobility Readiness Index	0.689
IESE Cities In Motion Index	0.591
Global Cities Outlook ranking	0.571
Legatum Prosperity Index	0.570
Quality Of Living City Rankings	0.567
International IP Index	0.565
Global Innovation Index	0.557
The Future Growth Report	0.551
Energy Transition Index	0.516
Blavatnik Index Of Public Administration	0.512
Sustainable Cities Index	0.501
The Green Future Index	0.463
Adjusted Net National Income Per Capita	0.460
Cost Of Living City Rankings	0.456
Agility Emerging Markets Logistics Index	0.455
Global Green Growth Index	0.454
The Global Financial Centres Index	0.447
Government Effectiveness	0.447
Travel & Tourism Development Index	0.443
Innovation Cities Global Index	0.423
Percentage of SDG Achievement	0.423
The Global Green Economy Index	0.418
Global Cities Index	0.417
Energy Sustainability Index	0.405
Regulatory Quality	0.403
International Construction Cost Index	0.403
Environmental Performance Index	0.400
Open Government	0.394
Oxford Economics Global Cities Index	0.390
Corruption Perception Index	0.380

Table 31 | Sustainability Factors

Instrumental Factor	Source	Website	Updated
Average Precipitation In Depth (mm Per Year)	World Bank	http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&series=AG.LND.PRCP.MM	N
Buildings Energy Efficiency Policies Database (Y/N)	IEA	https://www.iea.org/policies	N
City Commitment To Carbon Reduction (Cooperative Action)	UNFCCC	https://climateaction.unfccc.int/Actors	N
City Commitment To Carbon Reduction (Individual Action)	UNFCCC	https://climateaction.unfccc.int/Actors	N
Territorial Per capita (tCO ₂ /person)	Global Carbon Project	https://globalcarbonatlas.org/emissions/carbon-emissions/	N
Energy Intensity Of GDP	Enerdata Statistical Yearbook	https://yearbook.enerdata.net/	N
Energy Transition Index	World Economic Forum	https://www.weforum.org/publications/series/fostering-effective-energy-transition/	N
Environmental Performance Index	Yale University	https://epi.yale.edu/	N
Forestry Area	World Bank	http://databank.worldbank.org/data/reports.aspx?source=2&series=AG.LND.FRST.ZS&country=	Y
Global Green Growth Index	GGGI	https://ggindex-simtool.gggi.org/	N
Global Sustainable Competitiveness Index	Solability	https://solability.com/the-global-sustainable-competitiveness-index	N
IESE Cities In Motion Index	IESE	https://www.iese.edu/media/research/pdfs/ST-0684-E.pdf	Y
Pollution Index	Numbeo	https://www.numbeo.com/pollution/rankings.jsp	N
Proportion Of Population Using Safely-Managed Drinking-Water Services (%)	WHO	https://www.sdg6data.org/en/indicator/6.1.1	N
Protected Land Area % Of Land Area	World Bank	http://databank.worldbank.org/data/reports.aspx?source=2&series=ER.LND.PTLD.ZS&country=	N
Quality Of Life Index	Numbeo	http://www.numbeo.com/quality-of-life/rankings.jsp	N
Quality Of Living City Rankings	Mercer	https://mobilityexchange.mercer.com/insights/quality-of-living-rankings	N
Share Of Renewables In Electricity Production	Enerdata Statistical Yearbook	https://yearbook.enerdata.net/	N
Share Of Wind And Solar In Electricity Production	Enerdata Statistical Yearbook	https://yearbook.enerdata.net/	N
Percentage Of SDG Achievement	Sustainable Development report	https://dashboards.sdgindex.org/rankings/	New
Sustainable Cities Index	Arcadis	https://www.arcadis.com/en/global/our-perspectives/sustainable-cities-index-2018/citizen-centric-cities/	N
Sustainable Stock Exchanges (Y/N)	UN Sustainable Stock Exchange Initiative	https://sseinitiative.org/exchanges-filter-search/	N
Energy Sustainability Index	World Energy Council	https://trilemma.worldenergy.org/	N
Urban Mobility Readiness Index	Oliver Wyman	https://www.oliverwymanforum.com/mobility/urban-mobility-readiness-index/ranking.html	N
The Green Future Index	MIT Technology Review	https://www.technologyreview.com/2023/04/05/1070581/the-green-future-index-2023/	N
The Global Green Economy Index	Dual Citizen	https://dualcitizeninc.com/global-green-economy-index/	N
The Future Growth Report	WEF	https://www.weforum.org/publications/the-future-of-growth-report/	N
Climate Finance Vulnerability Index	Center on Global Energy Policy	https://clifvi.org/	N

Table 32 | Human Capital Factors

Instrumental Factor	Source	Website	Updated
Average Wages	OECD	https://data.oecd.org/earnwage/average-wages.htm	N
Adjusted Net National Income Per Capita	World Bank	https://data.worldbank.org/indicator/NY.ADJ.NNTY.PC.CD	N
Corruption Perception Index	Transparency International	https://www.transparency.org/en/cpi/2025	Y
Cost Of Living City Rankings	Mercer	https://www.mercer.com/insights/total-rewards/talent-mobility-insights/cost-of-living/	N
Crime Index	Numbeo	https://www.numbeo.com/crime/rankings.jsp?title=2026	N
Educational Attainment, At Least Bachelor's Or Equivalent, Population 25+, Total (%)	World Bank	https://data.worldbank.org/indicator/SE.TER.CUAT.BA.ZS	Y
Working hours	International Labour Organization	https://ilostat.ilo.org/topics/working-time/	Y
English Proficiency	Education First	https://www.ef.com/wwen/epi/	N
GDP Per Person Employed (Constant 2017 PPP \$)	World Bank	https://databank.worldbank.org/reports.aspx?source=world-development-indicators&series=SL.GDP.PCAP.EM.KD	Y
Global Cities Index	AT Kearney	https://www. Kearney.com/service/national-transformations-institute/gcr/2025-full-report	N
Global Health Security Index	Nuclear Threat Initiative, Johns Hopkins Center for Health Security, and Economist Impact	https://www.ghsindex.org/	N
Global Innovation Index	WIPO	https://www.wipo.int/gii-ranking/en/rank	N
Global Peace Index	Institute for Economics & Peace	https://www.visionofhumanity.org/maps/#/	N
Global Skills Index	Coursera	https://www.coursera.org/skills-reports/global	N
Global Terrorism Index	Institute for Economics & Peace	https://www.visionofhumanity.org/maps/global-terrorism-index/#/	Y
Good Country Index	Good Country Party	https://index.goodcountry.org/	N
Government Effectiveness	World Bank	https://www.worldbank.org/en/publication/worldwide-governance-indicators	N
Gross Tertiary Graduation Ratio	The World Bank Gender Data Portal	https://genderdata.worldbank.org/en/indicator/se-ter-cmpl-zs	Y
Health Care Index	Numbeo	http://www.numbeo.com/health-care/rankings.jsp	N
Henley Passport Index	Henley Partners	https://www.henleypassportindex.com/passport	Y
Homicide Rates	UNODC	https://data.unodc.org/dareport/hom-victim	Y
Median Net Wealth (USD Per Household)	OECD	https://data-viewer.oecd.org/?chartId=4c135991-5003-4aba-be98-790d72f787da	New
Human Development Index	UNDP	https://hdr.undp.org/content/human-development-report-2025	Y
Human Freedom Index	Cato Institute	https://www.cato.org/human-freedom-index/2025	N
Individual Income Tax Rates	PWC	https://taxsummaries.pwc.com/quick-charts/personal-income-tax-pit-rates	Y
Innovation Cities Global Index	2ThinkNow Innovation Cities	https://innovation-cities.com/world-city-rankings/	N
International IP Index	U.S. Chamber of Commerce	https://www.uschamber.com/intellectual-property/2026-international-ip-index	Y
Legatum Prosperity Index	Legatum Institute	https://index.prosperity.com/	N
Life Expectancy At Birth, Total	World Bank	https://data.worldbank.org/indicator/SP.DYN.LE00.IN	Y
Number Of High Net Worth Individuals	Capgemini	https://www.worldwealthreport.com/	N
Number Of Meetings	ICCA	https://iccaworld.aflip.in/652217d068.html	N
OECD Country Risk Classification	OECD	https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/country-risk-classification/cre-crc-current-english.pdf	Y
Open Government	World Justice Project	http://worldjusticeproject.org/rule-of-law-index	N
Patent applications, residents	World Bank	https://www3.wipo.int/ipstats/ips-search/patent	Y
People Near Services	ITDP	https://pedestriansfirst.itdp.org/	N
Taxes On Earnings And Gains (% Of GDP)	OECD	https://www.oecd.org/en/publications/revenue-statistics-2025_3a264267-en.html	N
Political Stability And Absence Of Violence/Terrorism	World Bank	https://www.worldbank.org/en/publication/worldwide-governance-indicators	N
Press Freedom Index	Reporters Without Borders (RSF)	https://rsf.org/en/index?year=2026	Y

Table 32 | (Continued) Human Capital Factors

Instrumental Factor	Source	Website	Updated
Prime International Residential Index	Knight Frank	https://www.knightfrank.com/wealthreport	Y
Proportion Of Seats Held By Women In National Parliament	World Bank	https://data.worldbank.org/indicator/SG.GEN.PARL.ZS	Y
Purchasing Power Index	Numbeo	https://www.numbeo.com/quality-of-life/rankings.jsp	N
Ratio Of Female To Male Labor Force Participation Rate	World Bank	https://data.worldbank.org/indicator/SL.TLF.CACT.FM.ZS	Y
Regulatory Quality	World Bank	https://www.worldbank.org/en/publication/worldwide-governance-indicators	N
Tax Revenue As Percentage Of GDP	World Bank	https://databank.worldbank.org/reports.aspx?source=2&series=GC.TAX.TOTL.GD.ZS&country=#	Y
Travel & Tourism Development Index	World Economic Forum	https://www.weforum.org/publications/series/travel-tourism-development-index/	N
World Talent Rankings	IMD	https://www.imd.org/centers/wcc/world-competitiveness-center/rankings/world-talent-ranking/	N
Forbes Billionaires	Forbes	https://www.forbes.com/billionaires/	Y
Urban Proportion (%)	United Nations	https://desapublications.un.org/publications/world-urbanization-prospects-2025-summary-results	N

Table 33 | Business Factors

Instrumental Factor	Source	Website	Updated
Broad Stock Index Levels	The World Federation of Stock Exchanges	https://focus.world-exchanges.org/issue/july-2026/market-statistics	Y
Capitalisation Of Stock Exchanges	The World Federation of Stock Exchanges	https://focus.world-exchanges.org/issue/july-2026/market-statistics	Y
Common Law Countries	OpenFactBook	https://openfactbook.org/	N
Corporate Tax Rates	PWC	https://taxsummaries.pwc.com/quick-charts/corporate-income-tax-cit-rates	Y
Country Brand Ranking	Bloom Consulting	https://www.bloom-consulting.com/en/country-brand-ranking	N
Democracy Index	The Economist	https://www.eiu.com/n/global-themes/democracy-index/	N
Domestic Credit To Private Sector (% Of GDP)	World Bank	https://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS	Y
Economic Freedom	The Heritage Foundation	https://economicfreedom.heritage.org/	Y
External Positions Of Central Banks As A Share Of GDP	The Bank for International Settlements	https://data.bis.org/topics/LBS/tables-and-dashboards/BIS_LBS_A2.1.0	Y
FATF AML Effectiveness	FATF	http://www.fatf-gafi.org/publications/mutualevaluations/documents/assessment-ratings.html	Y
FDI Inward Stock (in million dollars)	UNCTAD	https://unctad.org/publication/world-investment-report-2025	N
Financial Secrecy Index	Tax Justice Network	http://www.financialsecrecyindex.com/	Y
Foreign Direct Investment Inflows	UNCTAD	https://unctadstat.unctad.org/datacentre/dataviewer/US.FdiFlowsStock	N
GINI Index	World Bank	https://data.worldbank.org/indicator/SI.POV.GINI	Y
Global Business Complexity Index	TMF Group	https://www.tmf-group.com/en/news-insights/publications/global-business-complexity/	Y
Global Connectedness Index	DHL	https://www.dhl.com/global-en/microsites/core/global-connectedness/report.html	Y
Global Services Location	AT Kearney	https://www.kearney.com/service/digital/gslj	N
Government Debt As % Of GDP	IMF	https://www.imf.org/external/datamapper/GGXWDG_NGDP@WEO/OEMDC/ADVEC/WEOWORLD	Y
Jurisdictions Participating In The Convention On Mutual Administrative Assistance In Tax Matters	OECD	https://www.oecd.org/ctp/exchange-of-tax-information/Status_of_convention.pdf	N
Level Of Internet Freedom	Freedom House	https://freedomhouse.org/country/scores?type=fotn	N

Table 33 | (Continued) Business Factors

Instrumental Factor	Source	Website	Updated
Net External Positions Of Banks	The Bank for International Settlements	https://data.bis.org/topics/LBS/tables-and-dashboards/BIS,LBS_A3,1.0	Y
Number Of Tax Treaties	ICTD	https://www.treaties.tax/en/data/	N
Open Budget Survey	International Budget Partnership	https://internationalbudget.org/open-budget-survey/	Y
Percentage Of Firms Using Banks To Finance Investment	World Bank	http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&series=IC.FRM.BNKS.ZS	Y
Real Interest Rate	World Bank	https://databank.worldbank.org/reports.aspx?source=world-development-indicators&series=FR.INR.RINR	Y
Oxford Economics Global Cities Index	Oxford Economics	https://www.oxfordeconomics.com/global-cities-index/	New
The Global Financial Centres Index	Z/Yen	https://www.longfinance.net/programmes/financial-centre-futures/global-financial-centres-index/	Y
Global Startup Ecosystem Index	StartupBlink	https://www.startupblink.com/	New
Total Net Assets Of Regulated Open-End Funds	Investment Company Institute	http://www.icifactbook.org/	Y
TRACE Bribery Risk Matrix	Trace International	https://matrixbrowser.traceinternational.org/	N
Value Of Bond Trading	The World Federation of Stock Exchanges	https://statistics.world-exchanges.org/ReportGenerator/Generator#	Y
Value Of Share Trading	The World Federation of Stock Exchanges	https://focus.world-exchanges.org/issue/july-2026/market-statistics	Y
Volume Of Share Trading	The World Federation of Stock Exchanges	https://statistics.world-exchanges.org/ReportGenerator/Generator#	Y
World Competitiveness Scoreboard	IMD	https://www.imd.org/centers/wcc/world-competitiveness-center/rankings/world-competitiveness-ranking/rankings/wcr-rankings/#_tab_List	Y
Blavatnik Index Of Public Administration	University of Oxford	https://index.bsg.ox.ac.uk/posts/overall_results/	N
Liner Shipping Connectivity Index	World Bank	http://databank.worldbank.org/data/reports.aspx?source=2&series=LS.SHP.GCNW.XQ	N
Global Cities Outlook ranking	Kearney	https://www.kearney.com/service/national-transformations-institute/gcr/2025-full-report	N
World's Best Cities	Best Cities	https://www.worldsbestcities.com/rankings/worlds-best-cities/	N
Business Entry	World Bank	https://www.worldbank.org/en/businessready	N
Business Location	World Bank	https://www.worldbank.org/en/businessready	N
Financial Services	World Bank	https://www.worldbank.org/en/businessready	N

Table 34 | Infrastructure Factors

Instrumental Factor	Source	Website	Updated
Agility Emerging Markets Logistics Index	Agility	https://emli.agility.com/overall-rankings/	Y
INRIX Traffic Scorecard	INRIX	http://inrix.com/scorecard/	N
International Construction Cost Index	Arcadis	https://www.arcadis.com/en/knowledge-hub/perspectives/global/international-construction-costs	N
JLL Real Estate Transparency Index	Jones Lang LaSalle	https://www.jll.co.uk/en/trends-and-insights/research/global-real-estate-transparency-index	N
Metro Network Length	Metro Bits	https://mic-ro.com/metro/table.html	Y
Railways Per Land Area	OpenFactBook	https://openfactbook.org/	N
Refined Oil Products Production	Enerdata Statistical Yearbook	https://yearbook.enerdata.net/	N
Data Gravity Index	Digital Realty	https://www.digitalrealty.com/resources/multimedia/data-gravity-index-databook	New
Smart City Index	IMD	https://www.imd.org/smart-city-observatory/smart-city-index/	Y
Telecommunication Infrastructure Index	UN	https://publicadministration.un.org/egovkb/en-us/Data-Center	N
TomTom Traffic Index	TomTom	https://www.tomtom.com/en_gb/traffic-index/ranking/	Y
International Trade	World Bank	https://www.worldbank.org/en/businessready	N

Vantage**Financial
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Vantage Financial Centres is an exclusive network of financial centres around the world looking for a deeper understanding of financial centre competitiveness. Members receive enhanced access to CCB GGFI and GFCI data, marketing opportunities, and training for centres seeking to enhance their profile and reputation.



Casablanca Finance City is an African financial and business hub located at the crossroads of continents. Recognized as the leading financial center in Africa, and partner of the largest financial centers in the world, CFC has built a strong and thriving community of members across four major categories: financial companies, regional headquarters of multinationals, service providers and holdings.

CFC offers its members an attractive value proposition and a premium "Doing Business" support that fosters the deployment of their activities in Africa. Driven by the ambition to cater to its community, CFC is committed to promoting its members expertise across the continent, while enabling fruitful business and partnership synergies through its networking platform.

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Supported by the industry, the Financial Services Development Council (FSDC) is a high-level, cross-sectoral advisory body to the Hong Kong Special Administrative Region Government.

FSDC formulates proposals to promote the further development of Hong Kong's financial services industry and to map out the strategic direction for the development. As of March 2020, 110 of the 137 policy recommendations had been adopted by the Government and relevant regulators since FSDC's inception in 2013. On top of research, FSDC also carries out market promotion and human capital development functions.

Among others, FSDC focuses on topics including Mainland and international connectivity, green and sustainable finance, FinTech, as well as asset and wealth management.

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Seoul is a rising star among the financial cities of the world. It is already one of the top 10 cities in the world based on various indices, and it has many more opportunities to offer as a financial hub and great growth potential. Seoul believes global financial companies are our true partners for growth. There are many incentives provided to global financial companies that enter into Seoul, such as the financial incentives provided when moving into IFC, so that we can all jointly work towards the growth and development of the financial market.

It is sure that Seoul will become a top star of global financial hubs in the near future! Pay close attention to Seoul's potentials and pre-emptively gain a foothold in the Seoul financial hub. Seoul is the gateway to Northeast Asia and the world.

Sangwoon Jeong at sangwoon.jeong@seoul.go.kr
www.seoul.go.kr/main/index.jsp



Established to provide an efficient financial services ecosystem, Istanbul Financial Center (IFC) aims to deliver growth to the Turkish economy and international investors by becoming a regional center in the short term and a global center in the medium term.

IFC will include 1.3 million m2 of office space, a shopping mall spanning 100,000 m2, a congress center (with the capacity to hold up nearly 2,000 people), an extended-stay 5-star hotel, a car park (with a capacity for 25,000 vehicles), all created within a 'smart city' model.

IFC will host up to 100,000 people daily, offering a state of the art working environment, as well as green space and leisure facilities that will help to support work/life balance and wellbeing for all visitors. All offices are equipped with windows that can open and UV-filtered ventilation systems to ensure that all employees can work in a safe environment.

<https://ifm.gov.tr/>

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Please find out more at: www.vantagefinancialcentres.net or by contacting Mike Wardle at mike_wardle@zyen.com



Approved by the China's State Council, China Development Institute (CDI) was founded in 1989 with 116 representatives from the government, academia, and business in China. Being an independent think tank, CDI is committed to develop policy solutions via research and debates that help to advance China's reform and opening-up. After years of development, CDI has become one of the leading think tanks in China. CDI focuses on the studies of open economy and innovation-driven development, regional economy and regional development, industrial policies and industrial development, urbanization and urban development, business strategies, and investment decision-making. Via conducting research, CDI provides policy recommendations for the Chinese governments at various levels and develops consultation for corporate sectors at home and abroad. CDI organizes events in different formats that evoke dialogue among scholars, government officials, business people and civil society members around the globe. Based in Shenzhen, Southern China, CDI has one hundred and sixty staff, with an affiliated network that consists of renowned experts from different fields.

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Established in 2001, the Financial Services Commission, Mauritius ('FSC') is the integrated regulator for the non-bank financial services sector and global business and is mandated to license, regulate, and supervise the conduct of business activities in the non-bank financial services sector and global business.

Our vision is to be an internationally recognised financial supervisor committed to the sustained development of Mauritius as a sound and competitive financial services centre. The FSC aims to:

- promote the development, fairness, efficiency and transparency of financial institutions and capital markets;
- suppress crime and malpractices so as to provide protection to members of the public investing in non-banking financial products; and
- ensure the soundness and stability of the financial system in Mauritius.

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The [Taiwan Academy of Banking and Finance](http://www.tabf.org.tw) (TABF) is the foremost non-profit institution serving Taiwan's banking industry, and a trusted platform promoting the development and advancement of Taiwan's financial services. Advised by the Financial Supervisory Commission (FSC), it was established in 2000 through the merger of the Banking Institute of the Republic of China (BIROC) and the Banking and Finance Institute (BFI), and remains committed to fostering a modern, resilient, and inclusive financial system for a changing world.

TABF brings together stakeholders across the industry to provide opportunities for talent development, knowledge sharing, and networking. Working closely with both domestic and international partners, TABF provides customized and innovative financial training and certification solutions for the banking sector. Furthermore, it has also been working to improve the financial wellness of the public through financial literacy education, aiming to shape a banking sector that serves all of society.

In a nutshell, TABF is a unique and comprehensive platform committed to fostering a sustainable and inclusive banking industry, making it an essential organization in Taiwan and a valuable partner for the global financial community.



The Long Finance initiative grew out of the London Accord, a 2005 agreement among investment researchers to share environmental, social and governance research with policymakers and the public. Long Finance was established more formally by Z/Yen Group and Gresham College from 2007 with the aim of exploring long-term thinking across a global network of people.

We work on researching innovative ways of building a more sustainable financial system. In so doing, we try to operate openly and emulate scientific ideals. At the same time, we are looking to create a supportive and caring community where people can truly question the accepted paradigms of risk and reward.

www.longfinance.net

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The Taiwan Stock Exchange (the TWSE) started operations on February 9, 1962. The TWSE is responsible for operating and advancing the domestic securities market. TWSE primary business operations include listing, trading, settlement and surveillance. These comprise listing promotion and review, post-listing supervision and corporate governance, maintaining market trading and order, plus securities firms' services, investor protection, clearing and settlement operations, as well as safeguarding against market defaults and monitoring of illegal transactions. The TWSE provides comprehensive services to the securities market.

In line with the policy of the Financial Supervisory Commission (FSC) to promote Taiwan into the premier Asian Asset Management Center and advance the diversity and prosperity of the capital market, the TWSE will collaborate with its stakeholders to pursue four major goals aimed at building a world-class capital market and supporting industrial transformation: Establishing the Preferred Fundraising Platform for Enterprises; Leading the Path to Net-Zero Sustainability; Driving Product Internationalization; and Technology-Driven Innovation for Inclusive Finance.

<https://www.twse.com.tw/en/>



Since 2009 Busan Metropolitan City has been developing a financial hub specialising in maritime finance and derivatives. With its strategic location in the center of the southeast economic block of Korea and the crossroads of a global logistics route, Busan envisions growing into an international financial city in Northeast Asia. Busan Finance Center (BFC) will continue to develop and implement measures to promote Busan as the financial hub and bolster the local financial industry, while working together with various local economic players to pursue sustainable growth of the financial sector including FinTech. These efforts will enable BFC to play a leading role in taking Busan to the next level and become the international financial center and maritime capital of Northeast Asia.

BFC offers an attractive incentive package to global financial leaders and cooperation network of Busan Metropolitan City, and Busan Finance Center will support you to identify opportunities in Busan, one of the fastest developing cities in Asia.

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Dubai International Financial Centre (DIFC) is the world's most advanced financial centre, shaping the global financial landscape and cementing Dubai's reputation as a leading business destination across the Middle East, Africa, and South Asia (MEASA).

As the region's only financial centre operating at scale across all sectors, DIFC is home to 10,018 active firms. These include 1,134 regulated firms. Home to over 1,933 AI, FinTech and innovation firms, DIFC sets the benchmark for financial innovation and is a top five ranked FinTech hub across the world.

Underpinned by a trusted, world-class legal and regulatory framework, including the region's most utilised commercial courts, DIFC ensures efficient governance and reinforces Dubai's leadership in the digital economy. Connecting 50,200 professionals, it offers the region's deepest pool of financial talent, serving as the gateway to MEASA for all financial players.

Beyond business, DIFC provides the complete urban experience with world-class lifestyle amenities. Anchored in integrity, DIFC is the platform for success, driving the future of finance.

difc.com
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The Astana International Financial Centre (AIFC) is a leading financial hub in the Central Asian and Eastern European region, integrating advanced capabilities and best practices from prominent financial centres around the world. It is the first in the region to establish a comprehensive legal framework designed to attract, protect, and facilitate investment, grounded in business-friendly laws that reflect the principles, norms, and precedents of the law of England and Wales, as well as the standards of the world's leading financial centres.

The AIFC offers its participants and investors exceptional conditions and opportunities, including an independent judiciary, an IOSCO-recognised regulatory framework, a diverse range of financial services and instruments, streamlined visa and employment procedures, and tax benefits for licensed companies. More than 5,400 companies from 90 countries, including the United States, the United Kingdom, the EU, China, Türkiye, Singapore, and more, are registered within the AIFC. Since its inception, investments facilitated through the AIFC platform have exceeded \$21.5 billion, highlighting its key role in driving economic growth and development in Kazakhstan.

www.aifc.kz

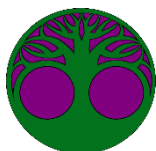
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Z/Yen helps organisations make better choices - our clients consider us a commercial think-tank that spots, solves and acts. Our name combines Zen and Yen - 'a philosophical desire to succeed' - in a ratio, recognising that all decisions are trade-offs. One of Z/Yen's specialisms is the development and publication of research combining factor analysis and perception surveys.

THE CHINA CONSTRUCTION BANK GLOBAL GREEN FINANCE INDEX



www.greenfinanceindex.net

The China Construction Bank Global Green Finance Index provides a measure of how financial centres are responding to the challenge of developing a sustainable economy, enabling centres to compare their performance with their peers, improve policy makers' understanding of the drivers of green growth, and assist them in shaping the financial system to support sustainability goals.

SUSTAINABLE FUTURES



<https://www.longfinance.net/programmes/sustainable-futures/>

The sustainable futures programme focuses on ways in which the financial system supports the transition to a sustainable economic model. Alongside the CCB GGFI, the programme supports the [London Accord](#), a free to access collection of over 700 environmental social and governance research reports from over 120 financial services, NGO, academic and policy making institutions.

PUBLISHED BY LONG FINANCE AND FINANCIAL CENTRE FUTURES



www.longfinance.net

Long Finance is a Z/Yen initiative designed to address the question **"When would we know our financial system is working?"** This question underlies Long Finance's goal to improve society's understanding and use of finance over the long-term. In contrast to the short-termism that defines today's economic views the Long Finance timeframe is roughly 100 years.



www.financialcentrefutures.net

Financial Centre Futures is a programme within the Long Finance initiative that initiates discussion on the changing landscape of global finance. Financial Centre Futures comprises the Global Green Finance Index and other research publications that explore major changes to the way we will live and work in the financial system of the future.