

# The Global Green Finance Index 6



October 2020



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. Z/Yen continues this work and is pleased to present the sixth edition of the Global Green Finance Index (GGFI 6).

**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 time-frame is roughly 100 years.

Within the Long Finance initiative, Z/Yen runs the **Sustainable Futures Programme**, which focuses on ways in which the financial system supports the transition to a sustainable economic model, addressing green finance and environmental, social and governance systems. Alongside the GGFI, the Sustainable Futures Programme supports the **London Accord**, a free to access collection of nearly 600 environmental social and governance research reports from more than 60, financial services, NGO, academic and policy making institutions from around the world.

The authors of this report, Mike Wardle, Professor Michael Mainelli, and Simon Mills would like to thank Bikash Kharel, Peter Welch, and the rest of the Z/Yen team for their contributions with research, modelling, and ideas.



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## Foreword

Covid-19 has accelerated change in much economic activity. As societies seek innovative recovery, they have ‘zoomed in on’ (sic) the potential of ‘going green’ much faster. Consequently, green and sustainable finance have come to the fore.

The [Global Green Finance Index](#) (GGFI), launched in 2018, has tracked the development of the depth and quality of green finance in financial centres across the globe. 74 centres now feature in GGFI 6. Western Europe continues to lead the way, reflecting both actions taken by the European Union, governments, and regulatory authorities, as well as public demand for action on sustainability.

This dependence on public policy and regulation marks green finance out from other parts of the financial system, and success in green finance for financial centres is closely related to the ‘greenness’ of countries and cities across the board. Places where sustainability is a hallmark of public life and discourse have a marked advantage in green finance.

Financial centres are demonstrating their commitment to green finance, as shown by initiatives such as Sustainable Stock Exchanges (SSE) and Financial Centres for Sustainability. Financial centres also see green finance as a marketing differentiator. Centres can, and do, make a difference in:

- **Regulation** – providing a supportive regulatory environment that mandates consideration of social and environmental issues in reporting and decision-making, and provides a strong platform for green and responsible finance.
- **Innovation** – developing frameworks that support experimentation and innovation in new technologies, products, and services to deliver sustainable outcomes.
- **Collaboration** – driving dialogue among financial centres, regulators, innovators, and financial service providers to develop standards, benchmarks and best practice.

The UN sets demanding Sustainable Development Goals, and over 17 nations have already committed to extremely demanding ‘net zero carbon’ targets by 2050 or earlier. We in the financial sector need to set and meet at least as demanding goals in order to earn our part in achieving the sustainable planet we all desire.



**Professor Michael Mainelli**  
**Executive Chairman**  
**Z/Yen Group**



# Summary

## Overview

This is the sixth Global Green Finance Index (GGFI 6). The 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.

We researched 121 financial centres for GGFI 6. The number of centres in the index has increased to 74 (67 in GGFI 5), with the addition of Glasgow, GIFT City-Gujarat, Helsinki, Lisbon, Osaka, Qingdao, and Wellington.

In the supplement to this edition of the GGFI, we take the fifth anniversary of the UN's Sustainable Development Goals (SDGs) as our theme. We explore the progress made towards the goals, and the likely impacts of the covid-19 pandemic on their attainment. We also consider the threats and opportunities to SDGs associated with financial services, and the leadership role that financial centres can play in directing humankind onto sustainable pathways.

## Commentary

The index provides ratings of both the depth and quality of green finance in financial centres. We consider that this approach remains useful, compared with providing a single measure of centres' green finance offering. As the index matures, we will keep this approach under review.

Western Europe continues to lead the world's centres in green finance depth and quality, taking nine of the top 10 places in depth and all top 10 places in quality. This reflects the continuing work being undertaken by European financial institutions, central banks, regulators, and the European Union to embed sustainability in their regulatory work, including in the approaches taken to economic support in response to the covid-19 pandemic.

There continues to be growing confidence in the development of green finance across all regions. Ratings of green finance rose in all centres for both depth and quality.

We indicated in GGFI 5 that London's lead in the quality index had narrowed to six points and that its leading position for quality was threatened. This prediction has been realised in GGFI 6, as Zurich and Amsterdam have overtaken London to lead the quality index.

The leading driver of the development of green finance continues to be identified as Policy And Regulatory Frameworks, reinforcing the fact that green finance is a policy driven sector, which requires government and regulatory action to thrive.

Green Bonds are seen as a less interesting area of green finance than in previous editions of the GGFI, perhaps reflecting growing criticism of the uses to which green bonds have been harnessed.

The online GGFI survey is at <http://greenfinanceindex.net/survey>. Please take a moment to take the survey if you have not recently done so: the survey runs continuously and is sampled for each edition of the GGFI.

## Index Results

- Amsterdam retained its leading position in the depth index. Zurich has risen to second place.
- In the quality index, these positions are reversed, with Zurich leading and Amsterdam second.
- San Francisco was the leading centre outside Western Europe, ranking seventh for depth and equal 10th for quality.
- New entrant, Helsinki, ranked 19th equal for depth and 12th for quality.
- On depth, San Francisco and Oslo moved into the top 10, while Montreal and Hamburg fell back.
- On quality, Oslo rose nine places to fourth, Munich and San Francisco moved into the top 10, and Hamburg and Vienna fell back.
- Narrow margins separate centres at top of the tables. Among the top 10 centres the spread of ratings is 31 out of 1,000 for depth (44 in GGFI 5) and 43 for quality (44 in GGFI 5).

## Western Europe

- Western Europe continues to improve its ratings across depth and quality, with all centres receiving improved ratings for both depth and quality, although a number of centres fell in the rankings as other centres improved faster.
- Oslo moved into the top 10 for depth and quality.
- Stockholm, Vienna, Brussels, Hamburg, Frankfurt, Madrid, Rome, Milan, Jersey, Isle Of Man, and Malta fell in the rankings for both depth and quality.

## North America

- USA centres have gained ground on Canadian centres in GGFI 6.
- San Francisco replaced Montreal as the top ranking centre for depth and continued to lead the region for quality, now featuring in the top 10 globally in both rankings.
- Vancouver also moved up in both measures, and now takes second position in both measures in the region.
- Montreal, Toronto, and Calgary fell in the rankings for depth. Toronto also fell in the quality rankings.

## Asia/Pacific

- Nineteen Asia/Pacific centres now feature in the GGFI, with the addition of Wellington, Osaka, Qingdao, and GIFT City-Gujarat in this edition.
- Shanghai, Beijing, Tokyo, Shenzhen, New Delhi, Mumbai, and Jakarta improved their ranking for both depth and quality.
- Sydney has fallen from first to third in the region for both depth and quality, with Shanghai now leading for depth and Tokyo leading for quality in the region.

## Middle East & Africa

- Casablanca maintained its position as the leading centre in the region, although its overall ranking dropped.
- Tel Aviv held onto second place in the region for quality, but Mauritius has taken second place for depth.
- Centres in the region generally fell in the rankings in both depth and quality.

### **Latin America & The Caribbean**

- All centres in Latin America & The Caribbean fell in the rankings of both depth and quality.
- Sao Paulo retained its leading position in the region for depth, but has been overtaken by Cayman Islands and the British Virgin Islands in the quality measure.

### **Eastern Europe & Central Asia**

- All centres in the region fell in the rankings for both depth and quality.
- Prague continued to lead the region for depth, but fell substantially in the quality measure, with Istanbul taking the leading place for quality in the region.

### **Areas Of Interest, Areas With Most Impact On Sustainability, And Drivers Of Green Finance**

We asked respondents which areas of green finance were of most interest; which areas would have most impact on sustainability; and which factors are driving the uptake of green finance:

- On interest, Environmental, Social And Governance (ESG) Analytics, Sustainable Infrastructure Finance, and Social And Impact Investment were cited as the three most interesting areas of green finance. Green Bonds fell from second place in GGFI 5 to fourth.
- On impact, the three leading areas mentioned were Sustainable infrastructure Finance, Green Bonds, and Environmental, Social And Governance (ESG) Analytics. Renewable Energy Investment fell from the top three, coming fourth in the list.
- Natural Capital Valuation continues to rank low for both interest and impact despite recent reports by the UN and rising public awareness of the threat posed by species extinction.
- On drivers, the leading drivers of green finance are identified as Policy And Regulatory Frameworks, and Climate Change.

### **GGFI 6**

GGFI 6 was compiled using 135 instrumental factors. These quantitative measures are provided by third parties including the World Bank, The Economist Intelligence Unit, the OECD, and the United Nations. Details can be found in Appendix 5.

The instrumental factors were combined with 4,219 financial centre assessments provided by respondents to the [GGFI online questionnaire](#). A breakdown of the 617 respondents is shown in Appendix 3. Further details of the methodology behind GGFI 6 are in Appendix 4.

We researched 120 financial centres for this edition of the index. The 74 centres listed in GGFI 6 are those which received a minimum of 20 assessments from survey respondents. Assessments of respondents' home centres were excluded from the data, in order to avoid home centre bias. For comparison, GGFI 5 collected survey data on 120 financial centres, of which 67 received sufficient responses to be included.

## GGFI 6 Ranks And Ratings

**Table 1 | Ranks And Ratings Of The Depth Of Green Finance**

Centre	GGFI 6		GGFI 5		Change In		Change In	
	Rank	Rating	Rank	Rating	Rank	Rating		
Amsterdam	1	574	1	496	▶	0	▲	78
Zurich	2	571	4	483	▲	2	▲	88
Copenhagen	3	558	3	484	▶	0	▲	74
London	4	554	6	470	▲	2	▲	84
Luxembourg	5	553	2	488	▼	-3	▲	65
Stockholm	6	550	5	474	▼	-1	▲	76
San Francisco	7	549	16	442	▲	9	▲	107
Paris	8	545	7	460	▼	-1	▲	85
Geneva	9	544	10	452	▲	1	▲	92
Oslo	10	543	12	447	▲	2	▲	96
Vancouver	11	536	17	441	▲	6	▲	95
Los Angeles	12	534	28	429	▲	16	▲	105
Shanghai	13	533	21	436	▲	8	▲	97
Beijing	14	532	20	437	▲	6	▲	95
Vienna	15=	531	10	452	▼	-5	▲	79
Brussels	15=	531	13	445	▼	-2	▲	86
Montreal	15=	531	9	454	▼	-6	▲	77
Sydney	18	527	14	444	▼	-4	▲	83
Tokyo	19=	526	33	414	▲	14	▲	112
Helsinki	19=	526	New	New	New		New	
Toronto	21	518	14	444	▼	-7	▲	74
Edinburgh	22=	517	28	429	▲	6	▲	88
Washington DC	22=	517	32	415	▲	10	▲	102
Shenzhen	22=	517	23	434	▲	1	▲	83
Wellington	25=	516	New	New	New		New	
Guangzhou	25=	516	24	432	▼	-1	▲	84
Hamburg	25=	516	8	456	▼	-17	▲	60
Boston	25=	516	40	406	▲	15	▲	110
Casablanca	29	515	18	439	▼	-11	▲	76
Munich	30=	511	18	439	▼	-12	▲	72
Singapore	30=	511	27	430	▼	-3	▲	81
Seoul	30=	511	25	431	▼	-5	▲	80
Lisbon	33	508	New	New	New		New	
Osaka	34	507	New	New	New		New	
Melbourne	35	502	31	427	▼	-4	▲	75
Frankfurt	36	501	21	436	▼	-15	▲	65
Dublin	37	496	38	408	▲	1	▲	88



Table 1 (continued) | Ranks And Ratings Of The Depth Of Green Finance

Centre	GGFI 6		GGFI 5		Change In Rank		Change In Rating	
	Rank	Rating	Rank	Rating				
Chicago	38	495	47	391	▲	9	▲	104
Qingdao	39	494	New	New	▲	New	▲	New
New York	40	493	44	395	▲	4	▲	98
Hong Kong	41	489	36	409	▼	-5	▲	80
Madrid	42	486	40	406	▼	-2	▲	80
Rome	43	482	34	410	▼	-9	▲	72
Calgary	44	481	43	399	▼	-1	▲	82
Glasgow	45	480	New	New	New		New	
New Delhi	46	475	67	340	▲	21	▲	135
Prague	47	473	36	409	▼	-11	▲	64
GIFT City-Gujarat	48	472	New	New	New		New	
Mauritius	49	467	42	405	▼	-7	▲	62
Dubai	50	466	51	386	▲	1	▲	80
Mumbai	51=	465	66	349	▲	15	▲	116
Milan	51=	465	39	407	▼	-12	▲	58
Cape Town	53	464	45	393	▼	-8	▲	71
Guernsey	54=	463	48	390	▼	-6	▲	73
Kuala Lumpur	54=	463	56	377	▲	2	▲	86
Jakarta	54=	463	65	352	▲	11	▲	111
Johannesburg	57	460	59	374	▲	2	▲	86
Tel Aviv	58=	459	30	428	▼	-28	▲	31
Sao Paulo	58=	459	48	390	▼	-10	▲	69
Jersey	60	458	25	431	▼	-35	▲	27
Liechtenstein	61	457	56	377	▼	-5	▲	80
Isle of Man	62	446	46	392	▼	-16	▲	54
Warsaw	63	444	55	379	▼	-8	▲	65
Abu Dhabi	64=	442	53	381	▼	-11	▲	61
Bermuda	64=	442	63	356	▼	-1	▲	86
Malta	66=	437	34	410	▼	-32	▲	27
Cayman Islands	66=	437	48	390	▼	-18	▲	47
Moscow	68=	436	54	380	▼	-14	▲	56
Mexico City	68=	436	60	373	▼	-8	▲	63
Rio de Janeiro	70=	427	62	366	▼	-8	▲	61
Bangkok	70=	427	64	353	▼	-6	▲	74
British Virgin Islands	72	426	61	371	▼	-11	▲	55
Istanbul	73	423	58	376	▼	-15	▲	47
Doha	74	421	52	382	▼	-22	▲	39

**Table 2 | Ranks And Ratings Of Green Finance Quality**

Centre	GGFI 6		GGFI 5		Change In		Change In	
	Rank	Rating	Rank	Rating	Rank	Rating	Rank	Rating
Zurich	1	580	3	507	▲	2	▲	73
Amsterdam	2	572	2	510	▶	0	▲	62
London	3	569	1	516	▼	-2	▲	53
Oslo	4	551	13	466	▲	9	▲	85
Luxembourg	5	545	6	489	▲	1	▲	56
Paris	6	544	7	487	▲	1	▲	57
Stockholm	7	543	4	496	▼	-3	▲	47
Geneva	8	542	9	476	▲	1	▲	66
Copenhagen	9	540	5	491	▼	-4	▲	49
Munich	10=	537	11	471	▲	1	▲	66
San Francisco	10=	537	13	466	▲	3	▲	71
Helsinki	12	525	New	New		New		New
Vancouver	13	524	17	455	▲	4	▲	69
Brussels	14	523	12	467	▼	-2	▲	56
Hamburg	15	520	8	477	▼	-7	▲	43
Montreal	16	519	19	453	▲	3	▲	66
Tokyo	17	518	23	445	▲	6	▲	73
Vienna	18	516	10	472	▼	-8	▲	44
Shanghai	19=	514	34	431	▲	15	▲	83
Sydney	19=	514	15	457	▼	-4	▲	57
Singapore	21	512	21	451	▶	0	▲	61
Beijing	22=	510	25	443	▲	3	▲	67
Edinburgh	22=	510	16	456	▼	-6	▲	54
New York	24=	509	28	438	▲	4	▲	71
Los Angeles	24=	509	30	437	▲	6	▲	72
Guangzhou	26=	508	26	441	▶	0	▲	67
Frankfurt	26=	508	20	452	▼	-6	▲	56
Casablanca	26=	508	22	446	▼	-4	▲	62
Guernsey	29	503	38	420	▲	9	▲	83
Shenzhen	30=	500	35	425	▲	5	▲	75
Toronto	30=	500	17	455	▼	-13	▲	45
Washington DC	32	499	32	433	▶	0	▲	66
Seoul	33	498	43	416	▲	10	▲	82
Wellington	34	495	New	New		New		New
Jersey	35	494	31	435	▼	-4	▲	59
Lisbon	36	493	New	New		New		New
Boston	37	491	40	419	▲	3	▲	72

Table 2 (continued) | Ranks And Ratings Of Green Finance Quality

Centre	GGFI 6		GGFI 5		Change In		Change In	
	Rank	Rating	Rank	Rating	Rank	Rating	Rank	Rating
Osaka	38	490	New	New	New	New	New	New
Calgary	39	489	49	395	▲ 10	▲ 94		
Tel Aviv	40=	487	27	439	▼ -13	▲ 48		
Hong Kong	40=	487	38	420	▼ -2	▲ 67		
Chicago	40=	487	41	418	▲ 1	▲ 69		
Liechtenstein	40=	487	51	392	▲ 11	▲ 95		
Dublin	44=	486	41	418	▼ -3	▲ 68		
Glasgow	44=	486	New	New	New	New		
Qingdao	46	485	New	New	New	New		
Madrid	47=	482	24	444	▼ -23	▲ 38		
Melbourne	47=	482	28	438	▼ -19	▲ 44		
Malta	49	479	36	424	▼ -13	▲ 55		
Mumbai	50	477	58	373	▲ 8	▲ 104		
Rome	51	476	47	399	▼ -4	▲ 77		
Milan	52	472	37	421	▼ -15	▲ 51		
Mauritius	53	471	52	391	▼ -1	▲ 80		
Gujarat	54=	469	New	New	New	New		
Kuala Lumpur	54=	469	48	398	▼ -6	▲ 71		
Dubai	56	466	55	382	▼ -1	▲ 84		
Cayman Islands	57	462	50	394	▼ -7	▲ 68		
Cape Town	58=	459	45	406	▼ -13	▲ 53		
Bangkok	58=	459	62	368	▲ 4	▲ 91		
New Delhi	58=	459	67	331	▲ 9	▲ 128		
British Virgin Islands	61=	449	54	386	▼ -7	▲ 63		
Istanbul	61=	449	57	380	▼ -4	▲ 69		
Jakarta	63	447	66	346	▲ 3	▲ 101		
Prague	64	444	32	433	▼ -32	▲ 11		
Isle of Man	65=	440	44	407	▼ -21	▲ 33		
Sao Paulo	65=	440	46	400	▼ -19	▲ 40		
Mexico City	65=	440	58	373	▼ -7	▲ 67		
Johannesburg	68	438	63	367	▼ -5	▲ 71		
Doha	69	437	53	390	▼ -16	▲ 47		
Moscow	70	435	65	356	▼ -5	▲ 79		
Bermuda	71	430	64	359	▼ -7	▲ 71		
Abu Dhabi	72	425	58	373	▼ -14	▲ 52		
Warsaw	73	419	55	382	▼ -18	▲ 37		
Rio de Janeiro	74	410	61	370	▼ -13	▲ 40		

## Depth And Quality

Chart 1 shows the relationship between ratings of depth and quality in the index and shows the generally close correlation between the assessments of each factor by respondents, though it also shows that some major, long-established financial centres such as New York and London, score higher for quality than depth; while for more specialist centres such as Copenhagen, the reverse is true.

**Chart 1 | Relationship Between Ratings Of Depth And Quality**



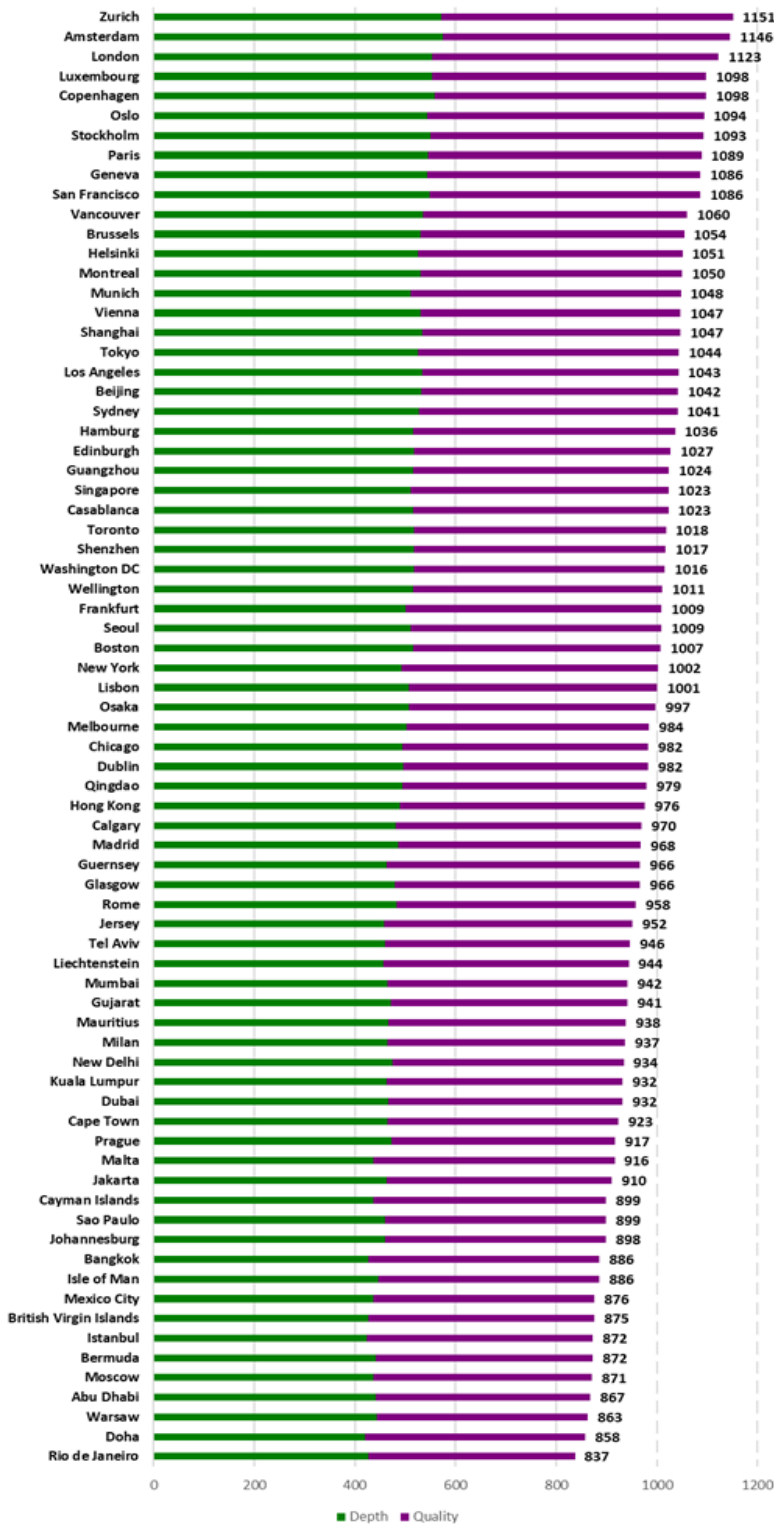
*“The Chinese market is committed to the development of green finance in the medium term through the introduction of mandatory green financing.”*

**Chairman, Professional Services Firm, Investment Banking, Shanghai**

We can also look at the overall ratings if we combine centres' scores for depth and quality. The results are shown in Chart 2.

Zurich and Amsterdam come first and second on this analysis, demonstrating consistency across depth and quality, while other leading centres may need to pay attention to the depth of their green finance offering to improve their overall ranking.

**Chart 2 | Combined Depth And Quality Ratings**



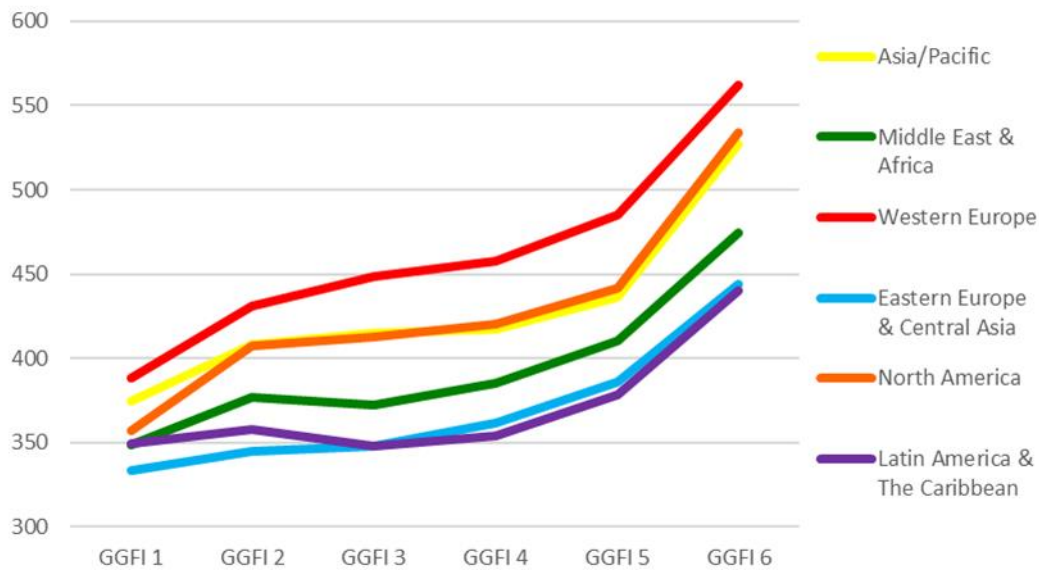
*“Environmental, Social, And Governance will be front and centre going forward both from an ethical perspective as well as mandated by regulation.”*

**Head Of Innovation,  
Derivatives Trading, London**

## Regional Performance

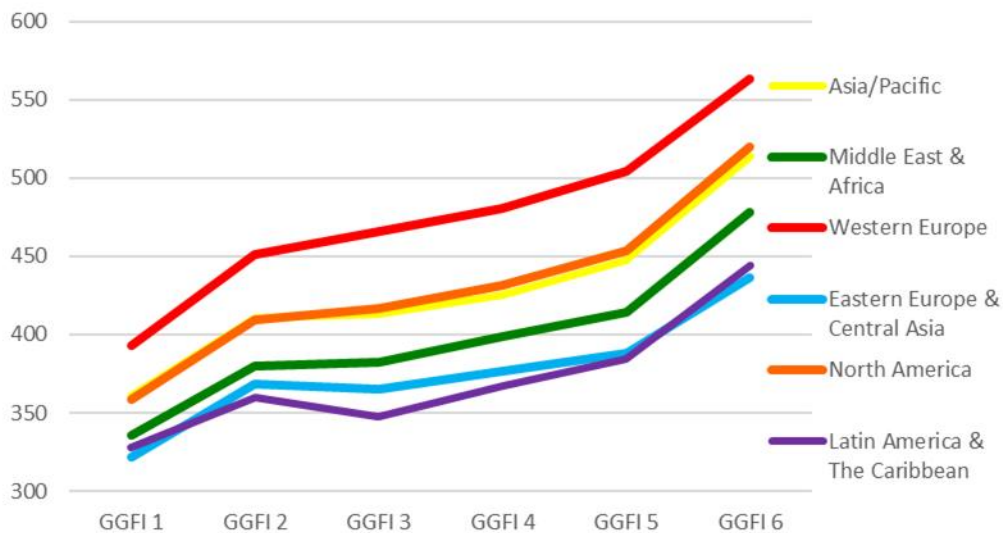
The top five centres in each region on average increased their ratings between GGFI 1 and GGFI 6 for depth. The leading North American centres, just lead Asia/Pacific centres. The average for leading centres in other regions also continues to rise.

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



A similar picture is shown for the quality measure, with improvements in all regions between GGFI 5 and GGFI 6. Latin America & The Caribbean overtook Eastern Europe & Central Asia on this measure.

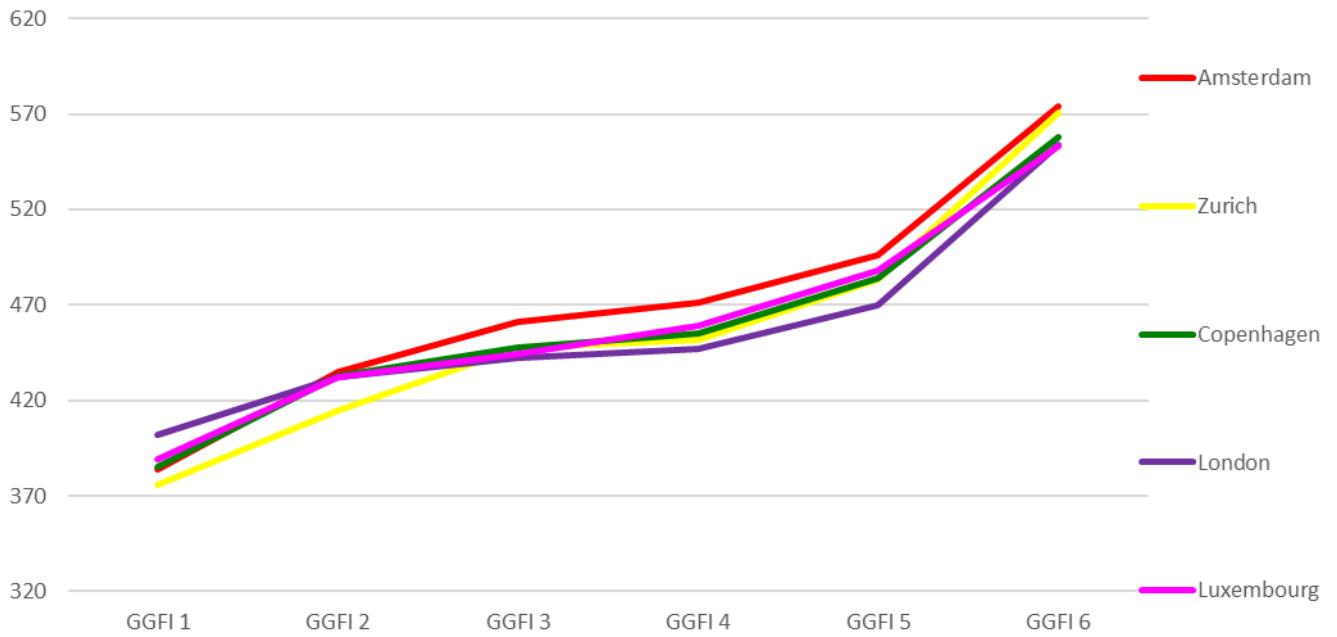
**Chart 4 | Average Ratings For Quality Of The Top Five Centres In Each Region**



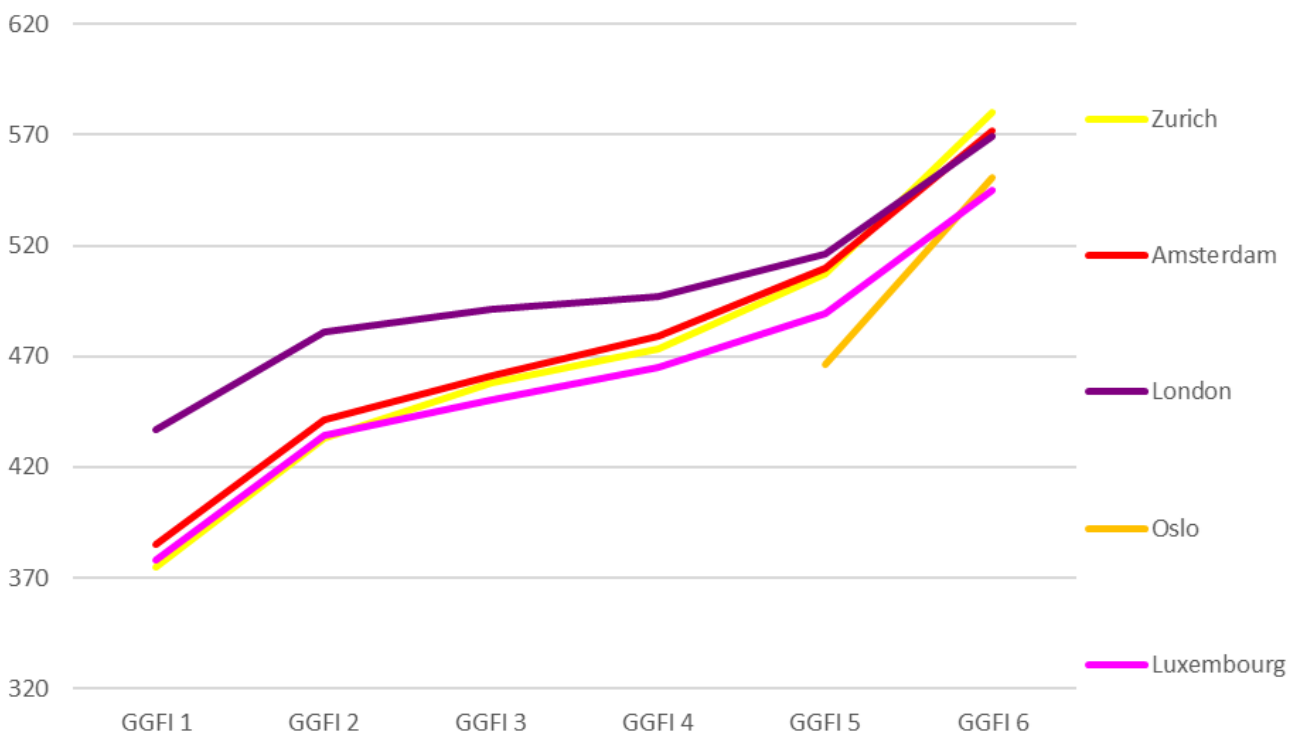
## Top Five Centres

The top five centres in the index for depth and quality improved their ratings in GGFI 6 along with other centres in the index.

**Chart 5 | The Top Five Centres For Depth Over Time**



**Chart 6 | The Top Five Centres For Quality Over Time**



## Leading Financial Centres

It is notable that some leading financial centres perform less well than expected in the 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 GGFI. The colours in Table 3 indicate the ranking in the indices. This shows a disconnect between the highest performing centres in the GFCI and performance on green finance in the GGFI. However, while only London featured in the top 10 in each index in GGFI 5, it is now joined by Zurich and San Francisco. This might indicate that more weight is being given to green finance in leading financial centres.

Historically, green finance has not been a leading factor in overall competitiveness as measured by the GFCI; and the legacy is that many of the leading centres in the GFCI are not as yet leading the way on green finance.

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

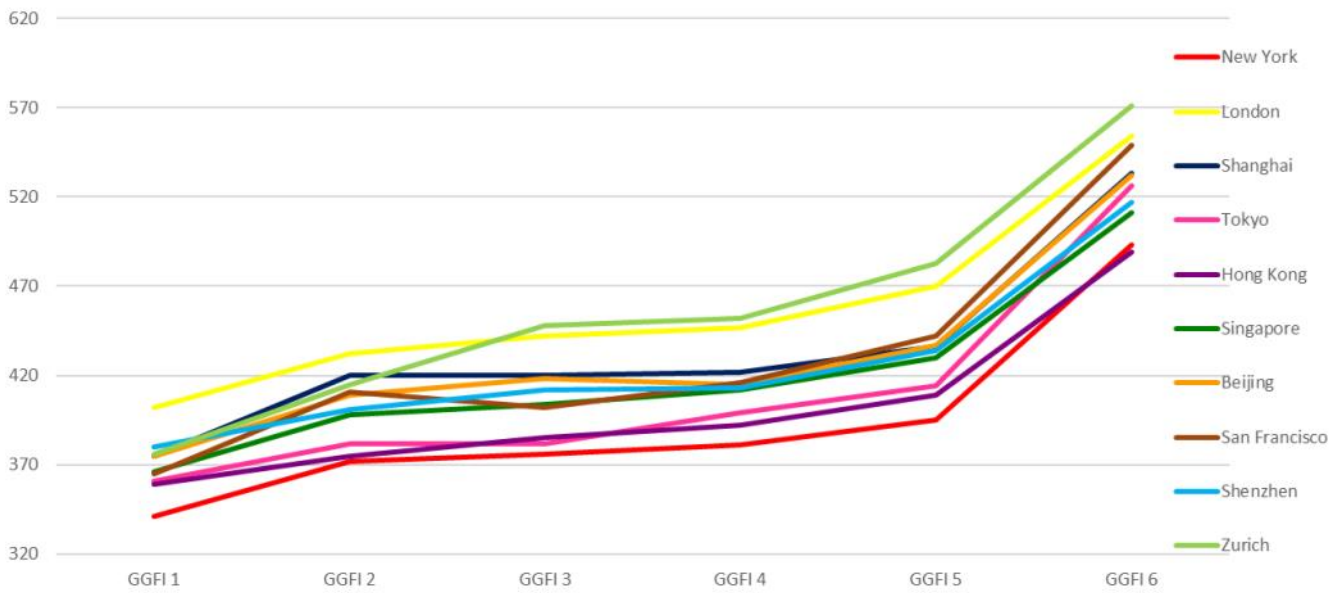
Centre	Green Finance Depth	Green Finance Quality	Financial Centre Competitiveness
New York	40	24	1
London	4	3	2
Shanghai	13	19	3
Tokyo	19	17	4
Hong Kong	41	40	5
Singapore	30	21	6
Beijing	14	22	7
San Francisco	7	10	8
Shenzhen	22	30	9
Zurich	2	1	10
Los Angeles	12	24	11
Luxembourg	5	5	12
Edinburgh	22	22	13
Geneva	9	8	14
Boston	25	37	15
Frankfurt	36	26	16
Dubai	50	56	17
Paris	8	6	18
Washington DC	22	32	19
Chicago	38	40	20
Source	GGFI 6 Depth Rank	GGFI 6 Quality Rank	GFCI 28 Rank



A further way to display the comparison between the GGFI and the GFCI is to examine the ratings for green finance depth and quality of the leading centres in the GFCI. The charts below show the leading 10 centres in the current 28<sup>th</sup> edition of the Global Financial Centres Index and their ratings in the GGFI for depth and quality.

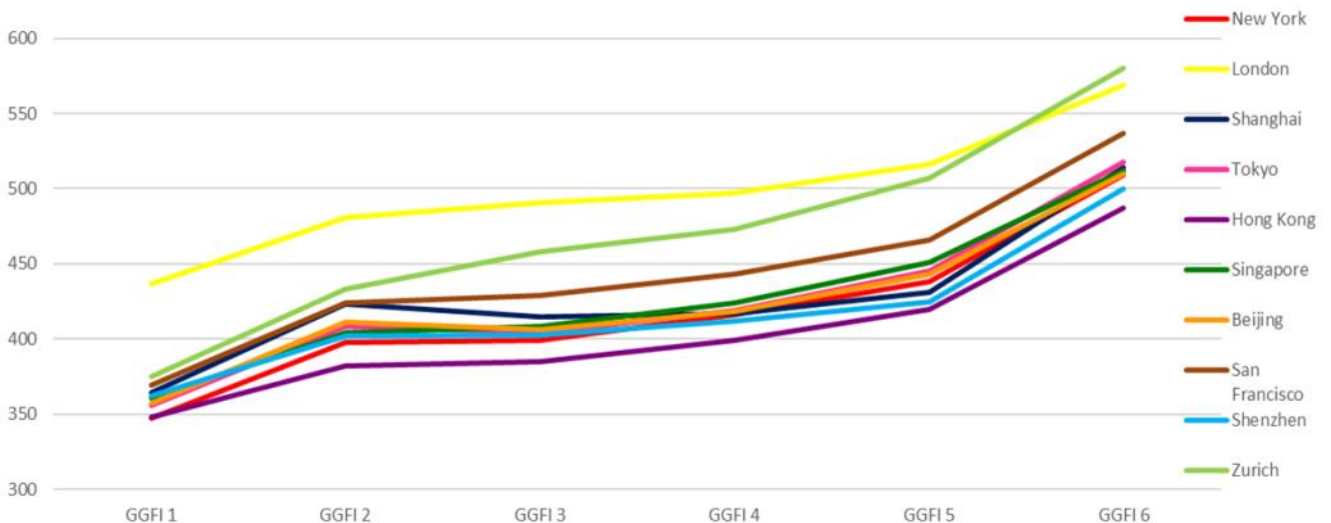
On the depth measure, Zurich leads the ratings in this group for the GGFI, with London and San Francisco closely matched, and Shanghai, Beijing, and Tokyo also in contention.

**Chart 7 | Leading Financial Centres - Ratings Of Depth In The GGFI Over Time**



Turning to quality, a similar picture emerges as on depth, with Zurich and London leading the ratings in the GGFI, with other leading centres in the Global Financial Centres Index some way behind.

**Chart 8 | Leading Financial Centres - Ratings Of Quality In The GGFI Over Time**



## GGFI 6 Further Analysis

### Future Prospects

We asked respondents to identify which financial centres they thought would become more significant as green finance centres over the next two to three years. Table 4 shows the centres that were mentioned five or more times. Of these centres, Shanghai rose in both the depth and quality rankings, Paris fell one place for depth and rose one place for quality. Singapore fell three places for depth and was static for quality. Frankfurt's ranking fell for both depth and quality. Gift City-Gujarat is a new entry to the index.

### Expected Change In Centres

As another way of measuring future movement, 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. This question produced a slightly different answer than the one above, and is perhaps more reliable due to a larger sample size. The results are displayed in Chart 9.

Fifty-three out of 74 centres in the index were expected to improve or significantly improve by over half of the respondents who rated them. Eighteen centres were rated as expected to improve by 75% or more respondents: Amsterdam, Bangkok, Beijing, Casablanca, Copenhagen, Frankfurt, Geneva, GIFT City, Guangzhou, Jakarta, London, Qingdao, San Francisco, Shanghai, Shenzhen, Singapore, Sydney, and Zurich.

The centres with the worst outlook, with more than 15 per cent of respondents who rated them judging that their green finance would decline or decline significantly, were Calgary, Mexico City, and Sao Paulo.

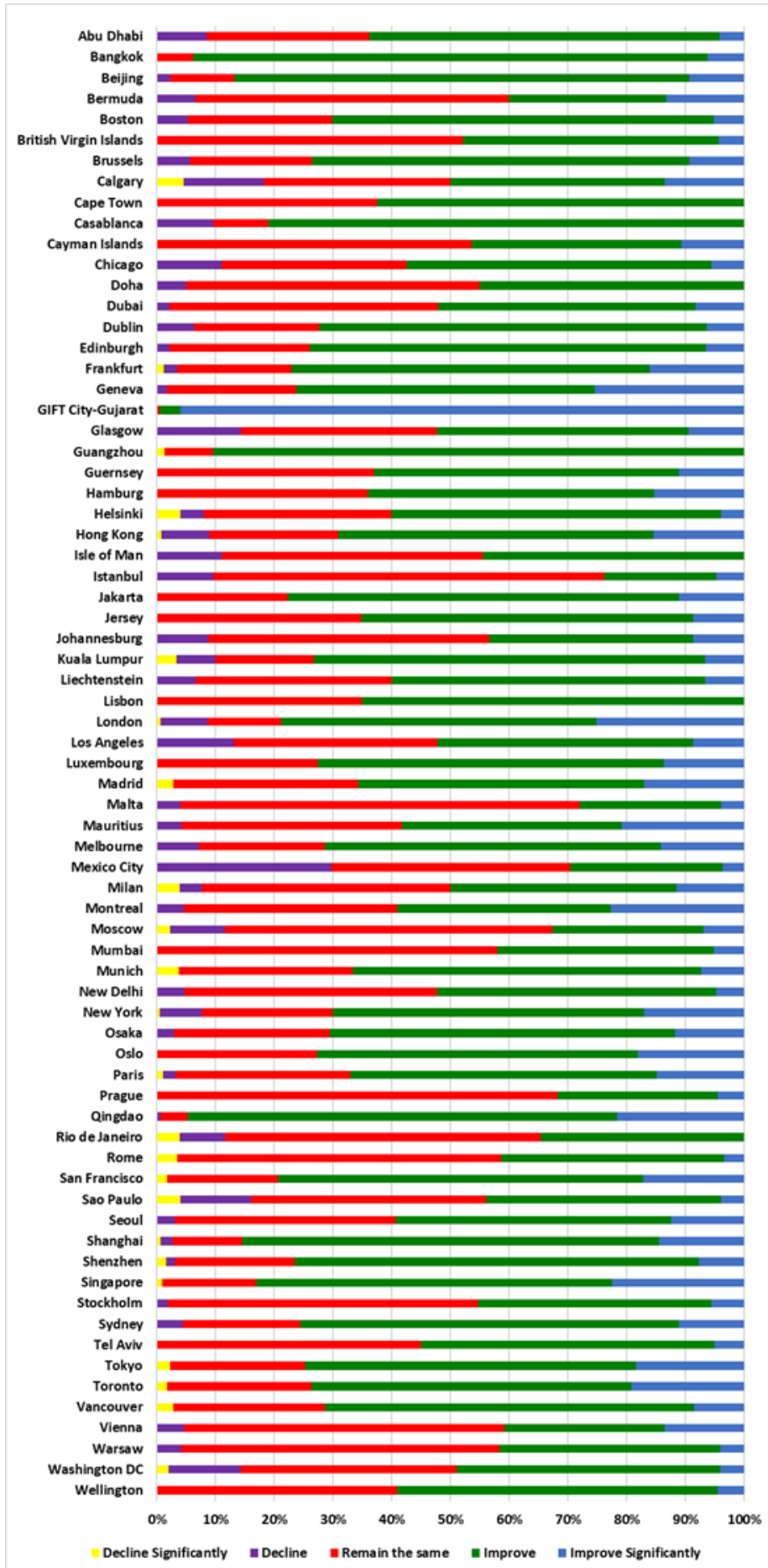
**Table 4 | Centres That Will Become More Significant**

Centre	Number of Mentions
GIFT City - Gujarat	170
Paris	6
Shanghai	6
Singapore	6
Frankfurt	5

*“Skills availability is still limited but we are training and capacity building in many institutions, especially in Africa.”*

**CEO, Financial Consultancy, Vancouver**

Chart 9 | Expected Change In Green Finance Offering



## Instrumental Factors

GGFI 6 is created using 135 instrumental factors which relate to a range of aspects of competitiveness, including sustainability measures.

Table 5 shows the top 10 instrumental factors in terms of their correlation with the ranking of depth and quality. The correlation between the GGFI and a number of well-established indices has increased over time.

Those factors with the highest correlation tend to be composite indices that reflect a city's approach to sustainability. Such metrics describe the local environment in which financial sector workers are operating, and the alignment of economic policies with the inclusive and green economic outcomes prioritised in the UN's Sustainable Development Goals.

**Table 5 | Top 10 Instrumental Factors By R Squared Correlation**

Depth	R Squared	Quality	R Squared
Water Quality	0.574	Global Innovation Index	0.566
Global Innovation Index	0.534	World Talent Rankings	0.502
World Talent Rankings	0.439	Wage Comparison Index	0.488
IESE Cities In Motion Index	0.434	Water Quality	0.474
Quality of Living City Rankings	0.428	Networked Society Index	0.468
Wage Comparison Index	0.420	IESE Cities In Motion Index	0.466
The Global Financial Centres Index	0.417	Sustainable Cities Index	0.458
Corruption Perception Index	0.411	OECD Country Risk Classification	0.440
Sustainable Cities Index	0.411	Corruption Perception Index	0.438
Legatum Prosperity Index	0.396	Legatum Prosperity Index	0.437



Focusing only on the instrumental factors which relate to sustainability, the factors most closely correlated in terms of their R Squared relationship with the GGFI rankings are set out in Table 6. Water quality ranks highly, along with a range of composite indices, which aim to measure sustainability performance across a range of social, economic and environmental factors.

**Table 6 | Top 10 Sustainability Instrumental Factors By R Squared Correlation**

Depth	R Squared	Quality	R Squared
Water Quality	0.574	Water Quality	0.474
IESE Cities In Motion Index	0.434	IESE Cities In Motion Index	0.466
Quality of Living City Rankings	0.428	Sustainable Cities Index	0.458
Sustainable Cities Index	0.411	Quality of Living City Rankings	0.425
Sustainable Economic Development	0.310	Sustainable Economic Development	0.348
Environmental Performance	0.296	Environmental Performance	0.332
Financial Centre Corporate Sustainability Performance	0.294	Global Sustainable Competitiveness Index	0.298
Global Sustainable Competitiveness Index	0.251	World Energy Trilemma Index	0.269
World Energy Trilemma Index	0.206	Financial Centre Corporate Sustainability Performance	0.257
Quality of Life Index	0.156	Stock Exchanges With A Green Bond Segment (Y/N)	0.162

The instrumental factors that have the closest correlation with the index results in terms of sustainability measures are:

- The OECD Water Quality Index: based on a regular survey of people's views on the water quality where they live and work.
- The IESE Cities In Motion Index, which assesses several socioeconomic aspects of development, including human capital, social cohesion (which includes employment, female participation in the work force, etc.), governance, sustainable development, mobility and transportation, urban planning, international outreach, and technology.
- the Arcadis Sustainable Cities Index: this index ranks 100 global cities on three dimensions of sustainability: people, planet, and profit. These represent social, environmental, and economic sustainability and offer an indicative picture of the health and wealth of cities for the present and the future.
- the Mercer Quality Of Living City Rankings: this index ranks cities taking account of a range of factors including political, economic, environmental, personal safety, health, education, transportation, and public service factors.

## Index Ranking For Sustainability

We have also conducted an analysis of the assessments provided by respondents 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, Montreal scores higher for both depth and quality. Oslo, Helsinki, and Washington DC gain five or more places for depth, while Brussels, Singapore, and Frankfurt gain five or more places for quality.

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

Rank	All Factors		Sustainability Factors	
	Depth	Quality	Depth	Quality
1	Amsterdam	Zurich	Zurich +1	Zurich
2	Zurich	Amsterdam	Amsterdam -1	Amsterdam
3	Copenhagen	London	London +1	London
4	London	Oslo	Luxembourg +1	Oslo
5	Luxembourg	Luxembourg	Oslo +5	Luxembourg
6	Stockholm	Paris	Copenhagen -3	Geneva +2
7	San Francisco	Stockholm	Paris +1	Paris -1
8	Paris	Geneva	Stockholm -2	Copenhagen +1
9	Geneva	Copenhagen	San Francisco -2	Brussels +5
10	Oslo	Munich	Helsinki +9	Stockholm -3
11	Vancouver	San Francisco	Washington DC +11	Singapore +10
12	Los Angeles	Helsinki	Brussels +3	Hamburg +3
13	Shanghai	Vancouver	Montreal +2	Montreal +3
14	Beijing	Brussels	Vancouver -3	Frankfurt +12
15=	Vienna	Hamburg	Geneva -6	Helsinki -5
15=	Brussels			
15=	Montreal			

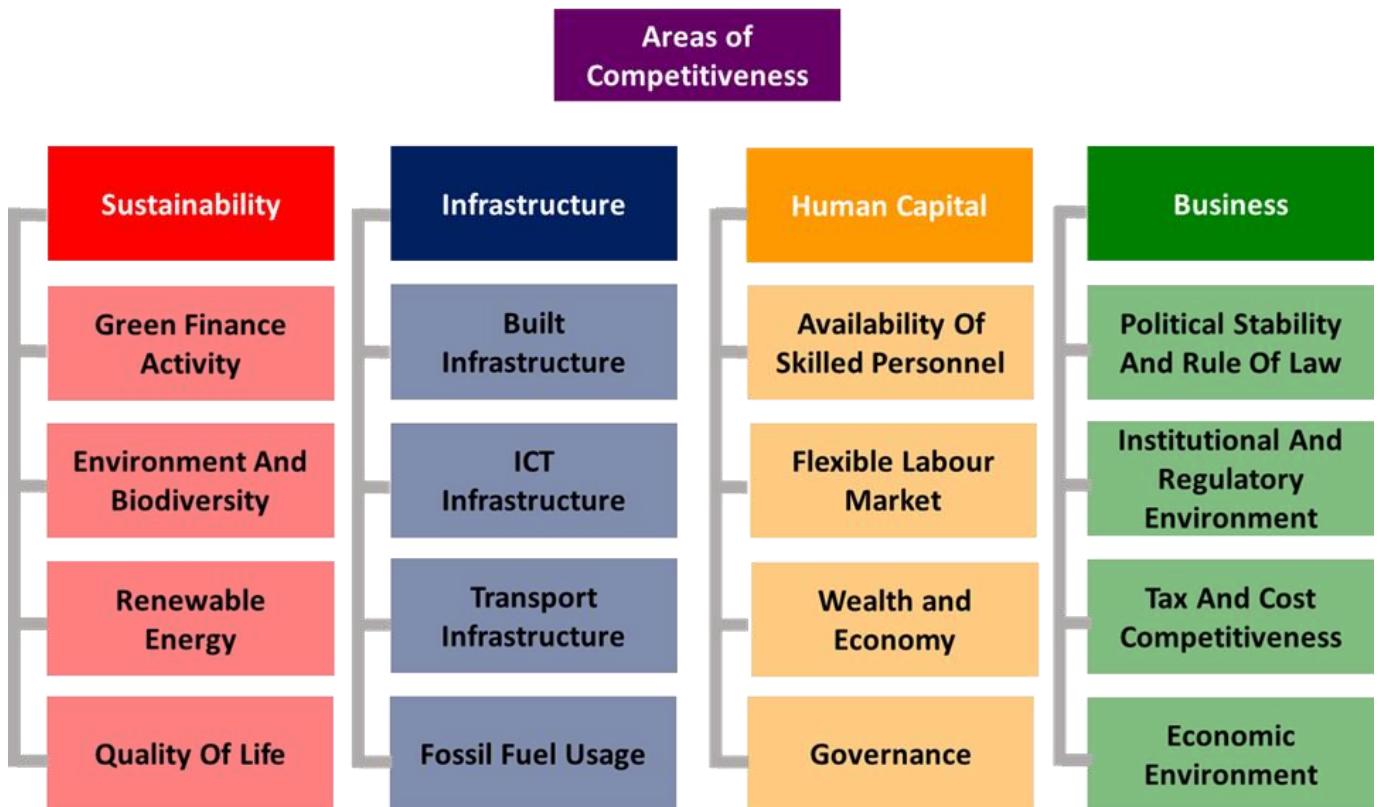
## Areas Of Competitiveness

The instrumental factors used in the 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 | GGFI Areas Of Competitiveness**



To assess how financial centres' green finance offerings perform against each of these areas, the GGFI model is run for each area separately. The top ranked 15 centres for depth and quality in each sub-index are shown in Tables 8 and 9.

Most of the leading centres have a balance of strengths, and appear in all four of the top 15 rankings. Other centres have some weaknesses, for example, San Francisco does not feature in the top 15 for its human capital score for depth. Zurich is top in each analysis for quality displacing London, which was ranked first in each area in GGFI 5.

**Table 8 | Top 15 Centres For Depth By Areas Of Competitiveness**

Rank	Sustainability	Business	Human Capital	Infrastructure
1	Zurich	Amsterdam	Stockholm	Zurich
2	Amsterdam	Stockholm	Zurich	London
3	London	Copenhagen	London	Tokyo
4	Luxembourg	Geneva	Amsterdam	Osaka
5	Oslo	Zurich	Geneva	Amsterdam
6	Copenhagen	Luxembourg	Luxembourg	Luxembourg
7	Paris	Paris	Shanghai	Paris
8	Stockholm	Oslo	Paris	San Francisco
9	San Francisco	London	Beijing	Geneva
10	Helsinki	Sydney	Copenhagen	Shanghai
11	Washington DC	Edinburgh	Sydney	Hamburg
12	Brussels	San Francisco	Shenzhen	Stockholm
13	Montreal	Shanghai	Vienna	Washington DC
14	Vancouver	Helsinki	Melbourne	Copenhagen
15	Geneva	Munich	Vancouver	Frankfurt

**Table 9 | Top 15 Centres For Quality By Areas Of Competitiveness**

Rank	Sustainability	Business	Human Capital	Infrastructure
1	Zurich	Zurich	Zurich	Zurich
2	Amsterdam	Amsterdam	London	Geneva
3	London	London	Amsterdam	London
4	Oslo	Oslo	Paris	Luxembourg
5	Luxembourg	Stockholm	Oslo	Amsterdam
6	Geneva	Geneva	Geneva	Osaka
7	Paris	Copenhagen	Stockholm	Tokyo
8	Copenhagen	Paris	Luxembourg	Vienna
9	Brussels	Luxembourg	Copenhagen	Paris
10	Stockholm	Edinburgh	Helsinki	Hamburg
11	Singapore	Tokyo	Edinburgh	Copenhagen
12	Hamburg	Helsinki	Sydney	San Francisco
13	Montreal	Sydney	Hamburg	Oslo
14	Frankfurt	Singapore	Vienna	Helsinki
15	Helsinki	Frankfurt	Glasgow	Frankfurt



## Commentary On Factors

The 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. These are summarised in Table 10.

**Table 10 | Commentary On Areas Of Competitiveness**

Area Of Competitiveness	Number Of Mentions	Main Themes
Regulatory Environment	100	<ul style="list-style-type: none"> <li>• Regulation must be strong and consistent</li> <li>• Mandatory disclosure and work on taxonomies is generally supported</li> <li>• International standards and cooperation was seen as vital</li> </ul>
Taxation	75	<ul style="list-style-type: none"> <li>• Tax breaks and penalties are both needed without driving greenwashing</li> <li>• It was important to consider all forms of pollution alongside carbon</li> <li>• Individual countries (e.g. Ireland) are adopting specific national arrangements, e.g., carbon taxes in Ireland and tax incentives in China.</li> </ul>
The Availability Of Skills In Green Finance	86	<ul style="list-style-type: none"> <li>• While green finance is seen as out of the mainstream, it will take time to build demand for relevant qualifications and skills</li> <li>• A strong presence from international firms was seen as important</li> <li>• Training and capacity building is taking place across the world, e.g., in Africa</li> </ul>
Other	37	<ul style="list-style-type: none"> <li>• Data and tools important, including the measurement of companies' environmental and social impact.</li> <li>• The investor base was increasingly important, e.g., buy-side firms taking strong leads on Green in the Netherlands</li> <li>• Political stability is crucial</li> </ul>

We also asked respondents to identify interesting initiatives in green finance. These included:

- Debt for climate swaps.
- Platforms such as Impaakt SA, relying on collective intelligence to assess the social and environmental impact of large companies. This could shift the way that companies are made accountable for their impact on the planet and society.
- The Carbon Disclosure Project
- The Bank Of England stress testing regime.
- The development of water pricing in a similar way to carbon pricing.
- The Network For Greening The Financial System.
- Opening public sector pensions to impact & ESG investing.
- Loan guarantees for green initiatives backed by government agencies.

## 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. Charts 11 and 12 use Amsterdam and Edinburgh as examples to contrast the different levels of connectivity that the two centres enjoy.

Amsterdam has connections to a wider variety of centres than Edinburgh, including a range of centres in Western Europe, North America, Middle East & Africa, and Asia/Pacific.

You can explore the connectivity data using our online tool at <https://www.longfinance.net/programmes/financial-centre-futures/global-green-finance-index/ggfi6-explore-data/ggfi-6-connectivity-chart/>.



Chart 11 | GGFI 6 Connectivity - Amsterdam

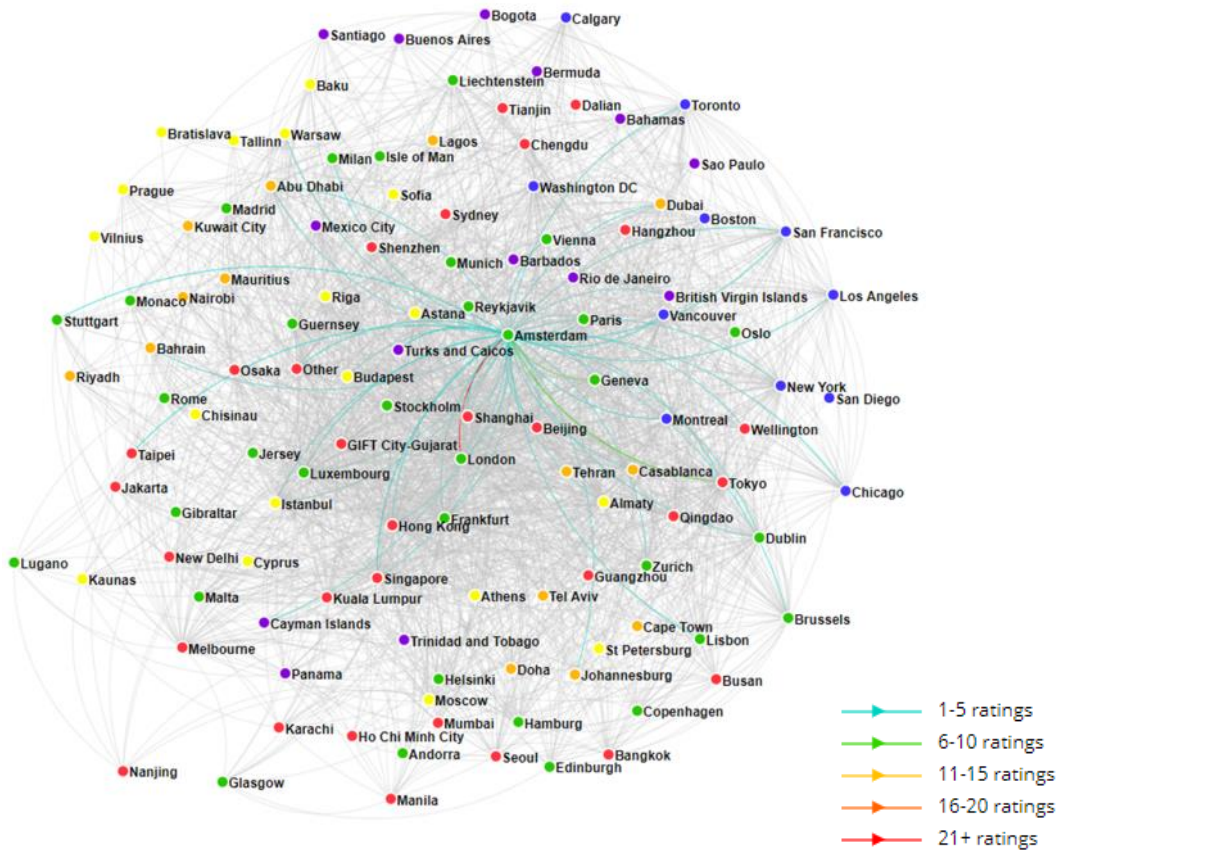
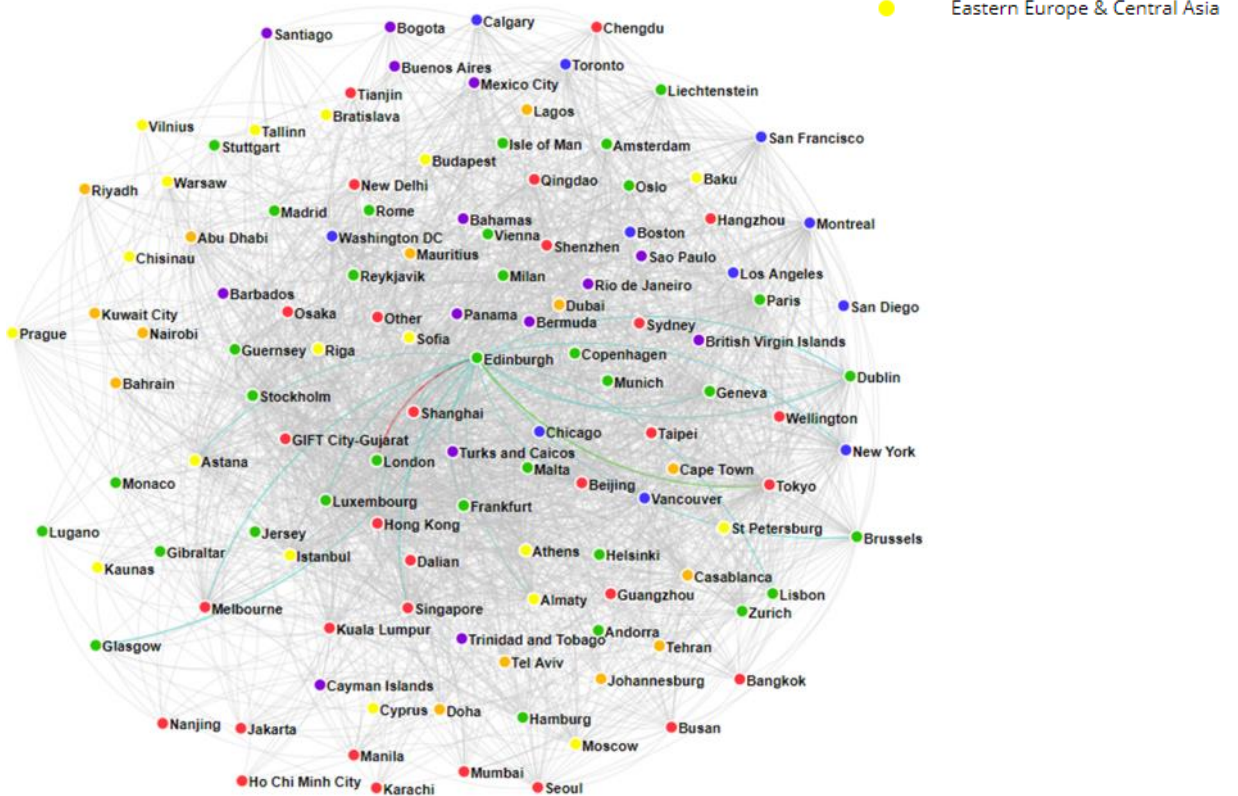


Chart 12 | GGFI 6 Connectivity - Edinburgh



Another view of connectivity is to look at the number of assessments received by centres and the number of centres that provided assessments. Table 11 shows the relationship between these factors for the centres receiving the highest number of assessments. There is no direct correlation between the number of responses and overall performance in the index. Those receiving a high number of assessments but not ranked highly in the GGFI may need to focus on improving their underlying performance.

**Table 11 | Relationship Between Number And Spread Of Assessments For The Top 15 Centres Ranked On The Number Of Assessments Received**

Centre	Number Of Assessments	Number Of Centres Providing Assessments
GIFT City-Gujarat	176	74
New York	175	43
London	152	44
Qingdao	152	31
Shanghai	152	41
Beijing	129	36
Hong Kong	123	36
Singapore	108	33
Zurich	97	34
Dubai	96	35
Paris	95	33
Frankfurt	87	27
Tokyo	87	33
Luxembourg	75	30
Amsterdam	74	25

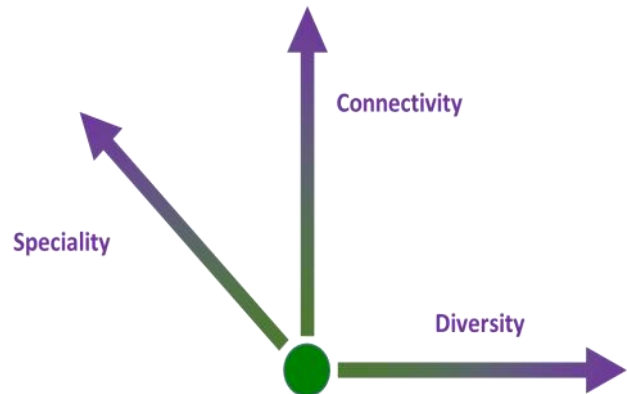
Assessments of the home centre of respondents are excluded from the data as there is the possibility of home centre bias. This bias can be positive or negative when compared with assessments from other centres, but on average home centre assessments are higher than assessments from other centres.

## Financial Centre Profiles

Z/Yen has conducted an analysis 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 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 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.



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 GGFI rating and the ratings when the model is calculated based only on sustainability factors.

In Tables 12 and 13, 'Diversity' (Breadth) and 'Speciality' (Depth) are combined on one axis to create a two dimensional table of financial centre profiles, first for depth and second for quality. The 74 centres in GGFI 6 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 tables) 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 12 | Financial Centre Profiling - Depth**

	Broad and Deep	Relatively Broad	Relatively Deep	Emerging
	Global Leaders	Global Diversified	Global Specialists	Global Contenders
<b>Global</b>	Amsterdam	Paris*	Luxembourg	Dublin*
	Zurich*	Montreal*	Geneva	GIFT City-Gujarat (New)
	London	Washington DC*	Shanghai	
	Stockholm*	Singapore*	Beijing*	
	Vancouver*	Frankfurt	Hong Kong	
	Tokyo			
	Toronto*			
	New York			
<b>International</b>	Established International	International Diversified	International Specialists	International Contenders
	San Francisco	Brussels*	Casablanca	Shenzhen*
	Los Angeles	Hamburg*	Guernsey*	Qingdao (New)
	Seoul	Boston	Liechtenstein	Dubai*
	Melbourne*	Chicago	Abu Dhabi	
	Kuala Lumpur*	Milan	Malta*	
			Moscow	
			British Virgin Islands	
			Istanbul	
<b>Local</b>	Established Players	Local Diversified	Local Specialists	Evolving Centres
	Copenhagen	Oslo	Guangzhou	Helsinki (New)
	Vienna*	Wellington (New)	New Delhi*	Osaka (New)
	Sydney*	Lisbon (New)	Prague*	Cape Town*
	Edinburgh*	Calgary*	Mauritius	Johannesburg
	Munich*	Glasgow (New)	Mumbai*	Tel Aviv*
	Madrid	Warsaw	Jakarta	Sao Paulo
	Rome		Isle of Man*	Jersey*
			Bermuda*	Mexico City
			Cayman Islands	Rio de Janeiro
			Bangkok	
			Doha	

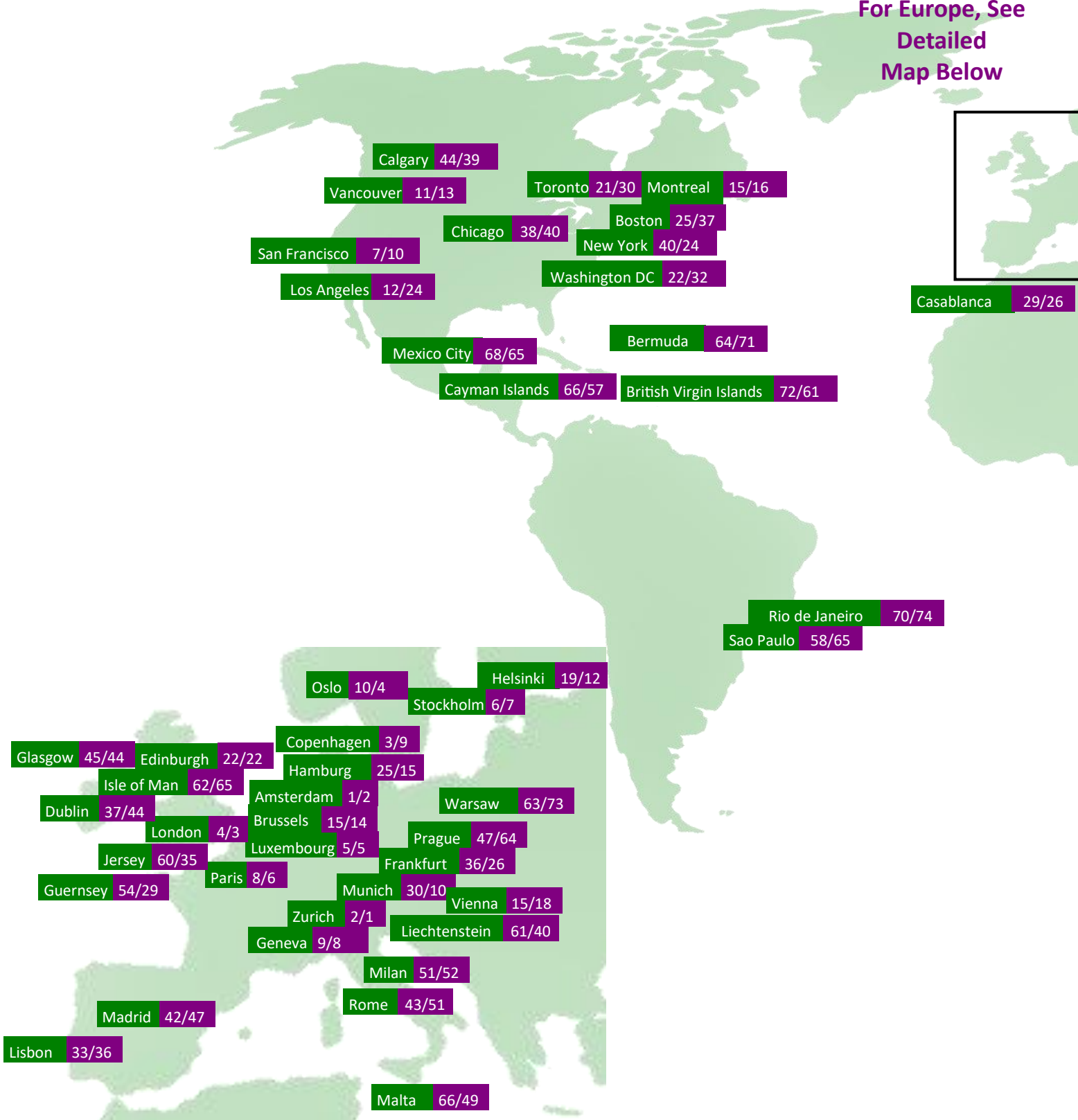
**Note: An asterisk denotes centres that have changed their classification since GGFI 5**

**Table 13 | Financial Centre Profiling - Quality**

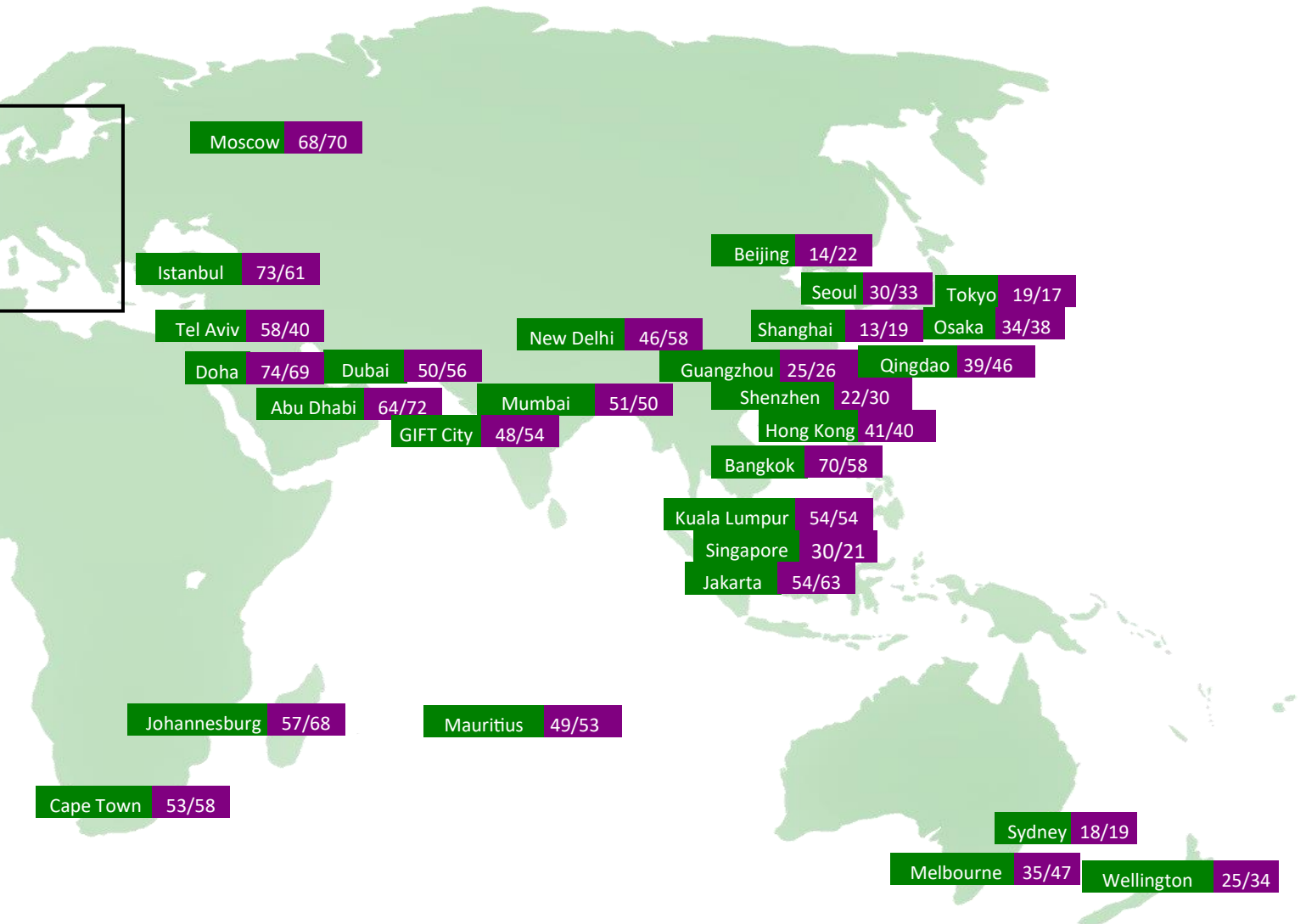
	Broad and Deep	Relatively Broad	Relatively Deep	Emerging
	Global Leaders	Global Diversified	Global Specialists	Global Contenders
<b>Global</b>	Amsterdam	Zurich*	Luxembourg	Shanghai
	London	Montreal*	Geneva	Hong Kong*
	Paris	Singapore*	Beijing*	Dublin
	Stockholm*	New York*		GIFT City-Gujarat (New)
	Vancouver*	Frankfurt		
	Tokyo			
	Toronto*			
	Washington DC*			
	Established International	International Diversified	International Specialists	International Contenders
<b>International</b>	San Francisco	Brussels*	Casablanca	
	Melbourne*	Hamburg*	Guernsey*	
	Kuala Lumpur*	Los Angeles*	Shenzhen	
		Seoul	Liechtenstein	
		Boston	Qingdao (New)	
		Chicago	Malta*	
		Milan	Dubai*	
			British Virgin Islands*	
			Istanbul*	
			Moscow	
			Abu Dhabi	
	Established Players	Local Diversified	Local Specialists	Evolving Centres
<b>Local</b>	Oslo*	Wellington (New)	Helsinki (New)	Guangzhou*
	Copenhagen	Lisbon (New)	Osaka (New)	Jersey*
	Munich	Calgary	Tel Aviv	Cape Town*
	Vienna	Glasgow (New)	Mumbai*	Prague*
	Sydney*	Warsaw	Mauritius*	Sao Paulo
	Edinburgh*		Cayman Islands	Mexico City
	Madrid		Bangkok	Johannesburg
	Rome*		New Delhi*	Rio de Janeiro
			Jakarta*	
			Isle of Man*	
			Doha	
			Bermuda*	
	<b>Note: An asterisk denotes centres that have changed their classification since GGFI 5</b>			

## The GGFI 6 World - Centres In The Index

For Europe, See Detailed Map Below







The numbers beside each centre indicate the rankings first for depth and second for quality in GGFI 6.

An interactive map showing the data for each centre is at <https://www.longfinance.net/programmes/financial-centre-futures/global-green-finance-index/ggfi6-explore-data/ggfi6-map/>

# COVID-19 & THE SUSTAINABLE DEVELOPMENT GOALS: AN OPPORTUNITY FOR LEADERSHIP

## Introduction

In 2015, the United Nations adopted a set of 17 Sustainable Development Goals (SDGs), designed to assist progress towards sustainable development. The SDGs were born at the 2012 Rio Sustainable Development Conference and aimed to replace the Millennium Development Goals (MDGs), which started a global effort in 2000 to tackle the indignity of poverty.

By creating a set of universally agreed objectives, such as tackling extreme poverty and hunger, preventing deadly diseases, and expanding primary education to all children, the MDGs proved enormously successful in promoting and coordinating international policy action. The result was:

- More than 1 billion people lifted out of extreme poverty (since 1990).
- A halving of the child mortality rate (since 1990).
- A fifty per cent increase in the proportion of children in school (since 1990).
- A forty per cent reduction in HIV/AIDS (since 2000).<sup>1</sup>

The SDGs aimed to emulate this success by broadening their scope to incorporate environmental and economic objectives. At the core of the goals is a recognition that these factors are interlinked. Ending poverty goes hand in hand with addressing education. Health, equality, job opportunities, and economic growth cannot be delivered without tackling climate change and working to preserve the natural environment. The UN's goal is to deliver the SDGs by 2030.

Figure 1 | The Sustainable Development Goals



1 UN 2020 [UN Sustainable Development Goals: Background To The Goals](https://www.undp.org/content/undp/en/home/sustainable-development-goals/background.html) <https://www.undp.org/content/undp/en/home/sustainable-development-goals/background.html>

At the fifth anniversary of the SDGs, policymakers around the world are taking stock of progress towards the goals, identifying both areas of concern, and new opportunities for growth and development.

### Tracking Progress

The 17 Sustainable Development Goals are defined by a list of 169 SDG Targets. Progress towards these Targets is tracked by 232 unique indicators and reported annually by the Inter-agency and Expert Group on SDG Indicators IAEG-SDGs.<sup>2</sup>

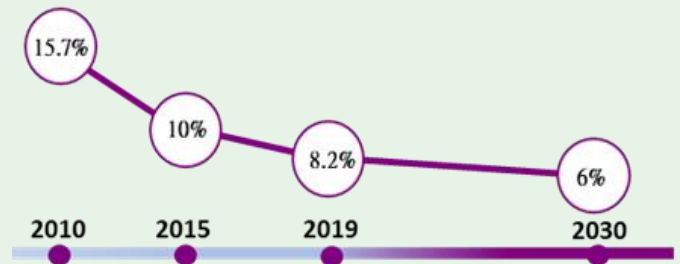
The 2020 report by the IAEG-SDG does not make for optimistic reading. Prior to the covid-19 pandemic only limited progress had been made against the goals:

#### Income Inequality Has Fallen In Some Countries



The GINI Index Fell In 38 Out Of 84 Countries

#### The World Will Miss The Target Of Ending Poverty



Extreme Poverty Is Rising

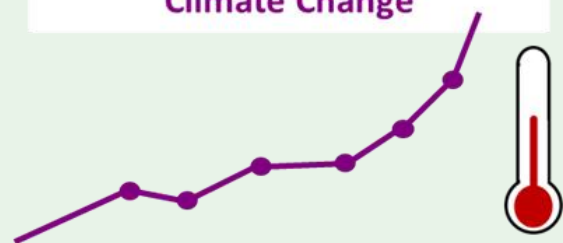
In other areas, the picture was far bleaker.

#### Food Insecurity Is On The Rise



% Population Affected By Food Insecurity

#### International Failure To Tackle Climate Change



The World Is On Course For 3°C of Warming

<sup>2</sup> <https://unstats.un.org/sdgs/iaeg-sdgs/>

The covid-19 pandemic has had a catastrophic impact on the delivery of the SDGs. Progress has halted or even been reversed across the board. The world may be facing its worst economic recession since the great depression<sup>3</sup>, with more than 34.3 million people expected to fall below the extreme poverty line in 2020, with 56% of this increase occurring in African countries. An additional 130 million people may join their ranks by 2030.<sup>4</sup>

### An Opportunity To Make A Difference – Are Financial Services Up To The Task?

Sustainable development, or sustainability, can be defined as “*development which meets the needs of the present without jeopardising the ability of future generations to meet their own needs*”.<sup>5</sup>

Sustainability has been a rallying call for the United Nations since 1992, but the redistribution of capital which has occurred since the 2008 financial crisis has raised fundamental questions about capitalism’s ability to deliver the goods society needs to support it.

Financial exclusion, poverty, inequality, and the rising tide of environmental problems have all contributed to this existential crisis. Even before the pandemic, confidence in the ability of capitalism to deliver a better tomorrow had plummeted.<sup>6</sup>

For the last two years, the World Economic Forum event in Davos has focussed on turning this tide of disillusionment through ‘Globalisation 4.0’.<sup>7</sup> Globalisation refers to the breaking down of trade barriers, driven by technology, and the movement of ideas, people, and goods.

The focus of Globalisation 4.0 is aligned with the SDGs, as it aims to look beyond stockholder capitalism to stakeholder capitalism and places inclusion at its heart. Stakeholder capitalism is the concept that corporations should be oriented to serve the interests of all their stakeholders, not just shareholders but customers, suppliers, employees, and local communities. Under this philosophy, a company's purpose is to create long-term value and not to maximize profits and enhance shareholder value at the cost of other stakeholder groups.

This esoteric concept, once the purview of Marxist economists, has found fertile ground as issues that were once considered secondary for CEOs and boards have become important determinants of firms’ capacity to create and sustain economic value. Climate change, water management, child labour and the treatment of suppliers are increasingly recognized as bottom-line issues in a world where technology, regulation, and other features of the operating environment can change quickly.

As the world starts its slow climb to recovery following the covid-19 pandemic, policy makers have been presented with a fork in the road – to rebuild economies to the model which was beginning to fail or to attempt to rebuild sustainably. Within this framework, the financial services sector provides a key tool to deliver a sustainable path to covid-19 recovery - Green Finance.

3 <https://www.bloomberg.com/news/articles/2020-04-09/imf-sees-world-economy-in-worst-recession-since-great-depression>

4 World Economic [Situation](https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2020_MYU_Report.pdf) and Prospects (WESP) mid-2020 report [https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2020\\_MYU\\_Report.pdf](https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2020_MYU_Report.pdf)

5 UNEP 1987 *Our Common Future* <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>

6 <https://news.gallup.com/poll/240725/democrats-positive-socialism-capitalism.aspx>

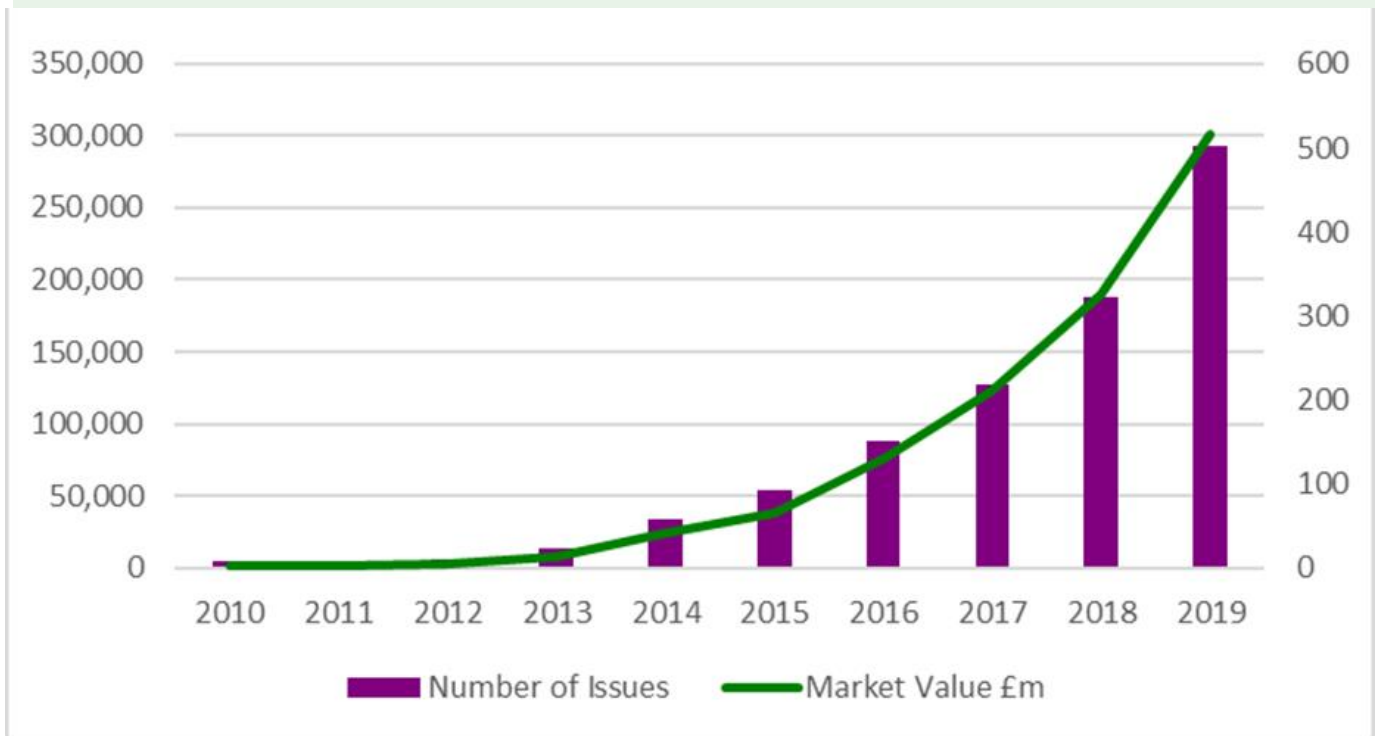
7 WEF 2018 *Globalization 4 – What Does It Mean?* <https://www.weforum.org/agenda/2018/11/globalization-4-what-does-it-mean-how-it-will-benefit-everyone/>

## Green Finance

Green Finance refers to any financial instrument or financial services activity – including insurance, equity, bonds, commodity and derivatives trading, analytical or risk management tools – which results in positive change for the environment and society over the long term (sustainability). The most basic “greenness” criterion of a company or project is that it contributes to reduce Green House Gases emissions.<sup>8</sup>

Pre-covid-19, green finance was enjoying steady growth. Environmental, social and governance (ESG) analytics were becoming a mainstream investment tool, and green bond issuance reached an all-time high (see figure 2).

**Figure 2 | Growth In Green Bonds 2010 to 2019**



However, although green bond issuance (fixed-income instruments specifically earmarked to raise money for climate and environmental projects) has slowed dramatically since the onset of covid-19<sup>10</sup>, there is evidence that there has been a rapid acceleration in the issuance of sustainability and social bonds, as the private markets are tapped to help with the response and recovery. The Institute of International Finance has reported recent monthly volumes of more than \$7 billion in social bond issuances, compared to a monthly average of \$1.2 billion in 2018/19.<sup>11</sup>

<sup>8</sup> <https://www.longfinance.net/programmes/financial-centre-futures/global-green-finance-index/about-ggfi/>

<sup>9</sup> <https://www.invesco.co.uk/uk/news-and-insights/evolution-of-the-green-bond-market>

<sup>10</sup> <https://www.environmental-finance.com/content/news/covid-19-slams-the-brakes-on-green-bond-issuance.html>

<sup>11</sup> S&P Global 2020 ESG in the Time of COVID-19 <https://www.spglobal.com/en/research-insights/featured/esg-in-the-time-of-covid-19>

Philips and Pfizer have issued sustainability bonds greater than \$1 billion that will target at least some of the proceeds to covid-19 responses<sup>12</sup>, while a number of governments have issued specific covid-19 bonds to tap private markets to help meet the social challenges posed by the pandemic.<sup>13</sup>

It is obvious that financial services have a critical role to play both in covid-19 recovery activity and the delivery of the SDGs, as financial services firms direct the flow of finance into more, or less, sustainable activities, which may enable or constrain future development paths for nations.

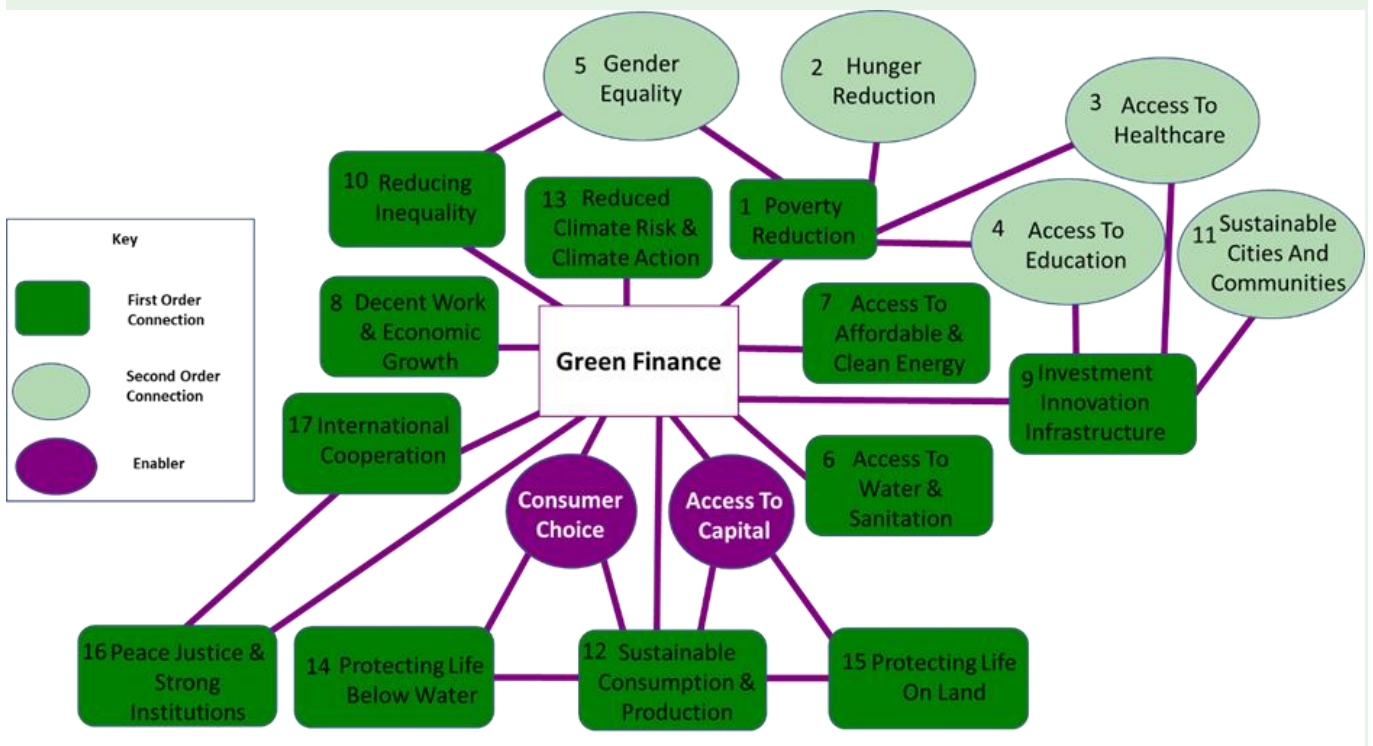
In February 2016, the United Nations Environment Programme published a report on the design of a sustainable financial system which “serves the long term needs of a healthy real economy, an economy that provides decent, productive and rewarding livelihoods for all, and ensures that the natural environment on which we all depend remains intact and so able to support the needs of this and future generations”.<sup>14</sup>

The report identified four criteria that identify whether a financial system is contributing to sustainable development:

- Reflection of pricing signals and risk.
- The encouragement of development and growth.
- The encouragement of long-term investment.
- Resilience to shocks.

Green finance provides a critical pathway to the delivery of the SDGs (see figure 7).

Figure 3 | The Key To The SDGs



12 Oliphant M 2020 COVID-19 & Green Finance: What Next? <https://www.environmental-finance.com/content/market-insight/covid-19-and-green-finance-what-next.html>

13 Kenway N 2020 Covid-19 fuels social bond issuance: Will they overtake green bonds in 2020? <https://esgclarity.com/covid-19-fuels-social-bond-issuance-will-they-overtake-green-bonds-in-2020/>

14 UNEP 2016 - *Imagining a Sustainable Financial System*

Even pre-covid-19, there was a growing realisation amongst investors that Environmental, Social, and Governance (ESG) issues were highly likely to affect the long-term performance of funds.<sup>15</sup> However, the advent of the pandemic and the impact it has had on global markets threw this advantage into sharp relief, as ESG funds comprehensively outperformed their rivals.<sup>16</sup> The indications are that from its position as a niche product, ESG investing is now fast growing in every world region and assets indicated as following ESG principles may soon represent 44% of Global Assets Under Management (GAUM).<sup>17</sup> Even so, unsustainable, or brown investment, still makes up the bulk of the financial services sector’s offering, and this represents a significant threat to the delivery of the SDGs. Figure 4, illustrates the threats and opportunities to SDGs associated with financial services.

**Figure 4 | Financial Services Threats And Opportunities Related To The Sustainable Development Goals**



The United Nations Principles for Responsible Investment (UNPRI) programme’s 2017 publication. *The SDG Investment Case*<sup>18</sup>, illustrates how the SDGs can provide useful lodestones for analysts seeking to navigate ESG issues.

In June 2020, the UNPRI went further by providing investors with a framework to enable them to build the SDGs into their investment strategies.<sup>19</sup>

15 Morningstar 2020 *Do Sustainable Funds Beat Their Rivals?* <https://www.morningstar.co.uk/uk/news/203214/do-sustainable-funds-beat-their-rivals.aspx>

16 Tett G 2020 *Why ESG Investing Makes Fund Managers More Money* <https://www.ft.com/content/1cfb5e02-7ce1-4020-9c7c-624a3dd6ead9>

17 JP Morgan 2020 *Why COVID-19 Could Prove To Be A Major Turning Point For ESG Investing* <https://www.jpmorgan.com/global/research/covid-19-esg-investing>

18 UNPRI 2017 *The SDG Investment Case* <https://www.unpri.org/sdgs/the-sdg-investment-case/303.article>

19 UNPRI 2020 *Investing With SDG Outcomes: A Five-Part framework* <https://www.unpri.org/sdgs/investing-with-sdg-outcomes-a-five-part-framework/5895.article>

The framework lays out five interlinked areas that will assist institutional investors seeking to incorporate the SDGs into their investment strategies:

1. **Identifying outcomes** – the identification and assessment of the impacts of their investments.
2. **Setting policies and targets** – the move from passive assessment to intentional steps to shape outcomes.
3. **Taking action** – investors seeking to enact the policies and targets they have set, and report on progress to their stakeholders
4. **Changing systems** – managing the participation of multiple players embedded in financial systems, such as credit rating agencies, index providers, proxy advisors, banks, and insurers whose collective action is greater than the sum of the parts.
5. **Global collaboration** – recognising that collective action at the international level is required to deliver the SDGs.

### Global Warming Has Not Gone Away

Any route map to the delivery of the SDGs must include a shift from a carbon-based economy. As the world went into lockdown at the start of the pandemic, carbon emissions plummeted by more than 8%.<sup>20</sup> However, indications are that, as economies recover, emissions will continue to rise, putting the world on course to three degrees of warming before the end of the century.<sup>21</sup>

There are indications that the existential risks posed by climate change are being taken on board by the financial services sector. The fossil fuel sector has suffered significant loss in value (though still short of the wholesale evisceration outlined in the Disinvestment Supplement of GGFI 3<sup>22</sup>) and the disinvestment juggernaut continues to gather pace.<sup>23</sup> However, the most powerful tool available to the financial services sector in tackling climate change remains disclosure.

In June 2017, the Task Force on Climate-related Financial Disclosures, which was established by the Financial Stability Board (FSB), published its recommendations on climate-related financial risk disclosures. The recommendations, which encompassed both transition impacts and physical impacts, provided a reporting framework for climate risks and opportunities that can be integrated with current financial reporting disclosures.

To date, mandatory climate related financial risk disclosures is patchy (see tables A and B), and guidance variable, and although many large organisations are incorporating disclosure in their company reports as a matter of course the TCFD's latest status report states that "*not enough companies are disclosing decision-useful climate-related financial information*".<sup>24</sup>

20 Tollefson J 2020 *How the coronavirus pandemic slashed carbon emissions — in five graphs* <https://www.nature.com/articles/d41586-020-01497-0#:~:text=The%20international%20response%20to%20the,the%20annual%20emissions%20of%20Italy>

21 UN 2019 *UN emissions report: World on course for more than 3 degree spike, even if climate commitments are met* <https://news.un.org/en/story/2019/11/1052171>

22 Mills S & Ford G 2018 *Focus On Disinvestment: Value And Values In A Warming World* <https://www.longfinance.net/programmes/sustainable-futures/london-accord/reports/value-and-values-warming-world/>

23 Nauman B 2019 *Sharp rise in number of investors dumping fossil fuel stocks* <https://www.ft.com/content/4dec2ce0-d0fc-11e9-99a4-b5ded7a7fe3f>

24 <https://www.fsb-tcfid.org/wp-content/uploads/2019/06/2019-TCFD-Status-Report-FINAL-053119.pdf>



**Table A | Mandatory National And Regional Disclosure Frameworks**

Country/Region	Policy Framework	Target	Type of Information
Australia	National Greenhouse and Energy Reporting Act (2007)	Financial and non-financial firms that meet emissions or energy production or consumption thresholds	Emissions, energy consumption, and energy production.
European Union	EU Directive 2014/95	Financial and non-financial firms that meet size criteria (i.e., have more than 500 employees)	Diversity, Land use, water use, GHG emissions, use of materials and energy use
France	Article 173, Energy Transition Law (2015)	Listed financial and non-financial firms and institutional investors	Risks related to climate change, on the company's activities.
United Kingdom	Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013	Financial and non-financial firms that are "Quoted Companies," as defined by the Companies Act 2006	The main trends and factors likely to affect future performance, (including the impact of the company's business on the environment), and GHG emissions
United States	SEC Guidance Regarding Disclosure Related to Climate Change	Financial and non-financial firms subject to Securities and Exchange Commission (SEC) reporting requirements	Climate-related material risks and factors that can affect or have affected the company's financial condition, such as regulations, treaties and agreements, business trends, and physical impacts

**Table B | Mandatory National And Regional Disclosure Frameworks**

Country/Region	Policy Framework	Target	Type of Information
Australia Securities Exchange	Listing Requirement 4.10.3; Corporate Governance Principles and Recommendations (2014)	Listed financial and non-financial firms	General disclosure of material environmental risks
Singapore Exchange	Listing Rules 711A & 711B and Sustainability Reporting Guide (2016)	Listed financial and non-financial firms	Material environmental, social, and governance factors, performance, targets, and related information specified in the Guide
Johannesburg Stock Exchange	Listing Requirement Paragraph 8.63; King Code of Governance Principles (2009)	Listed financial and non-financial firms	General disclosure regarding sustainability performance

Source: Recommendations of the Task Force on Climate-related Financial Disclosures

As the concept of carbon risk continues to penetrate the lexicon of financial services professionals, there is a widely held belief that it is only a matter of time before this type of reporting becomes mandatory in most jurisdictions,<sup>25</sup> and standards are developed with regard to content and utility. The question is who will leap first, and will they reap a leadership bonus?

25 Edie 2020 Will 2020 be the year of mandatory climate disclosure? <https://www.edie.net/registration/regwall.asp?mid=129337&origin=https%3A%2F%2Fwww%2Eedie%2Eenet%2Fnews%2F7%2FWill%2D2020%2Dbe%2Dthe%2Dyear%2Dof%2Dmandatory%2Dclimate%2Ddisclosure%2D%2F&title=Will+2020+be+the+year+of+mandatory+climate+disclosure%3F>

### The Role Of International Financial Centres

The world has more than 100 international financial centres (IFCs) – and many more centres serving local and national economies. IFCs can be defined as locations with an intense concentration of a wide variety of financial businesses and transactions.<sup>26</sup>

Financial centres are key to sustainable economic growth, as they provide the framework for investment and savings that drives infrastructure investment and entrepreneurial endeavour. Their prime purpose is to meet growing global funding needs, and these are expected to be particularly high for the next 10 to 20 years.

In a world confronted with complex issues such as including technological disruption, climate change, ageing populations, and social issues, IFCs are well placed to take a leading role in helping society meet these challenges, but there are three areas where progress needs to be made to enable this:

- **Regulation** – a supportive regulatory environment, which mandates consideration of social and environmental issues in reporting and decision making, and provides a strong platform for responsible finance.
- **Innovation** – a framework that supports experimentation and innovation in new products and services which deliver inclusive outcomes.
- **Leadership and Collaboration** – dialogue between financial centres, between regulators and innovators, and between financial service providers assists in the developments of standards and benchmarks which improve the delivery of sustainable financial services.

Figure 9 | Aspects Affecting Financial Centre Delivery Of the SDGs



26 Long Finance 2020 **Global Financial Centres Index** <https://www.longfinance.net/programmes/financial-centre-futures/global-financial-centres-index/>

Financial centres hold a unique position. They are neutral platforms for the facilitation of frictionless trade. Unencumbered by political baggage, they have the capacity to be thought leaders as their views are given weight by policymakers, and the dialogues they initiate can direct the attention of financial service providers.

IFCs are ideally placed to create a new agenda for change, the delivery of Globalisation 4.0 and the SDGs. To meet this potential:

- Financial centres must work together to frame the questions for policy makers, regulators, and financial service providers on how to embed inclusion in financial systems.
- IFCs must lead the international and domestic policy discussions which will shift the Overton Window.<sup>27</sup> The Overton window is the range of policies politically acceptable to the mainstream population at a given time. It is also known as the window of discourse and is named after Joseph P. Overton, who stated that an idea's political viability depends mainly on whether it falls within this range, rather than on politicians' individual preferences.<sup>28</sup> Shifting the Overton Window to make green finance and international cooperation the *de facto* choice, will allow policy and regulatory progress on the SDGs to be made; and
- IFCs must work together to establish benchmarks and standards which will allow the legislative and policy barriers, applying friction to international trade, to be torn down.

Products and services delivered through financial centres do not only have a positive effect on the nation hosting the centre but have regional and global ramifications.

Financial centres are starting to show leadership, as demonstrated by initiatives such as Sustainable Stock Exchanges (SSE) and Financial Centres for Sustainability and there is some evidence that participation in this type of collaborative programme translate into enhanced GGFI scores. However, if international financial centres are to realise their true potential in the delivery of the SDGs, they must adopt the mantle of leadership which will set the world on the path to a sustainable post-covid recovery.

27 Lustig P & Ringland G 2019 *Shifting The Overton Window* <https://www.longfinance.net/news/pamphleteers/shifting-overton-window/>

28 Mackinac Centre 2020 A Brief Explanation Of The Overton Window <https://www.mackinac.org/OvertonWindow>

## Regional Analysis

In our analysis of the 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.

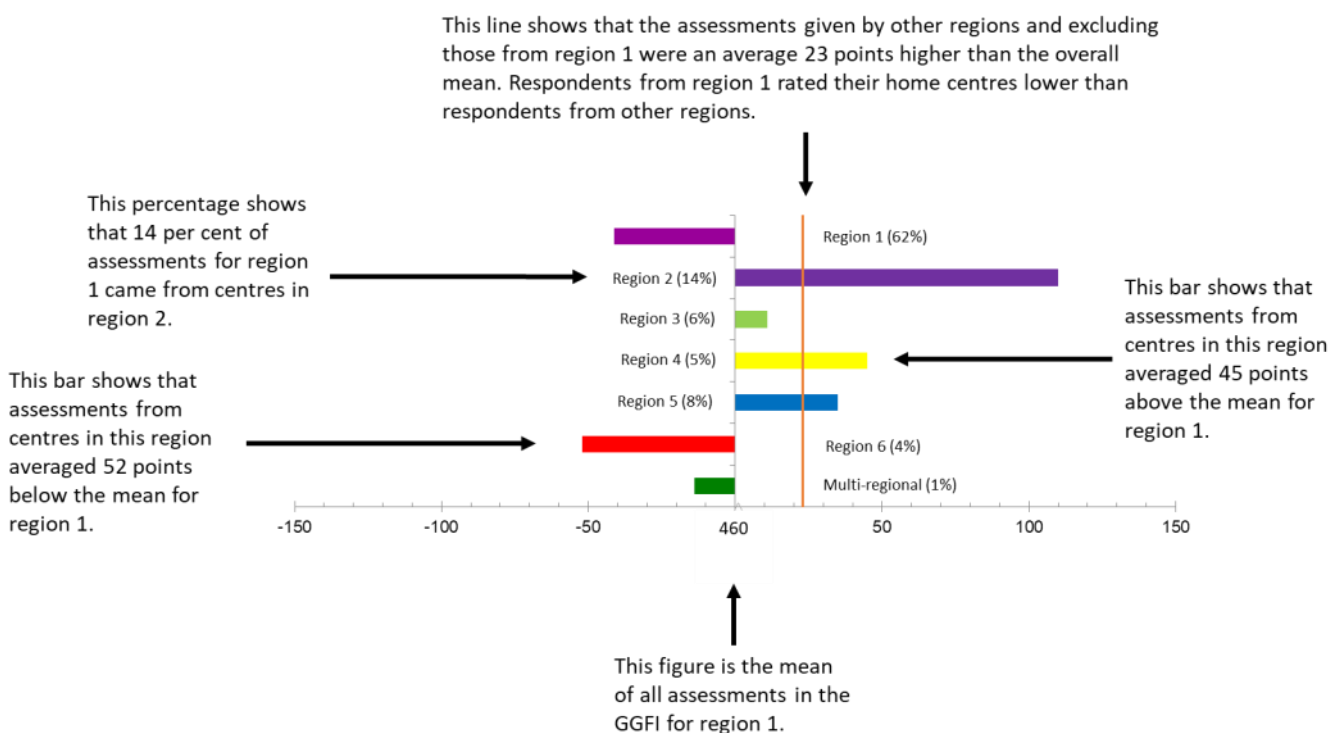
We display this analysis in charts, either for a region or an individual centre. These charts show:

- 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 13 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 red) 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 13 | Example: Assessments Compared With The Mean For A Region



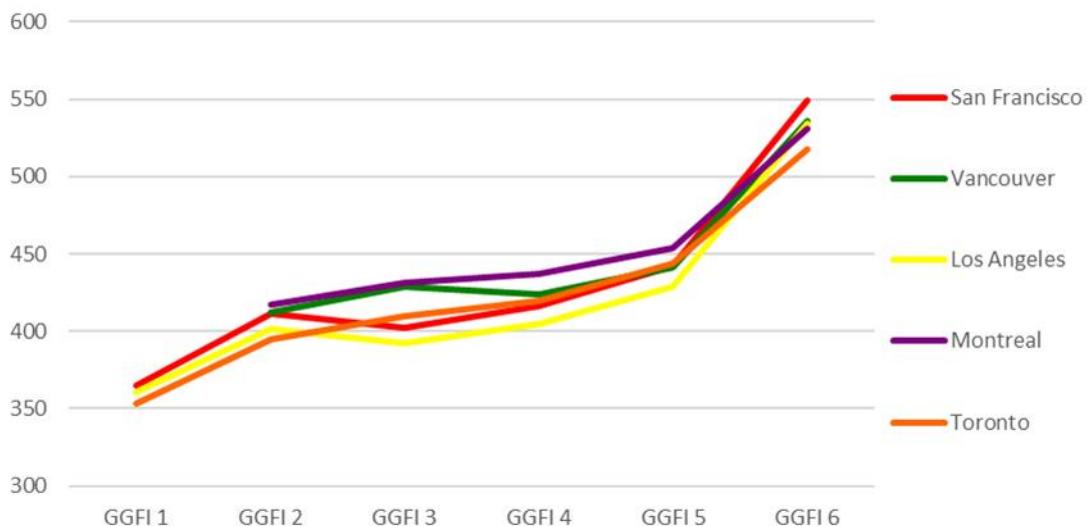
## North America

- 10 North American financial centres feature in GGFI 6.
- San Francisco moved into the leading position in the region for both depth and quality, with Vancouver taking second place.
- USA centres performed well in this edition of the index, with all centres improving or maintaining their rank in both depth and quality, while most Canadian centres fell in the depth ranking, but improved in the quality ranking.
- Respondents to the GGFI survey from Asia/Pacific scored North American centres higher than average. Respondents from other regions scored them below average.

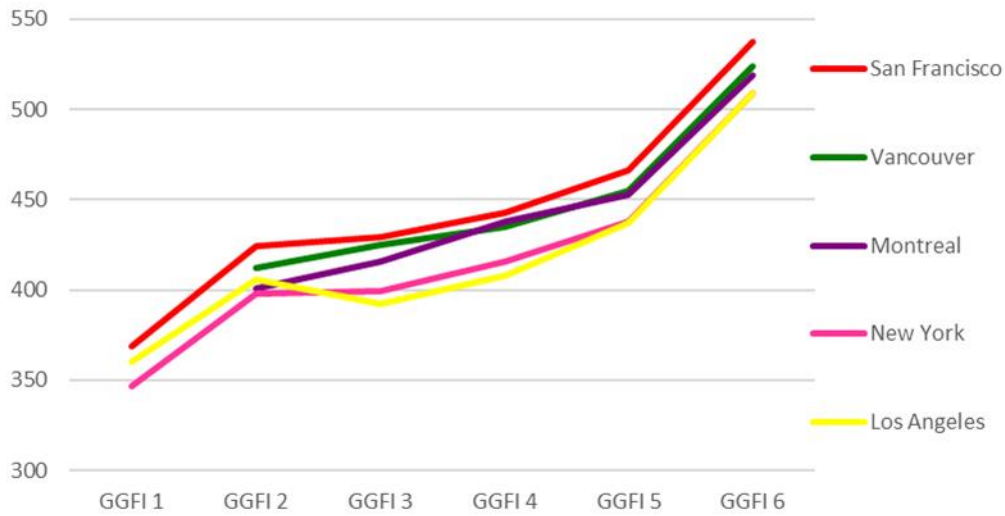
**Table 14 | North American Centres In GGFI 6**

Centre	Depth GGFI 6		Centre	Quality GGFI 6	
	Rank	Rating		Rank	Rating
San Francisco	7	549	San Francisco	10=	537
Vancouver	11	536	Vancouver	13	524
Los Angeles	12	534	Montreal	16	519
Montreal	15	531	New York	24=	509
Toronto	21	518	Los Angeles	24=	509
Washington DC	22=	517	Toronto	30=	500
Boston	25=	516	Washington DC	32	499
Chicago	38	495	Boston	37	491
New York	40	493	Calgary	39	489
Calgary	44	481	Chicago	40=	487

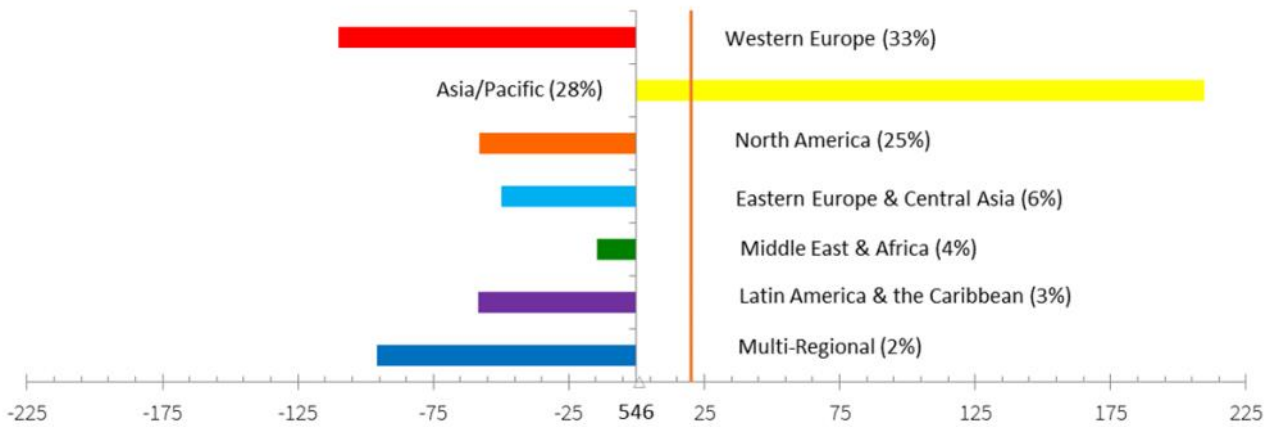
**Chart 14 | Top Five North American Centres Ratings Over Time - Depth**



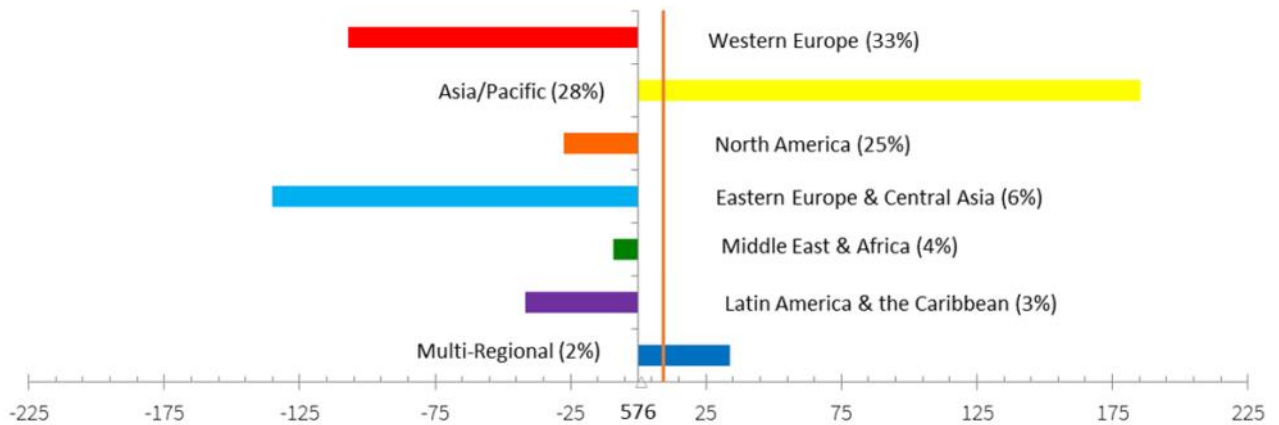
**Chart 15 | Top Five North American Centres Ratings Over Time - Quality**



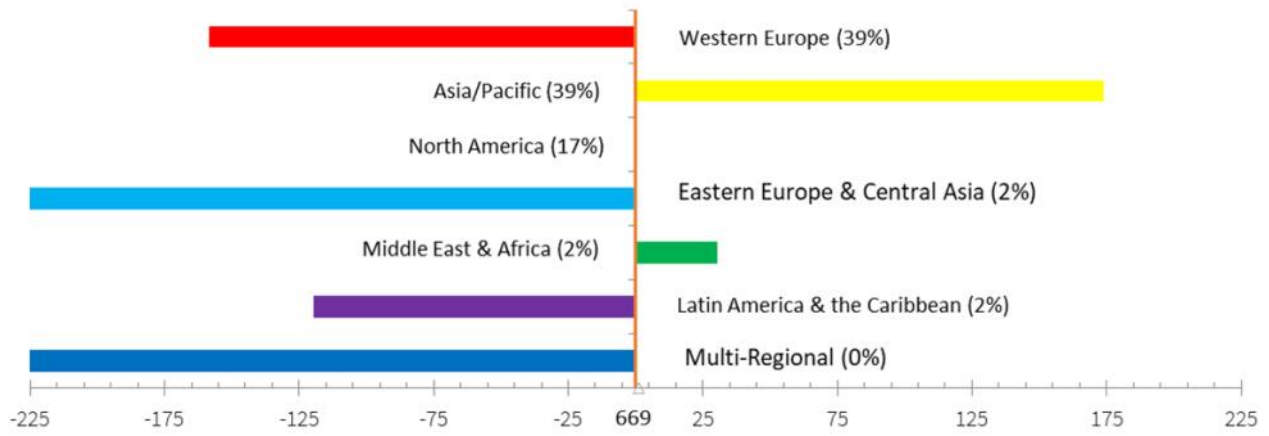
**Chart 16 | North American Regional Assessments For Depth – Difference From The Mean**



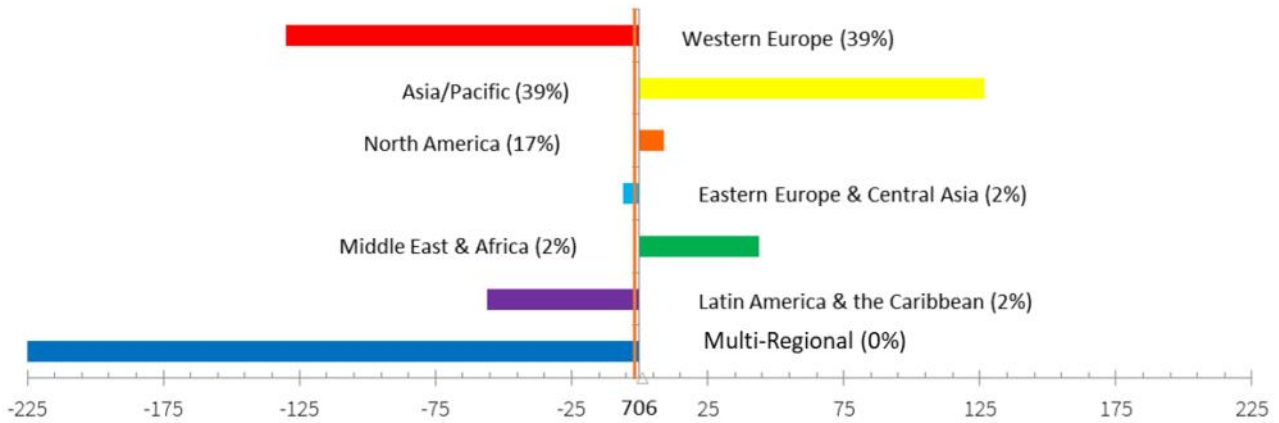
**Chart 17 | North American Regional Assessments For Quality – Difference From The Mean**



**Chart 18 | Regional Assessments For Depth For San Francisco – Difference From The Mean**



**Chart 19 | Regional Assessments For Quality For San Francisco – Difference From The Mean**



*“Clusters are the only way to encourage the establishment of a Green Finance sector. The entire eco-system needs to be in place including higher level educational institutions.”*

**Partner, Management Consultancy, Vancouver**

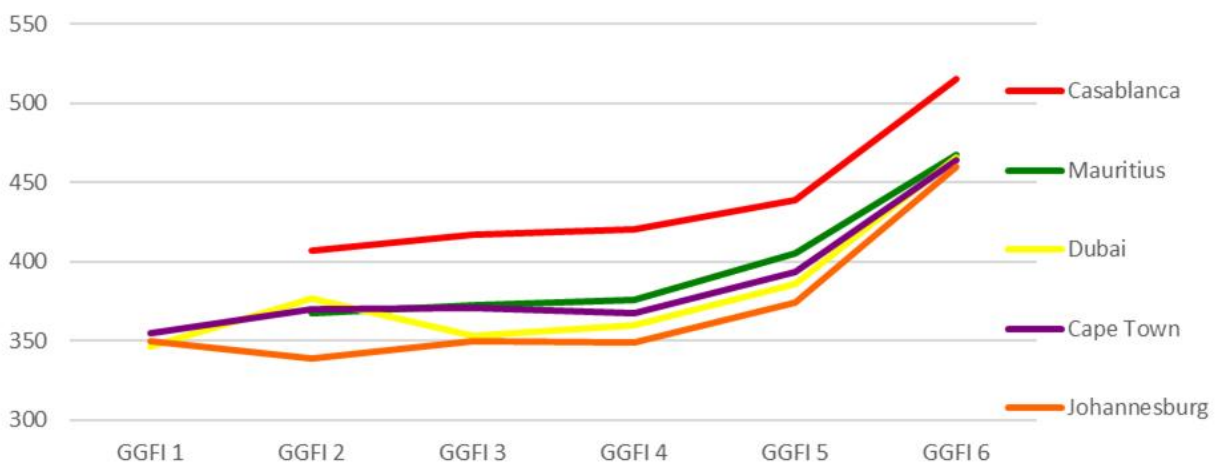
## Middle East & Africa

- Eight financial centres from the Middle East & Africa feature in GGFI 6.
- Aside from Casablanca, which leads the region for both depth and quality, centres in this region are ranked 40th or lower in both measures.
- Mauritius overtook Tel Aviv in the depth ranking to place second in the region.
- Those from western Europe rated centres in this region substantially lower than average, with respondents from most other regions rating them higher, particularly those from Asia/Pacific.

**Table 15 | Middle Eastern & African Centres In GGFI 6**

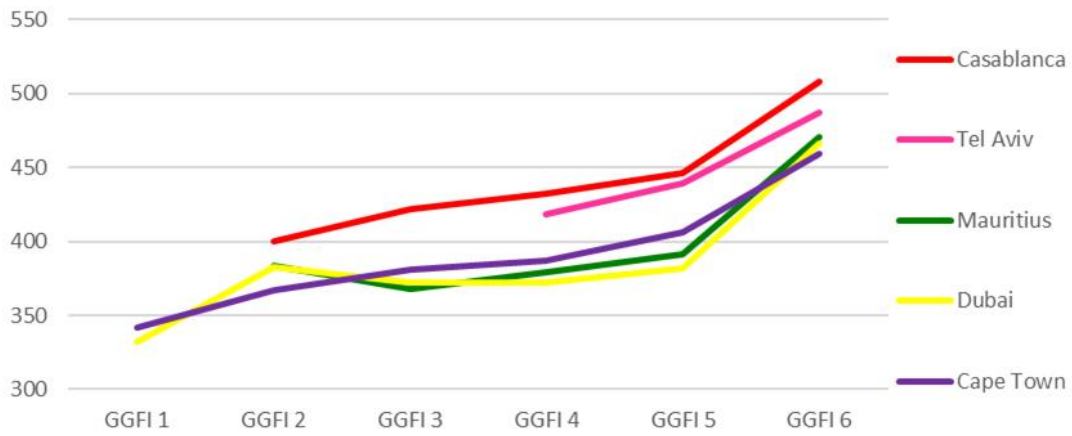
Centre	Depth GGFI 6		Centre	Quality GGFI 6	
	Rank	Rating		Rank	Rating
Casablanca	29	515	Casablanca	26=	508
Mauritius	49	467	Tel Aviv	40=	487
Dubai	50	466	Mauritius	53	471
Cape Town	53	464	Dubai	56	466
Johannesburg	57	460	Cape Town	58=	459
Tel Aviv	58=	459	Johannesburg	68	438
Abu Dhabi	64=	442	Doha	69	437
Doha	74	421	Abu Dhabi	72	425

**Chart 20 | Top Five Middle East & African Centres Ratings Over Time - Depth**

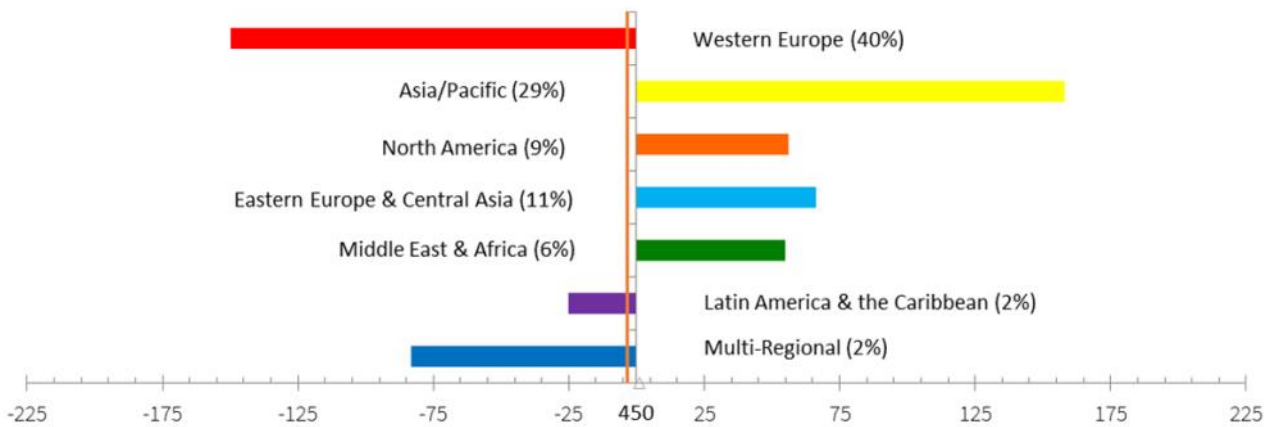




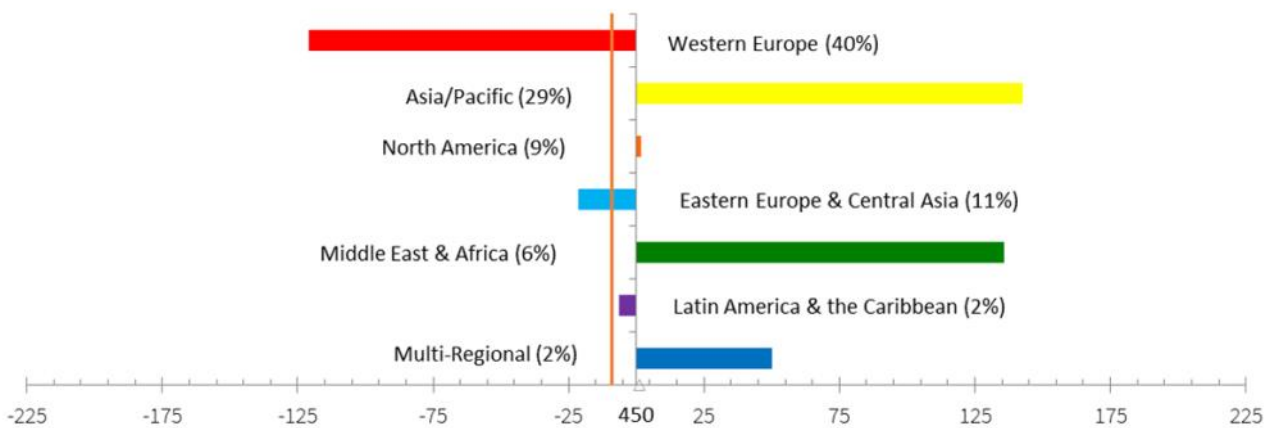
**Chart 21 | Top Five Middle East & African Centres Ratings Over Time - Quality**



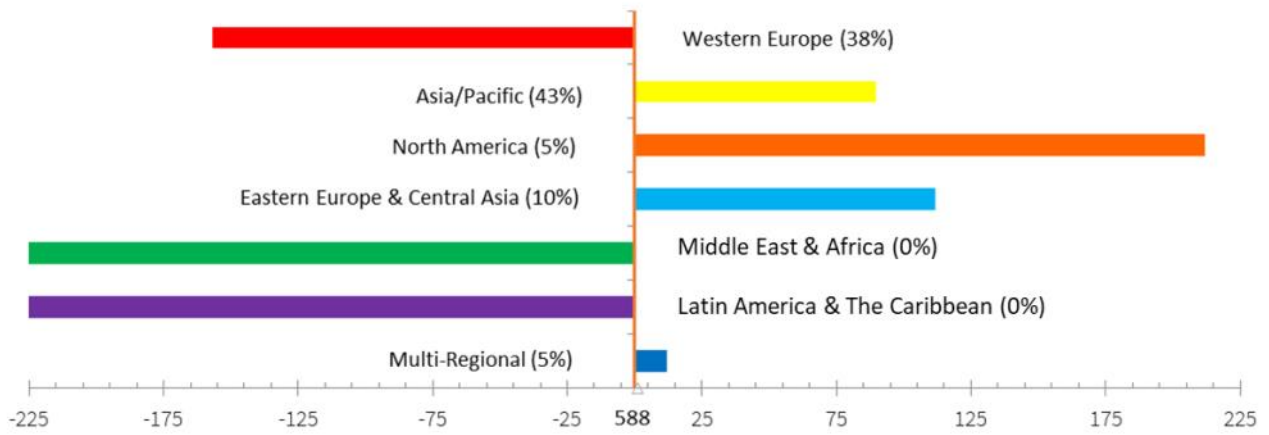
**Chart 22 | Middle East & Africa Regional Assessments For Depth – Difference From The Mean**



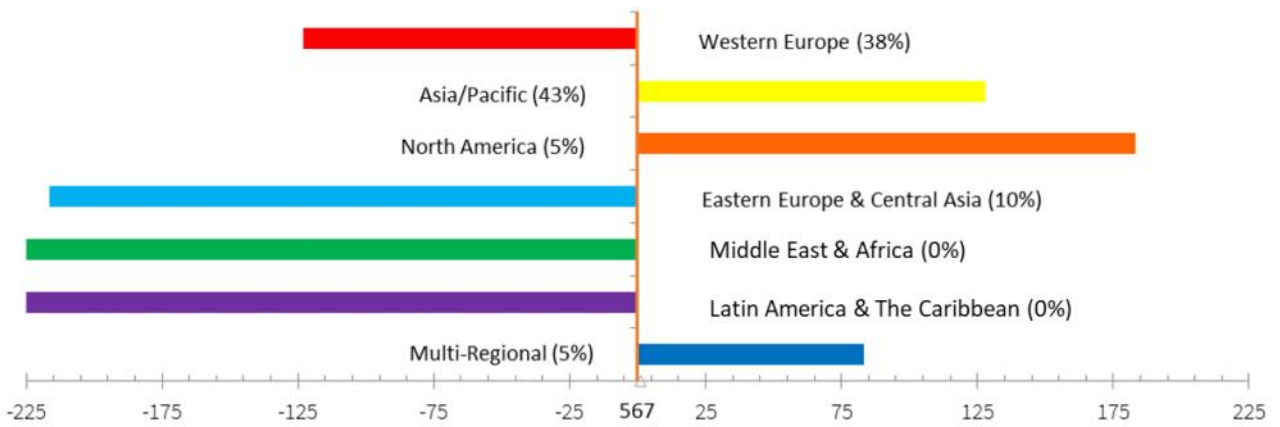
**Chart 23 | Middle East & Africa Regional Assessments For Quality – Difference From The Mean**



**Chart 24 | Regional Assessments For Depth For Casablanca – Difference From The Mean**



**Chart 25 | Regional Assessments For Quality For Casablanca – Difference From The Mean**



*“A supportive regulatory environment is absolutely key to driving green finance.”*

**Sustainable Finance Lead, Banking, London**

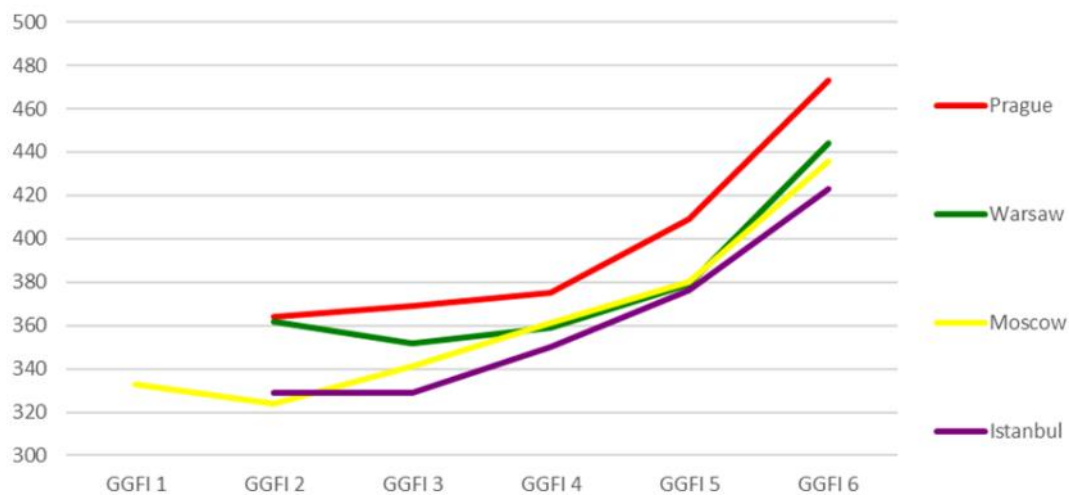
## Eastern Europe & Central Asia

- There are four Eastern European & Central Asian financial centres featured in the GGFI.
- These centres are all in the bottom half of the rankings and all four centres fell in the rankings for both depth and quality in GGFI 6.
- Prague remains top of the depth ranking in the region, while Istanbul has overtaken Prague to take first place in quality.
- Respondents from Middle East & Africa and Asia/Pacific rate these centres higher than average while those from all other regions rate them lower than average, including respondents from the home region.

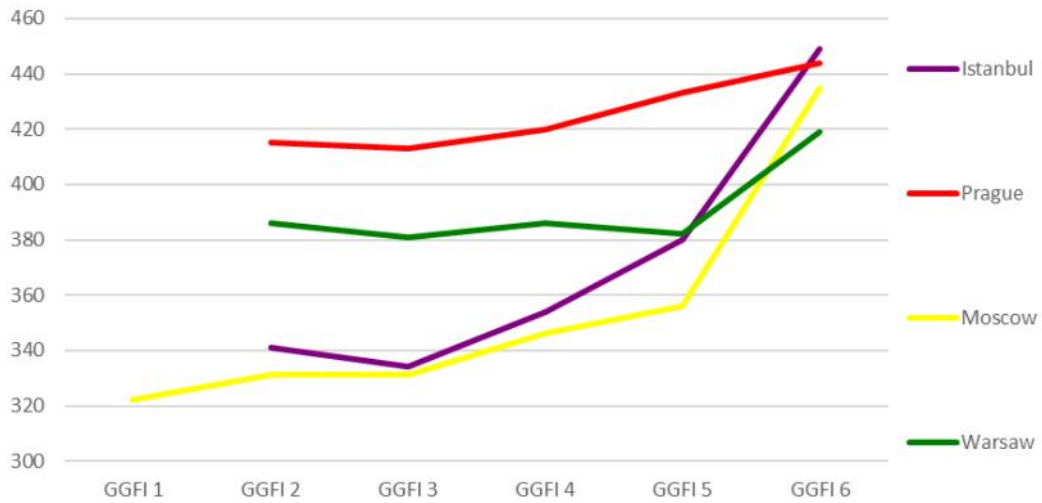
**Table 16 | Eastern European & Central Asian Centres In GGFI 6**

Centre	Depth GGFI 6		Centre	Quality GGFI 6	
	Rank	Rating		Rank	Rating
Prague	47	473	Istanbul	61=	449
Warsaw	63	444	Prague	64	444
Moscow	68=	436	Moscow	70	435
Istanbul	73	423	Warsaw	73	419

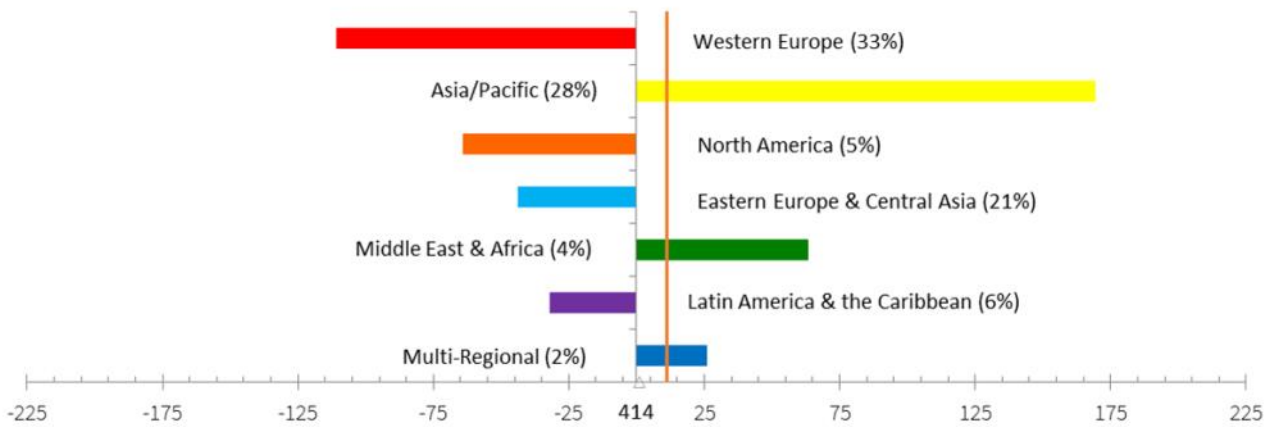
**Chart 26 | Eastern European & Central Asian Centres Ratings Over Time - Depth**



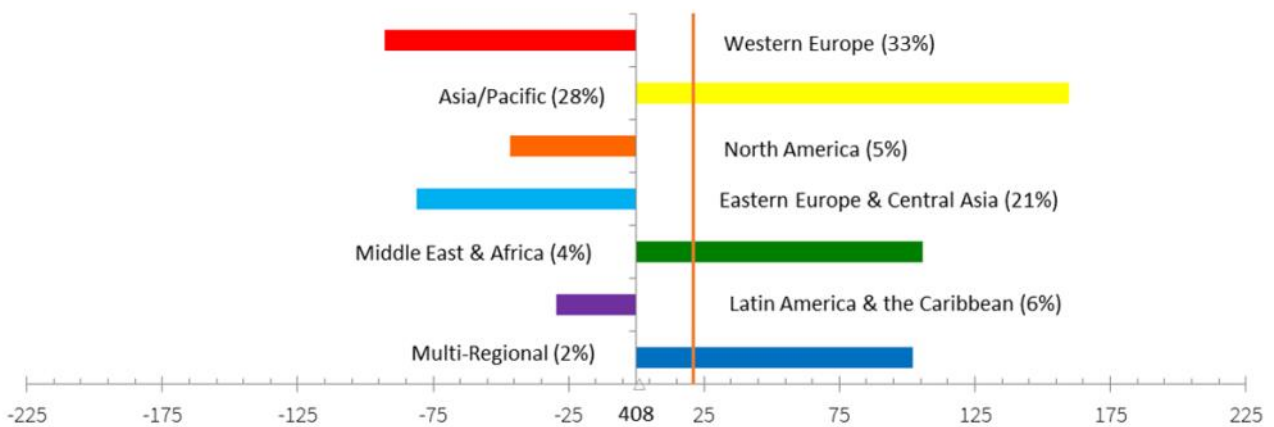
**Chart 27 | Eastern European & Central Asian Centres Ratings Over Time - Quality**



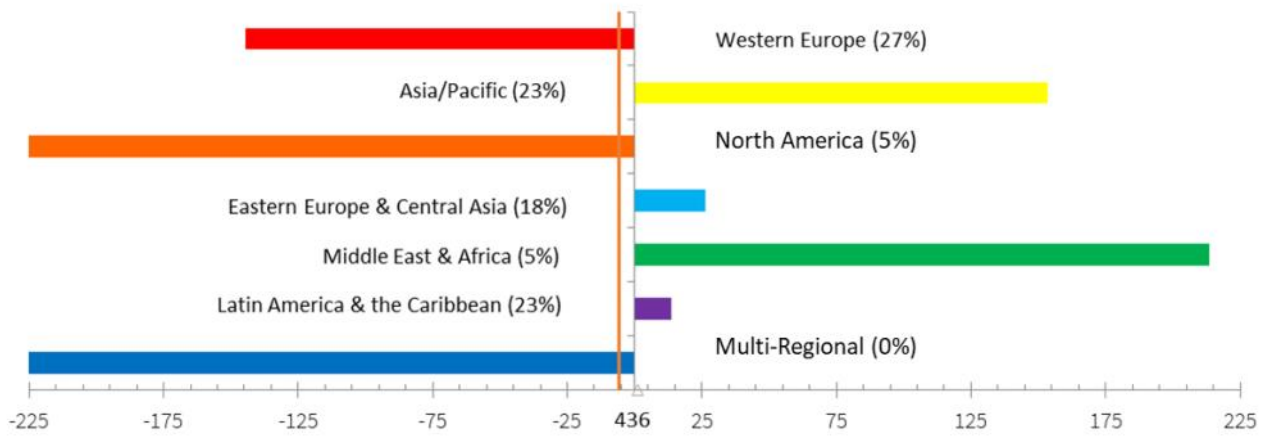
**Chart 28 | Eastern European & Central Asian Regional Assessments For Depth – Difference From The Mean**



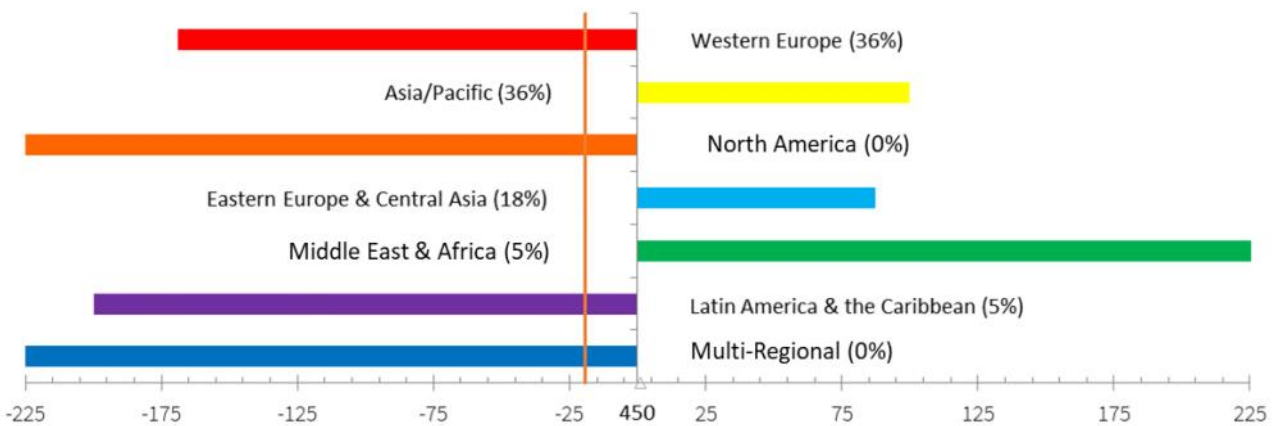
**Chart 29 | Eastern European & Central Asian Regional Assessments For Quality – Difference From The Mean**



**Chart 30 | Regional Assessments For Prague For Depth – Difference From The Mean**



**Chart 31 | Regional Assessments For Istanbul For Quality – Difference From The Mean**



*“The regulatory environment is key for the uptake of green finance, including mandatory disclosure, a clear taxonomy of green activities, and science-based targets in line with the Paris accord.”*

**Consultant, Project Development And Financing Consultancy, Bratislava**

## Western Europe

- 27 Western European centres feature in GGFI 6, with Helsinki, Lisbon, and Glasgow joining the index for the first time.
- Amsterdam retains its leading position for depth in the region and globally, while Zurich and Amsterdam have overtaken London to lead the quality ranking.
- Scandinavian centres perform well, with four centres in the top 15 for both depth and quality.
- For depth, only respondents from Asia/Pacific rated Western European centres higher than average, while for quality, respondents from Asia/Pacific, North America, and Middle East & Africa rated Western European centres higher than average.

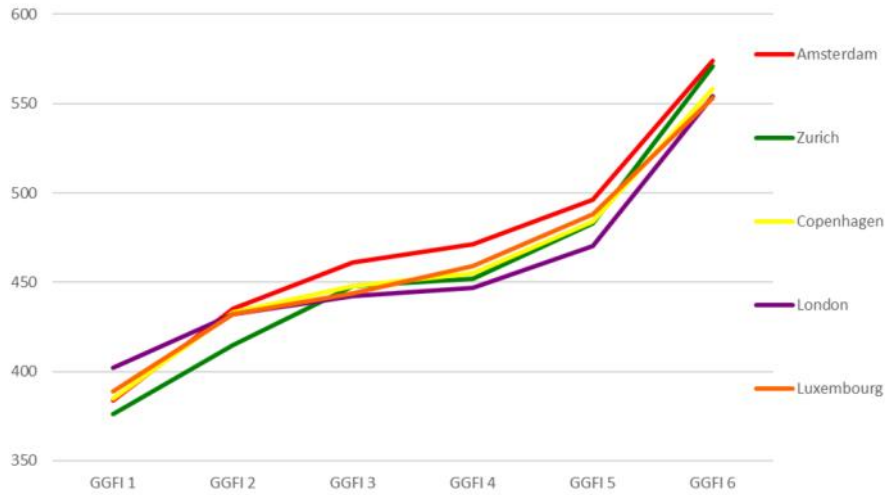
**Table 17 | Western European Top 10 Centres In GGFI 6**

Centre	Depth GGFI 6		Centre	Quality GGFI 6	
	Rank	Rating		Rank	Rating
Amsterdam	1	574	Zurich	1	580
Zurich	2	571	Amsterdam	2	572
Copenhagen	3	558	London	3	569
London	4	554	Oslo	4	551
Luxembourg	5	553	Luxembourg	5	545
Stockholm	6	550	Paris	6	544
Paris	8	545	Stockholm	7	543
Geneva	9	544	Geneva	8	542
Oslo	10	543	Copenhagen	9	540
Vienna	15=	531	Munich	10=	537

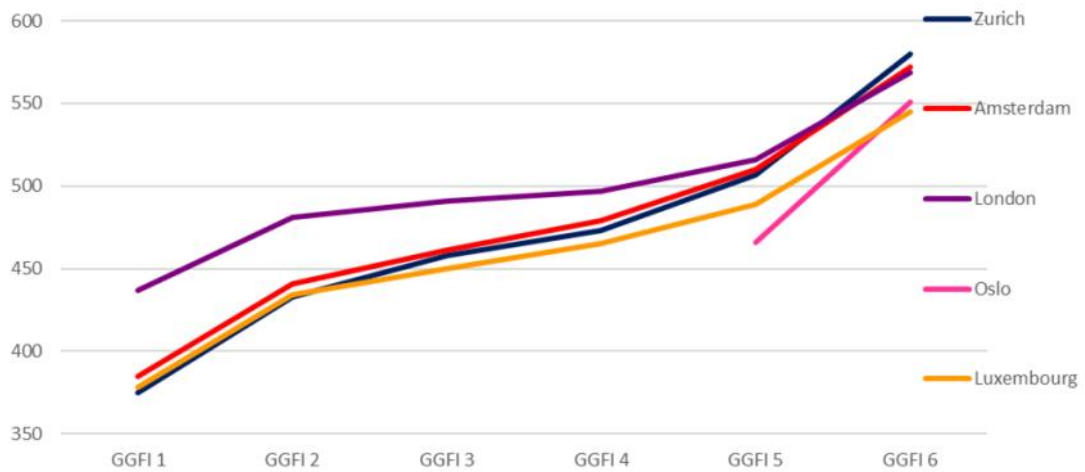
*“Taxation is always a factor. Luxembourg tries to over-compensate here. Good breaks in the UK, Netherlands and Ireland.”*

**Director, Professional And Research Body, Amsterdam**

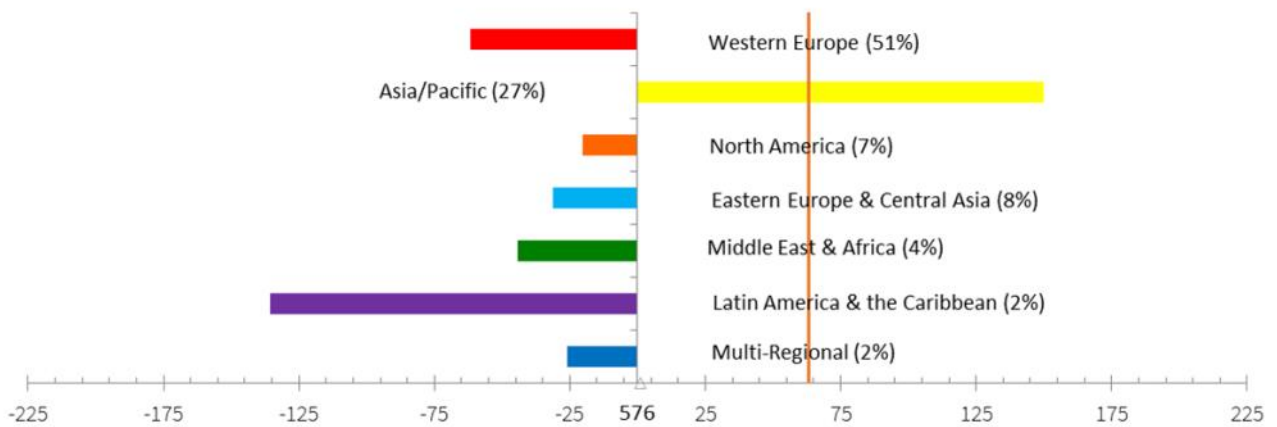
**Chart 32 | Top Five Western European Centres Ratings Over Time - Depth**



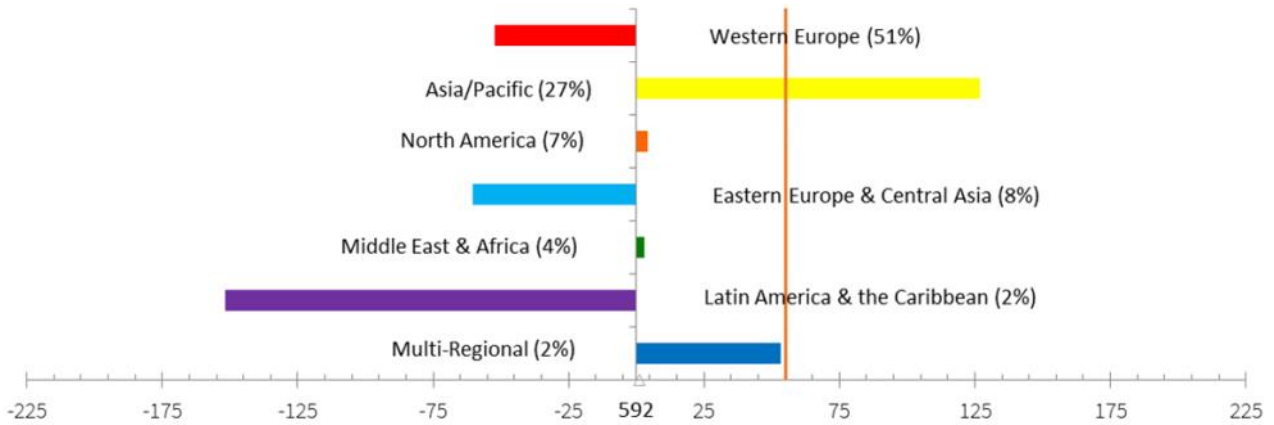
**Chart 33 | Top Five Western European Centres Ratings Over Time - Quality**



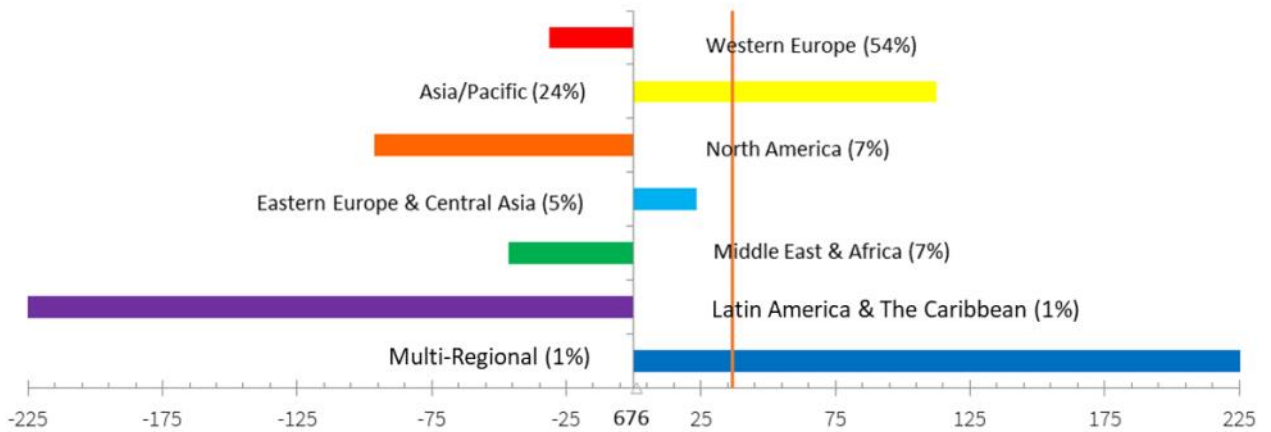
**Chart 34 | Western Europe Regional Assessments For Depth – Difference From The Mean**



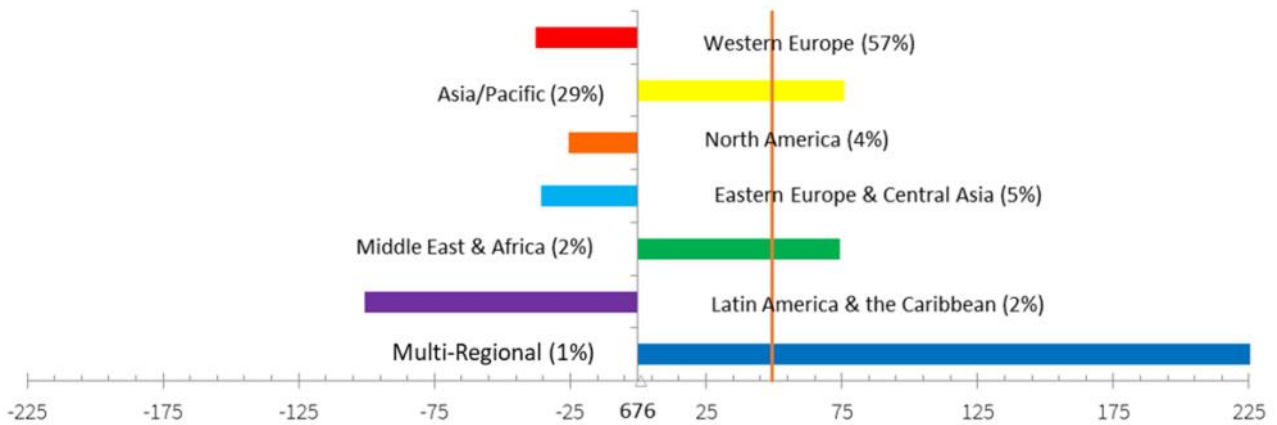
**Chart 35 | Western Europe Regional Assessments For Quality – Difference From The Mean**



**Chart 36 | Regional Assessments For Amsterdam For Depth – Difference From The Mean**



**Chart 37 | Regional Assessments For Zurich For Quality – Difference From The Mean**





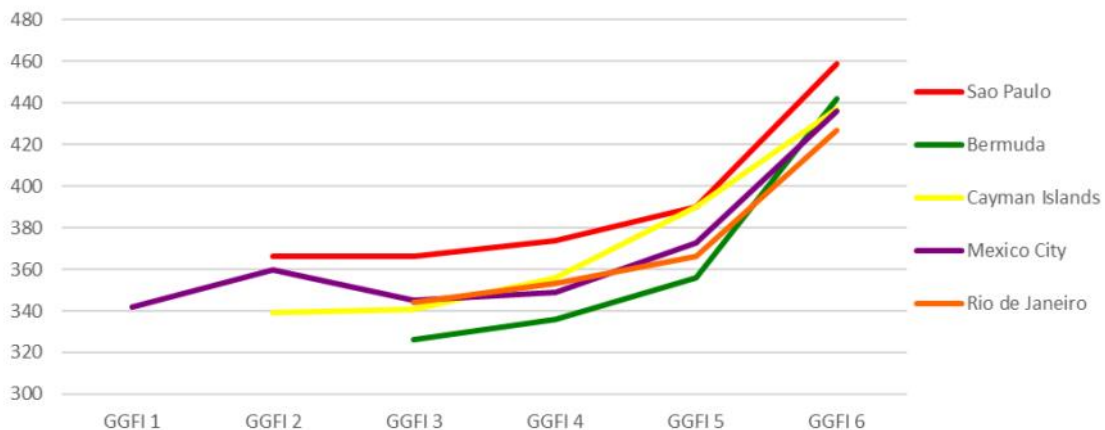
## Latin America & The Caribbean

- Six Latin American & Caribbean centres are included in GGFI 6.
- Sao Paulo takes the leading position in the region for depth, but has been overtaken in the quality ranking by the Cayman and British Virgin Islands.
- All centres in the region fell in the rankings for both depth and quality.
- Respondents from Asia/Pacific and the Middle East & Africa rated centres in the region higher than average.

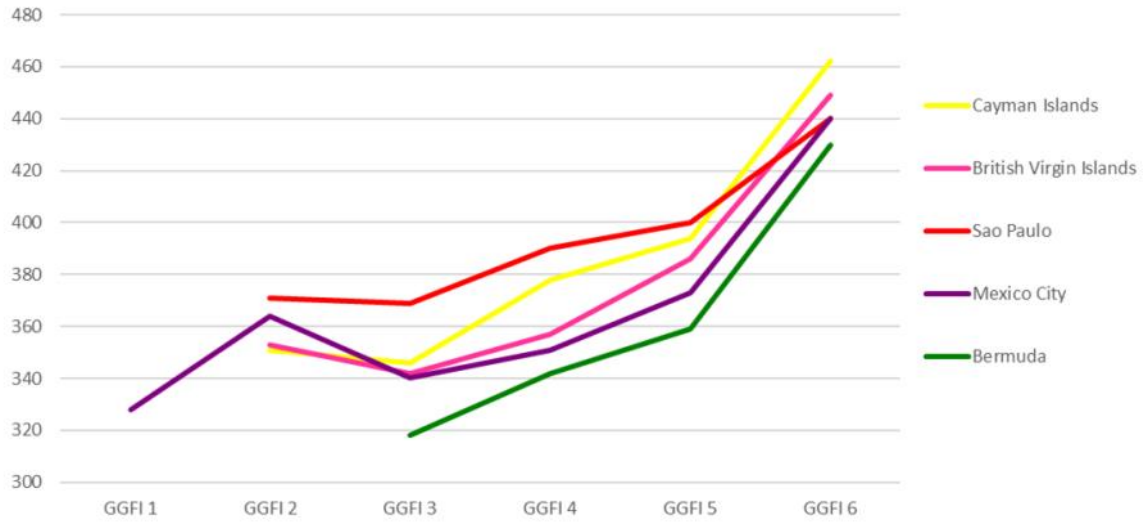
**Table 18 | Latin American & Caribbean Centres In GGFI 6**

Centre	Depth GGFI 6		Centre	Quality GGFI 6	
	Rank	Rating		Rank	Rating
Sao Paulo	58=	459	Cayman Islands	57	462
Bermuda	64=	442	British Virgin Islands	61=	449
Cayman Islands	66=	437	Sao Paulo	65=	440
Mexico City	68=	436	Mexico City	65=	440
Rio de Janeiro	70=	427	Bermuda	71	430
British Virgin Islands	72	426	Rio de Janeiro	74	410

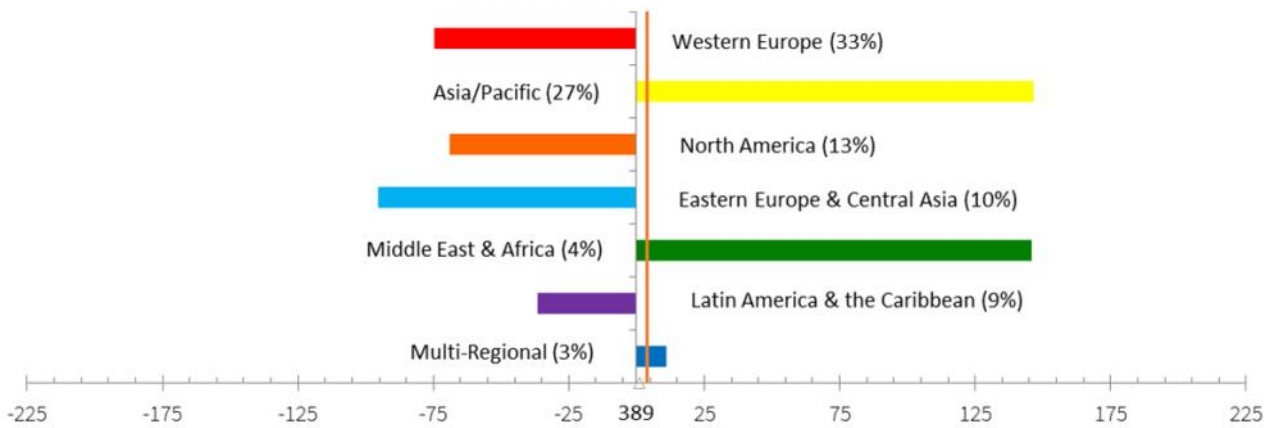
**Chart 38 | Top Five Latin American & Caribbean Centres Ratings Over Time - Depth**



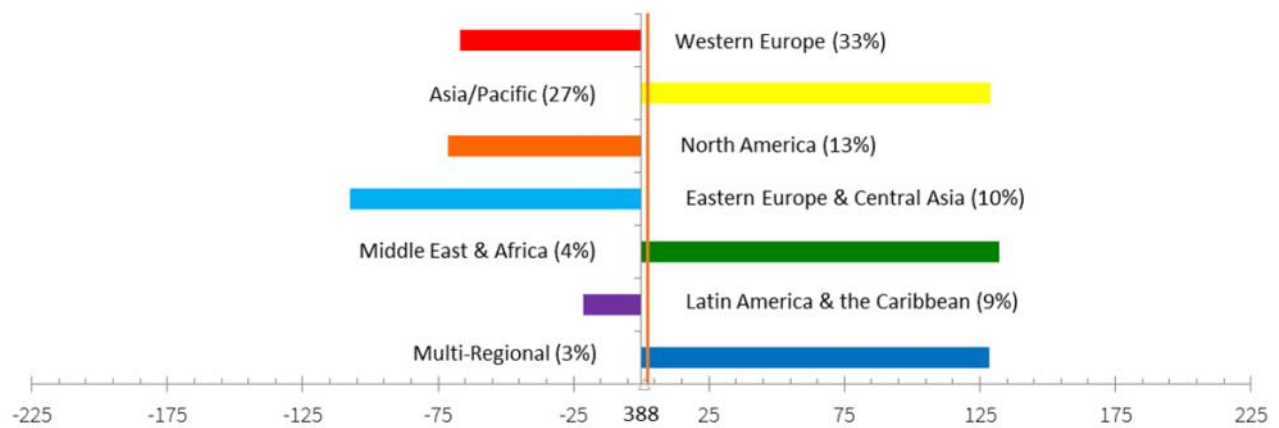
**Chart 39 | Top Five Latin American & Caribbean Centres Ratings Over Time - Quality**



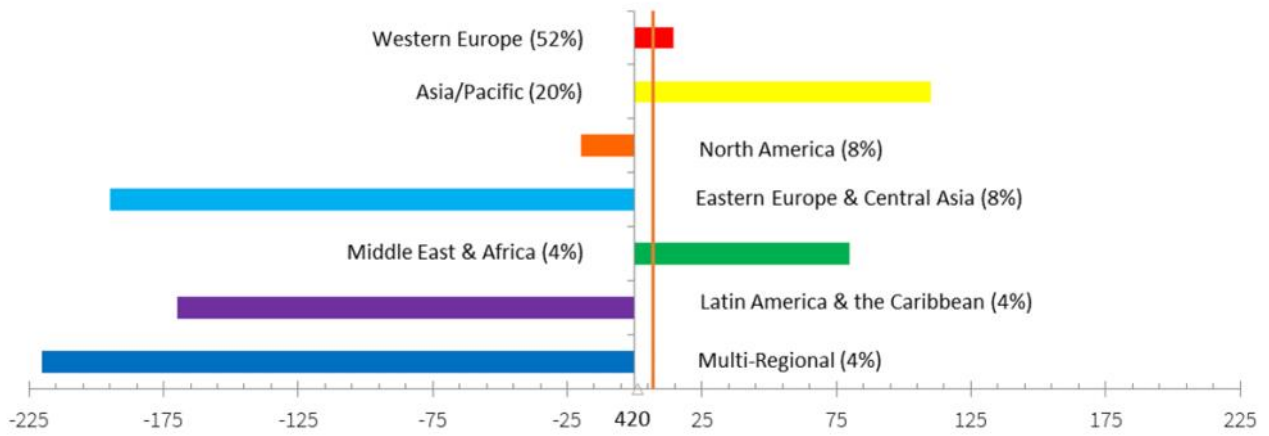
**Chart 40 | Latin American & Caribbean Regional Assessments For Depth – Difference From The Mean**



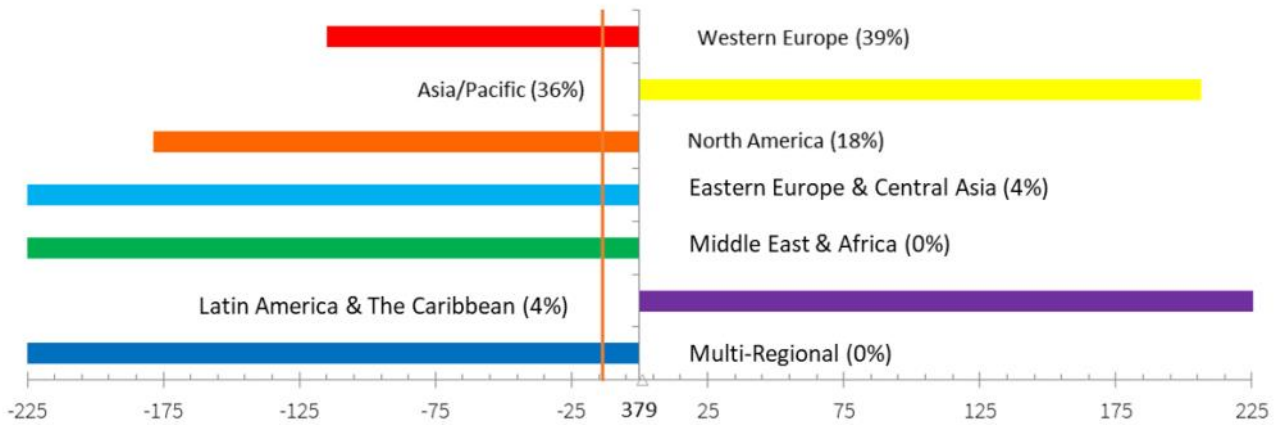
**Chart 41 | Latin America & The Caribbean Regional Assessments For Quality – Difference From The Mean**



**Chart 42 | Regional Assessments For Sao Paulo For Depth – Difference From The Mean**



**Chart 43 | Regional Assessments For Cayman Islands For Quality – Difference From The Mean**



*“Tax incentives are important but projects should be competitive rather than reliant upon unsustainable benefits.”*

**CEO, Business Development Consultancy, Nur-Sultan**

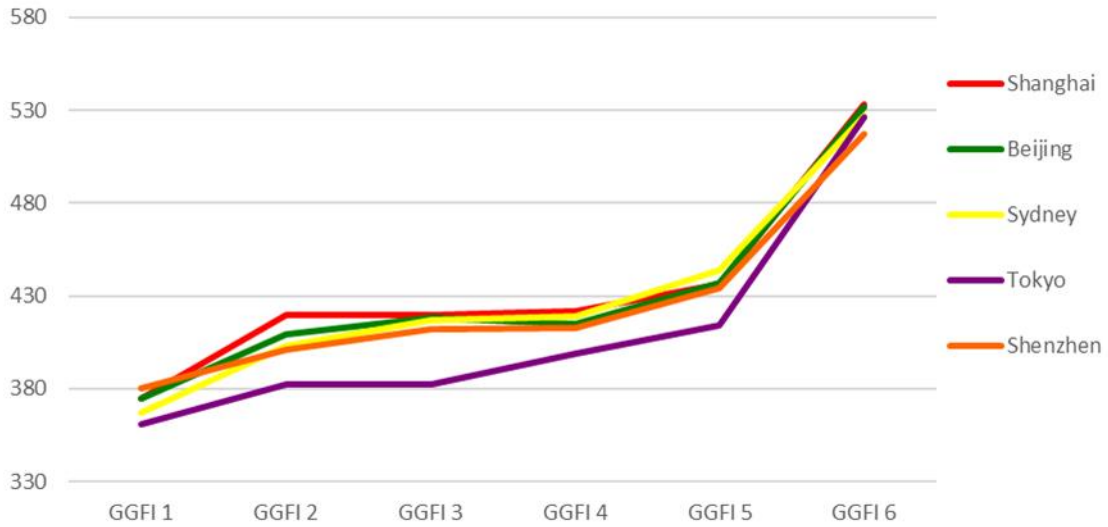
## Asia/Pacific

- 19 financial centres from Asia/Pacific now feature in the GGFI, with the addition in GGFI 6 of Wellington, Osaka, Qingdao, and GIFT City-Gujarat.
- Shanghai leads the region for depth, overtaking Sydney and Beijing.
- In the quality rankings, Tokyo takes first place in the region, displacing Sydney and Singapore.
- Seven centres rose in both the depth and quality ratings: Shanghai, Tokyo, Beijing, Shenzhen, New Delhi, Mumbai, and Jakarta.
- Respondents from Western Europe and North America rated Asia/Pacific centres below average, with those from other regions rating them higher.

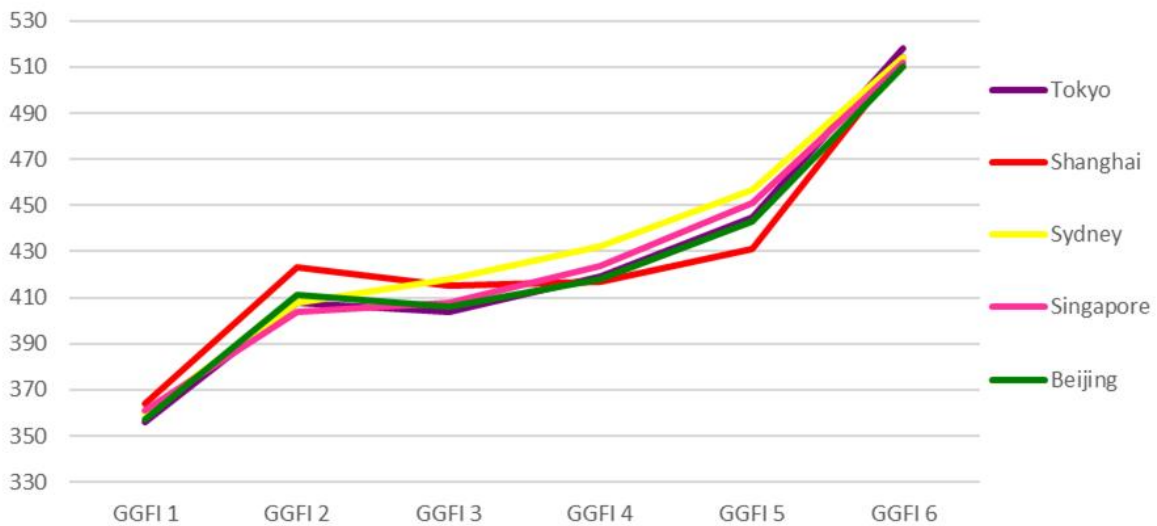
**Table 19 | Asia/Pacific Top 10 Centres In GGFI 6**

Centre	Depth GGFI 6		Centre	Quality GGFI 6	
	Rank	Rating		Rank	Rating
Shanghai	13	533	Tokyo	17	518
Beijing	14	532	Shanghai	19=	514
Sydney	18	527	Sydney	19=	514
Tokyo	19	526	Singapore	21	512
Shenzhen	22=	517	Beijing	22=	510
Wellington	25=	516	Guangzhou	26=	508
Guangzhou	25=	516	Shenzhen	30=	500
Singapore	30=	511	Seoul	33	498
Seoul	30=	511	Wellington	34	495
Osaka	34	507	Osaka	38	490

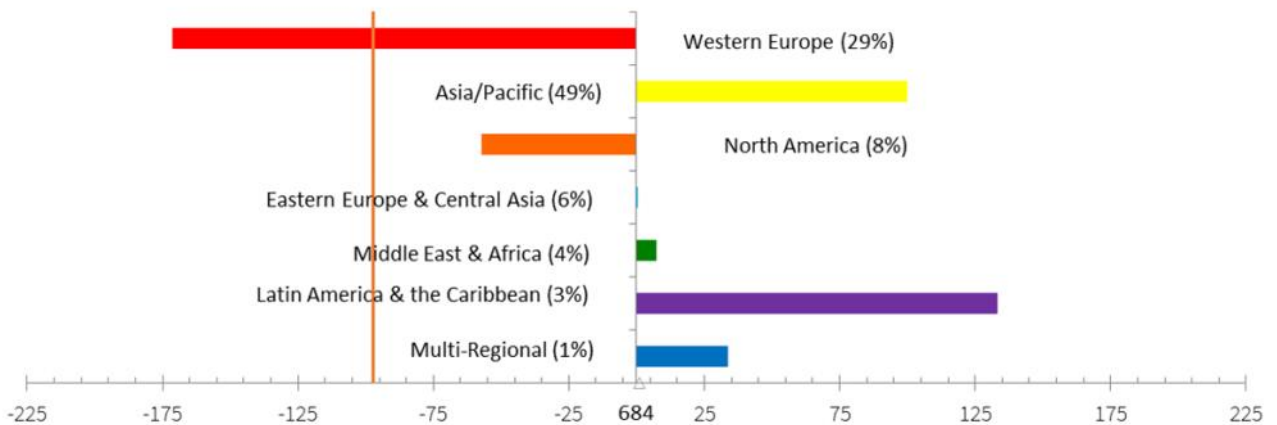
**Chart 44 | Top Five Asia/Pacific Centres Ratings Over Time - Depth**



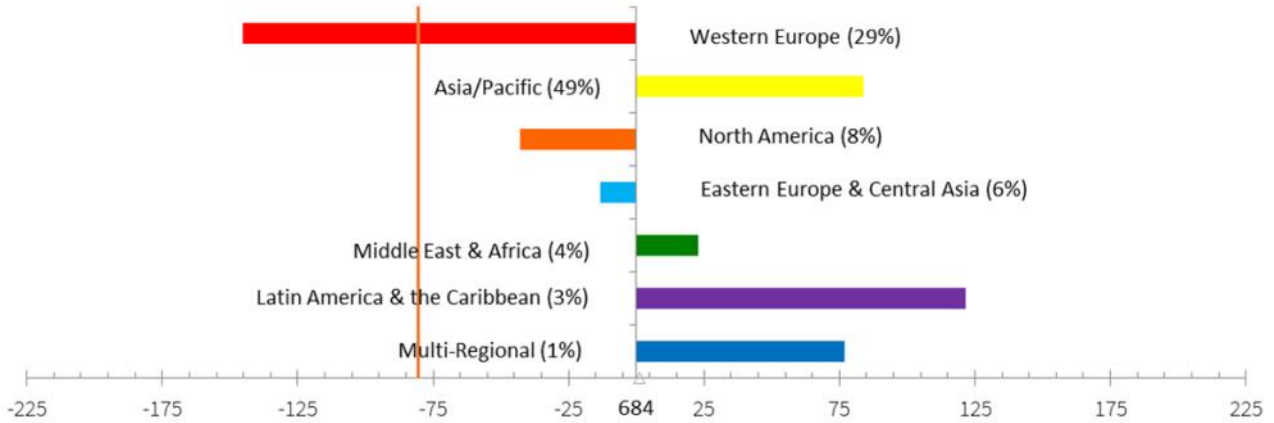
**Chart 45 | Top Five Asia/Pacific Centres Ratings Over Time - Quality**



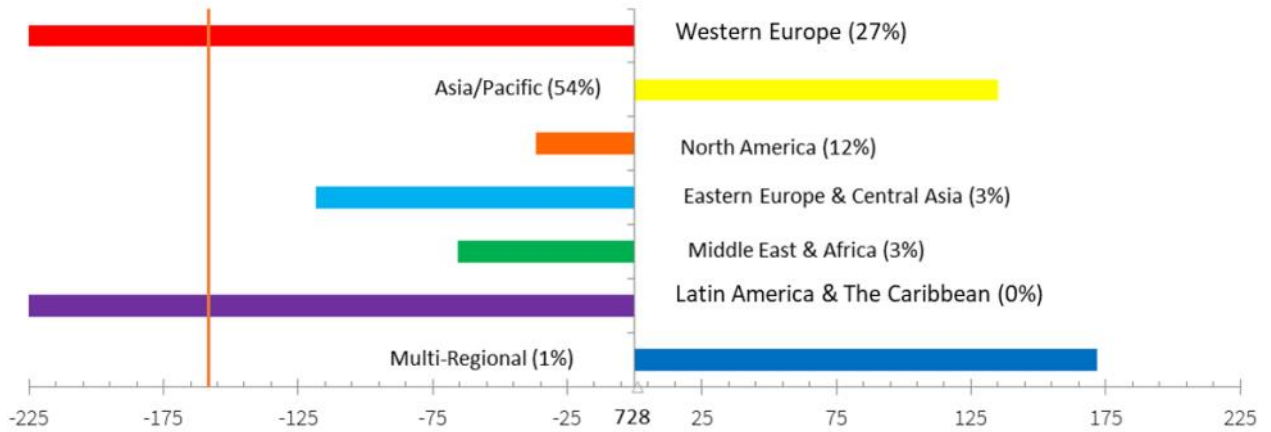
**Chart 46 | Asia/Pacific Regional Assessments For Depth – Difference From The Mean**



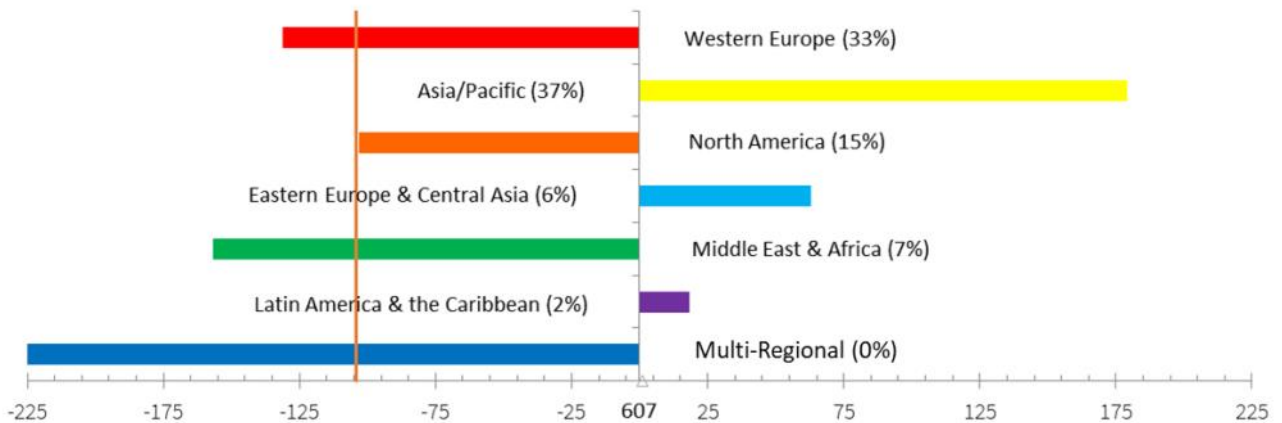
**Chart 47 | Asia/Pacific Regional Assessments For Quality – Difference From The Mean**



**Chart 48 | Regional Assessments For Shanghai For Depth – Difference From The Mean**



**Chart 49 | Regional Assessments For Tokyo For Quality – Difference From The Mean**

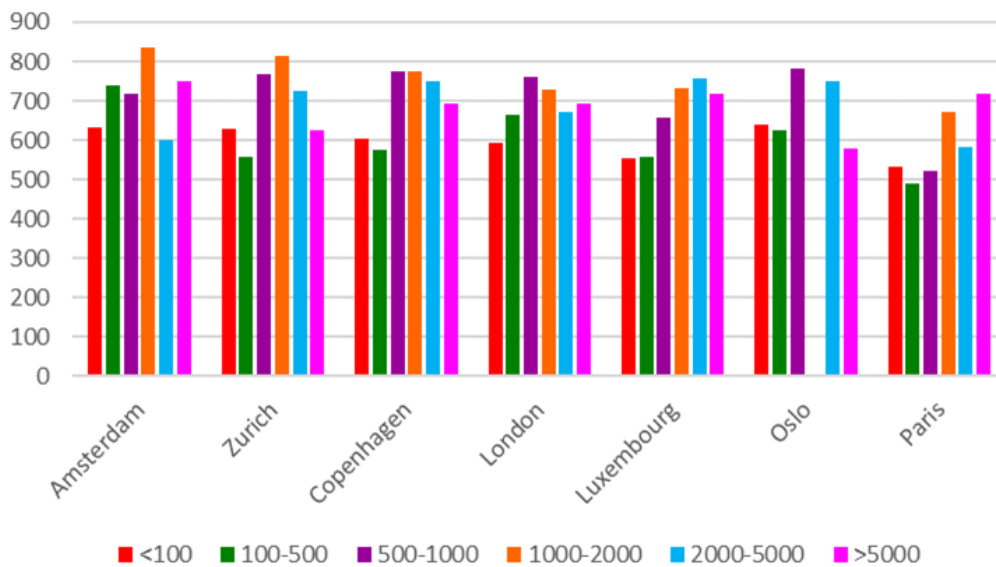


## Organisation Size

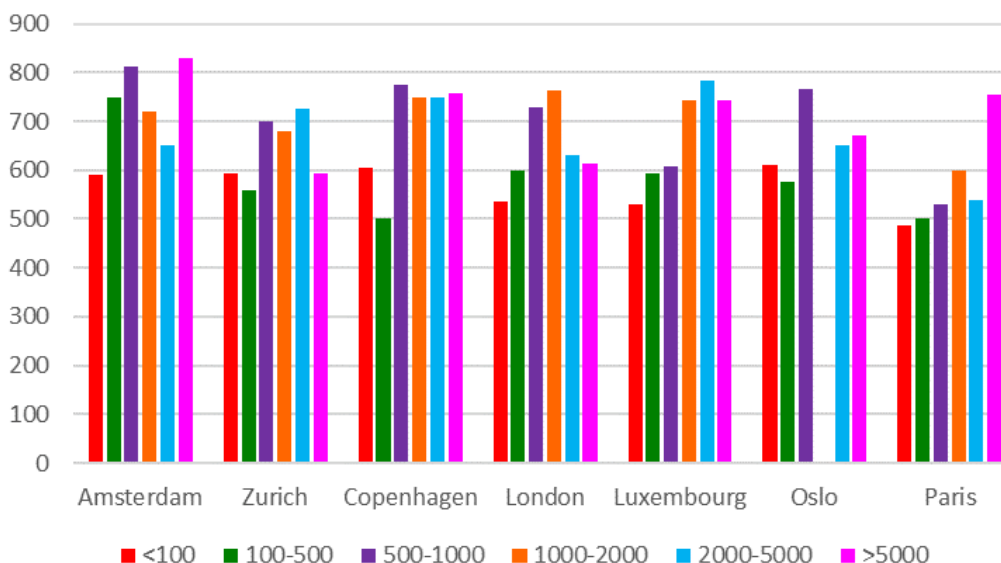
There is variation in how the leading centres are viewed by respondents working for different sizes of organisation. Taking the seven centres that appear in the top five of the rankings for both depth and quality, Charts 50 and 51 show the average of the assessments given by respondents in different sizes of organisation.

Centres had a mixed range of responses, with Luxembourg and Paris, for example, receiving lower ratings from those in organisations of less than 100 people, and Amsterdam scoring high in responses from those in organisations of more than 5,000 people.

**Chart 50 | Average Assessments By Respondents' Organisation Size: Depth**



**Chart 51 | Average Assessments By Respondents' Organisation Size: Quality**



## Stability

The 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. Charts 52 and 53 contrast the ‘spread’ or variance of the individual assessments given to the top 50 centres for depth and quality in GGFI 6, with the sensitivity to changes in the instrumental factors: first for depth and second for quality assessments.

The chart shows three bands of financial centres. The unpredictable centres in the top right of the chart have a higher sensitivity to changes in the instrumental factors and a higher variance of assessments. These centres have the highest potential future movement. The stable centres in the bottom left have a lower sensitivity to change and demonstrate greater consistency in their GGFI ratings.

On the depth analysis, Melbourne stands out, while for quality Tel Aviv is well to the right hand side of the chart. This shows that amongst the top 50 centres on each measure, these centres received a wider variation in assessments, and their raw assessment scores were affected more by the instrumental factor analysis than others.

**Chart 52 | Stability In Depth Assessments And Instrumental Factors**

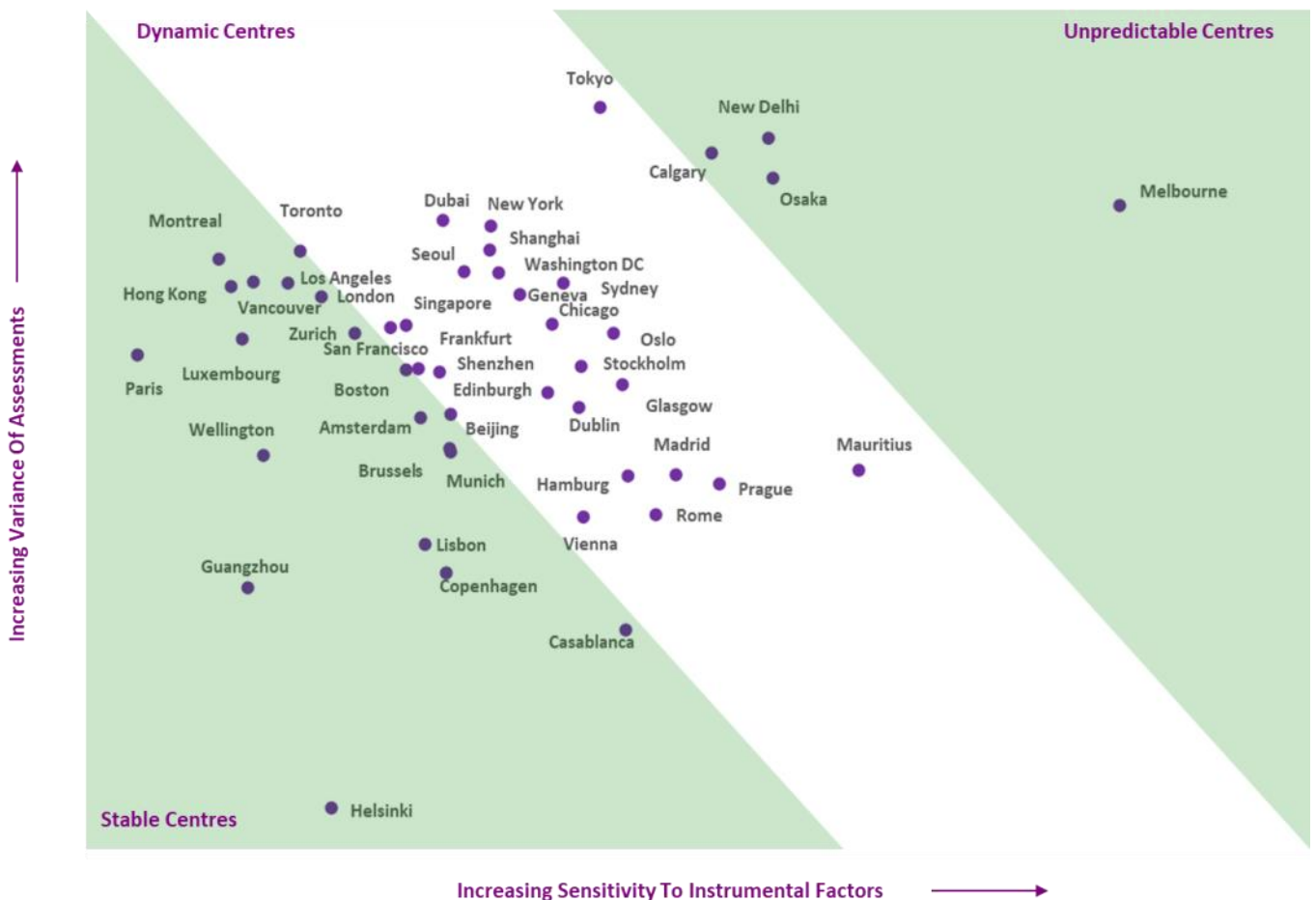
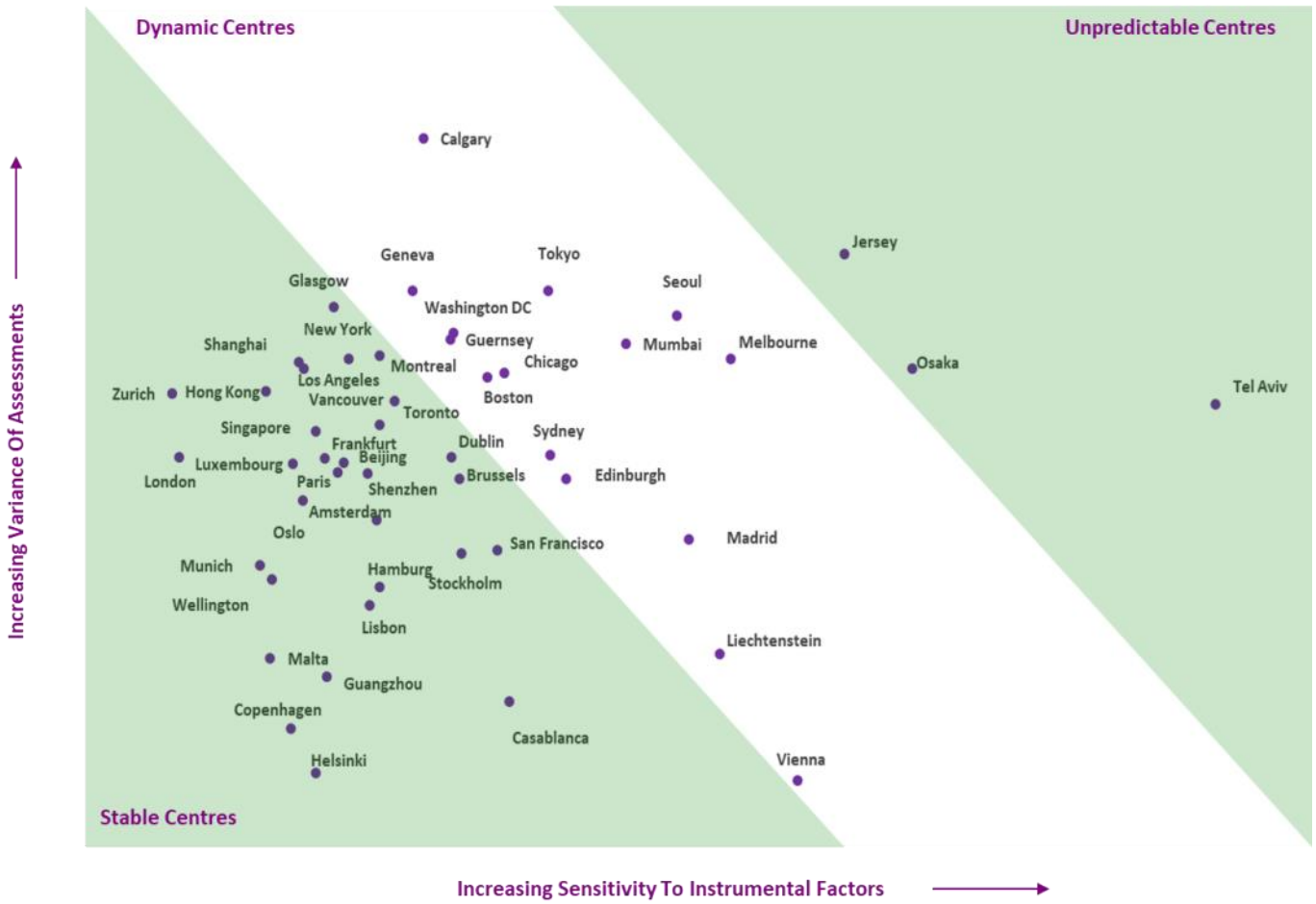




Chart 53 | Stability In Quality Assessments And Instrumental Factors



*“It would be interesting to develop a document describing the skill sets needed in Green Finance for the young generations.”*

**ESG Consultant, ESG Integration Advisors, Montreal**

## Industry Sectors And Green Finance Professionals

We can conduct an analysis of the differing assessments provided by respondents working in relevant industry sectors by building the index separately using the responses provided only from those industries. This creates separate sub-indices for the Professional Services, Knowledge (incorporating universities and NGOs), Banking, Investment, and Policy & Public Finance sectors. Tables 24 and 25 show the top 15 centres in these industry sectors for depth and quality.

Amsterdam as the leader in the general depth index does not feature in the top 15 in the professional services and banking sub-indices, suggesting that the ratings it receives in this areas are considerably lower than from those working in other sectors. Paris ranks first in the professional services, knowledge and banking sub-indices for depth, in comparison with its eighth place overall.

**Table 24 | GGFI 6 Industry Sector Sub-Indices - Depth**

Rank	Professional Services	Knowledge	Banking	Investment	All Other Sectors
1	Paris	Paris	Paris	Amsterdam	Zurich
2	Luxembourg	Copenhagen	Beijing	Geneva	Geneva
3	San Francisco	Amsterdam	Montreal	Helsinki	London
4	Washington DC	Helsinki	London	Copenhagen	Luxembourg
5	Casablanca	Brussels	Boston	Stockholm	Vancouver
6	Oslo	Los Angeles	Washington DC	London	Paris
7	Zurich	Stockholm	Hong Kong	Luxembourg	Montreal
8	Boston	London	Zurich	Tokyo	Amsterdam
9	London	San Francisco	Shenzhen	Osaka	San Francisco
10	Tokyo	Oslo	Sydney	Oslo	Copenhagen
11	Stockholm	Shanghai	Edinburgh	Brussels	Tokyo
12	Shanghai	Beijing	Guangzhou	Paris	Edinburgh
13	Frankfurt	Shenzhen	Casablanca	Edinburgh	Beijing
14	Shenzhen	Hamburg	Singapore	Zurich	Sydney
15	Montreal	Milan	Toronto	Vienna	Brussels

In the quality index, Zurich, which now leads the quality ratings, ranks 13th in the knowledge sector. London achieves two of the top five rankings in the industry sub-indices, while in GGFI 5 it held four of these places, and has dropped a place in the banking sector to sixth. Other leading centres perform well across all industry sectors.

**Table 25 | GGFI 6 Industry Sector Sub-Indices - Quality**

Rank	Professional Services	Knowledge	Banking	Investment	All Other Sectors
1	London	London	Singapore	Amsterdam	Geneva
2	Paris	Amsterdam	Zurich	London	London
3	Zurich	Paris	Washington DC	Zurich	Zurich
4	Oslo	Edinburgh	Boston	Geneva	Paris
5	San Francisco	Brussels	Paris	Copenhagen	Luxembourg
6	Singapore	Oslo	London	Tokyo	Oslo
7	Frankfurt	Luxembourg	Sydney	Brussels	Amsterdam
8	Tokyo	Frankfurt	Hong Kong	Dublin	Munich
9	Amsterdam	San Francisco	San Francisco	Stockholm	New York
10	Helsinki	Hamburg	Guangzhou	San Francisco	Helsinki
11	Vienna	Los Angeles	Oslo	Oslo	Brussels
12	Washington DC	Copenhagen	Helsinki	Edinburgh	Shanghai
13	Luxembourg	Zurich	Shanghai	Luxembourg	Shenzhen
14	Boston	Singapore	New York	Seoul	Tokyo
15	Brussels	Dublin	Hamburg	Los Angeles	Stockholm

Taking the sectoral analysis further, we have calculated the index on the basis of the responses only from those working directly in green finance in financial services organisations. The results are shown in tables 26 and 27 below for depth and quality respectively. On this analysis, Vancouver, Toronto, Wellington, Qingdao, Guangzhou, Osaka, Prague, New Delhi, Cape Town, and Jakarta would lose 10 rank places or more in the index for depth if scored only on the responses from this group. Munich, Frankfurt, Dublin, Milan, Liechtenstein, Guernsey, Jersey, and Malta would improve 10 or more places. This may illustrate the different perspectives of people with a focus on green finance compared with those with a more indirect interest in green finance.

**Table 26 | GGFI 6 Using Responses Only From Financial Services Professionals Working In Green Finance - Depth**

City	Depth			
	Depth	Rank	GGFI 6 Rank	Difference
Amsterdam	518	1	1	0
Zurich	506	2	2	0
Luxembourg	502	3	5	-2
Stockholm	494	4	6	-2
Copenhagen	488	5	3	2
Oslo	484	6	10	-4
London	483	7	4	3
Paris	481	8	8	0
Montreal	479	9	15=	-6
Geneva	474	10	9	1
San Francisco	470	11	7	4
Vienna	469	12	15=	-3
Los Angeles	467	13	12	1
Brussels	466	14	15=	-1
Helsinki	465	15	19=	-4
Sydney	464	16	18	-2
Munich	451	17	30=	-13
Shanghai	450	18	13	5
Washington DC	446	19	22=	-3
Frankfurt	445	20	36	-16
Edinburgh	444	21	22=	-1
Beijing	443	22	14	8
Vancouver	442	23=	11	12
Tokyo	442	23=	19=	4
Dublin	442	23=	37	-14
Singapore	441	26	30=	-4
Boston	440	27=	25=	2
Lisbon	440	27=	33	-6
Shenzhen	439	29	22=	7
Hamburg	438	30	25=	5
Toronto	437	31=	21	10
Casablanca	437	31=	29	2
Seoul	431	33=	30=	3
Melbourne	431	33=	35	-2
Wellington	428	35	25=	10
New York	427	36	40	-4
Hong Kong	426	37	41	-4

City	Depth			
	Depth	Rank	GGFI 6 Rank	Difference
Glasgow	422	38=	45	-7
Milan	422	38=	51=	-13
Chicago	421	40	38	2
Calgary	420	41	44	-3
Liechtenstein	418	42	61	-19
Rome	417	43	43	0
Guernsey	412	44=	54=	-10
Jersey	412	44=	60	-16
Dubai	408	46	50	-4
Madrid	405	47	42	5
Tel Aviv	404	48	58=	-10
Qingdao	402	49	39	10
Malta	401	50	66=	-16
GIFT City-Gujarat	399	51	48	3
Mauritius	398	52	49	3
Guangzhou	397	53=	25=	28
Osaka	397	53=	34	19
Sao Paulo	395	55=	58=	-3
Isle of Man	395	55=	62	-7
Prague	393	57	47	10
Abu Dhabi	392	58	64=	-6
Mumbai	391	59	51	8
Mexico City	387	60	68=	-8
Kuala Lumpur	384	61	54=	7
Johannesburg	381	62	57	5
New Delhi	379	63	46	17
Cape Town	377	64	53	11
Warsaw	374	65	63	2
British Virgin Islands	374	65	72	-7
Rio de Janeiro	372	67	70=	-3
Moscow	367	68=	68=	0
Bangkok	367	68=	70=	-2
Istanbul	367	68=	73	-5
Bermuda	361	71	64=	7
Doha	360	72	74	-2
Jakarta	354	73	54=	19
Cayman Islands	348	74	66=	8

Turning to quality, Montreal, Shanghai, Mauritius, Seoul, Casablanca, Beijing, Guangzhou, Osaka, GIFT City, and Qingdao would lose ten or more rank places in the index if we only considered responses from those working directly in green finance. Washington DC, Wellington, Lisbon, Dublin, Malta, Milan, Glasgow, Mexico City, and Johannesburg would gain ten or more places.

We will continue to track the responses from green finance professionals alongside the GGFI main index results.

**Table 27 | GGFI 6 Using Responses Only From Financial Services Professionals Working In Green Finance - Quality**

Quality				
City	Depth	Rank	GGFI 6 Rank	Difference
Zurich	528	1	1	0
Amsterdam	523	2	2	0
Oslo	521	3	4	-1
Paris	520	4	6	-2
London	503	5	3	2
Luxembourg	495	6	5	1
Stockholm	489	7	7	0
Munich	483	8	10	-2
San Francisco	482	9	10	-1
Geneva	480	10	8	2
Copenhagen	480	10	9	1
Brussels	474	12	14	-2
Vienna	466	13	18	-5
Helsinki	464	14	12	2
Singapore	460	15	21	-6
Sydney	459	16	19	-3
Hamburg	454	17	15	2
Vancouver	453	18	13	5
Tokyo	452	19	17	2
Frankfurt	450	20	26	-6
Edinburgh	449	21	22	-1
Toronto	449	21	30	-9
Washington DC	449	21	32	-11
Wellington	448	24	34	-10
Lisbon	448	24	36	-12
Montreal	447	26	16	10
Los Angeles	447	26	24	2
Dublin	444	28	44	-16
New York	436	29	24	5
Boston	436	29	37	-8
Malta	436	29	49	-20
Milan	434	32	52	-20
Hong Kong	431	33	40	-7
Glasgow	429	34	44	-10
Shenzhen	427	35	30	5
Liechtenstein	425	36	40	-4
Chicago	424	37	40	-3

Quality				
City	Depth	Rank	GGFI 6 Rank	Difference
Shanghai	423	38	19	19
Guernsey	423	38	29	9
Calgary	423	38	39	-1
Jersey	422	41	35	6
Madrid	422	41	47	-6
Melbourne	420	43	47	-4
Mauritius	420	43	53	-10
Seoul	419	45	33	12
Casablanca	416	46	26	20
Beijing	415	47	22	25
Rome	412	48	51	-3
Tel Aviv	409	49	40	9
Mexico City	404	50	65	-15
Guangzhou	402	51	26	25
Osaka	402	51	38	13
Kuala Lumpur	401	53	54	-1
Istanbul	395	54	61	-7
Mumbai	393	55	50	5
Prague	393	55	64	-9
Sao Paulo	392	57	65	-8
Johannesburg	389	58	68	-10
Cape Town	388	59	58	1
Isle of Man	387	60	65	-5
Jakarta	385	61	63	-2
British Virgin Islands	382	62	61	1
Dubai	381	63	56	7
GIFT City-Gujarat	379	64	54	10
New Delhi	375	65	58	7
Cayman Islands	374	66	57	9
Bangkok	374	66	58	8
Warsaw	374	66	73	-7
Qingdao	373	69	46	23
Bermuda	367	70	71	-1
Rio de Janeiro	366	71	74	-3
Doha	365	72	69	3
Abu Dhabi	364	73	72	1
Moscow	358	74	70	4

## GGFI 6 Interest, Impact, And Drivers Of Green Finance

Alongside the ratings of depth and quality in the GGFI questionnaire, we ask additional questions about the development of green finance, covering:

- the areas of green finance which were considered most interesting by respondents;
- the areas of green finance which had most impact on sustainability; and
- the factors driving the development of green finance.

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

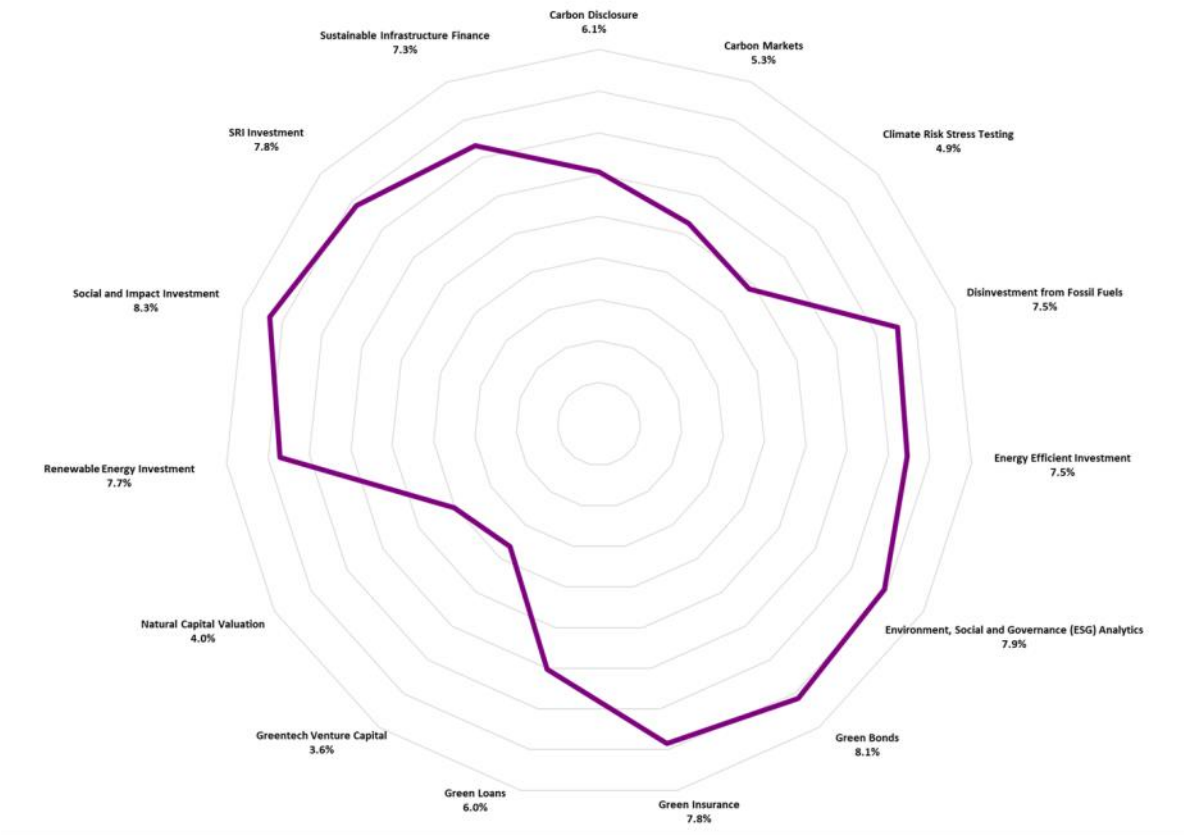
We asked respondents to identify the areas of green finance which they considered most interesting; and areas of green finance that they consider have most impact on sustainability. The results are shown in Charts 54 and 55.

For interest, the three areas most frequently cited were Sustainable Infrastructure Finance, Environment, Social and Governance (ESG) Analytics, and Social And Impact Investment. In terms of those areas which have most impact, the top three areas cited were Social And Impact Investment, Green Bonds, and SRI Investment. In all previous editions of the GGFI, renewable energy investment featured in the top three for both interest and impact. On both measures, this area has now fallen to sixth place.

**Chart 54 | Most Interesting Areas Of Green Finance**



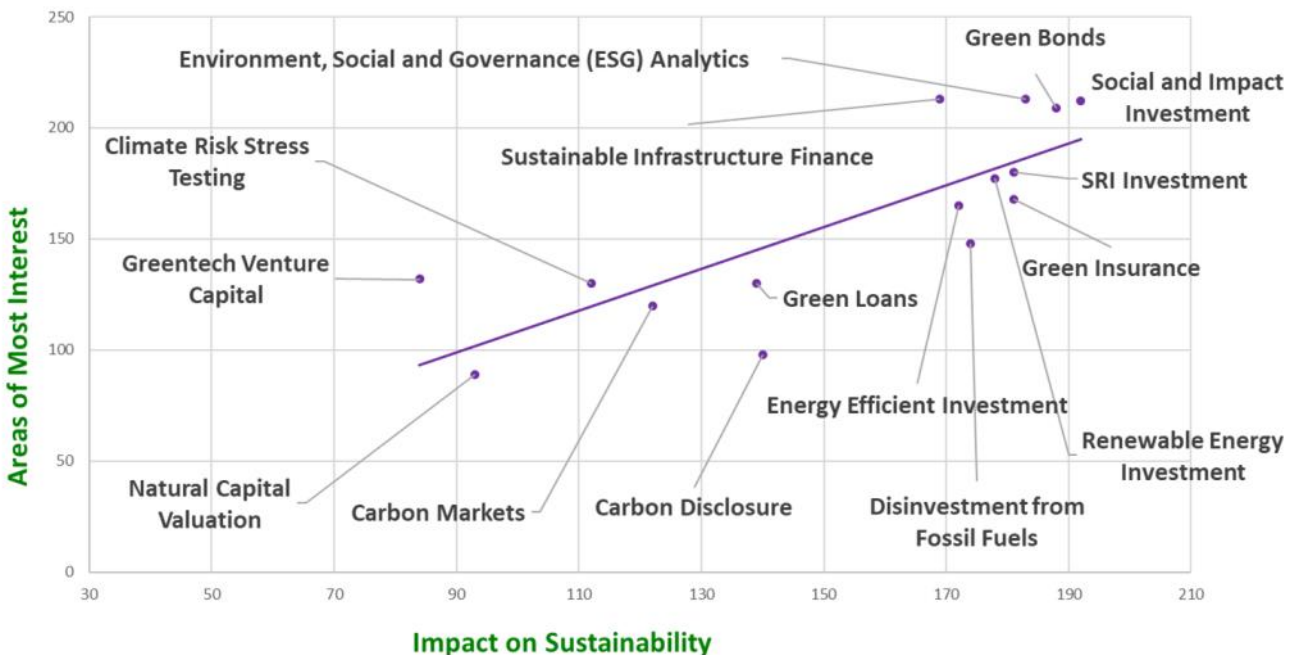
Chart 55 | Green Finance Activities With Most Impact On Sustainability



**Relationship Between Areas Of Interest And Impact**

Looking at the areas of Green Finance that respondents identified as interesting and those they considered had most impact, we see a close correlation, as shown in Chart 56. Carbon Disclosure stands out as furthest from the trendline, indicating that this is seen as having greater impact than the interest shown in it.

Chart 56 | Relationship Between Areas Of Interest And Impact

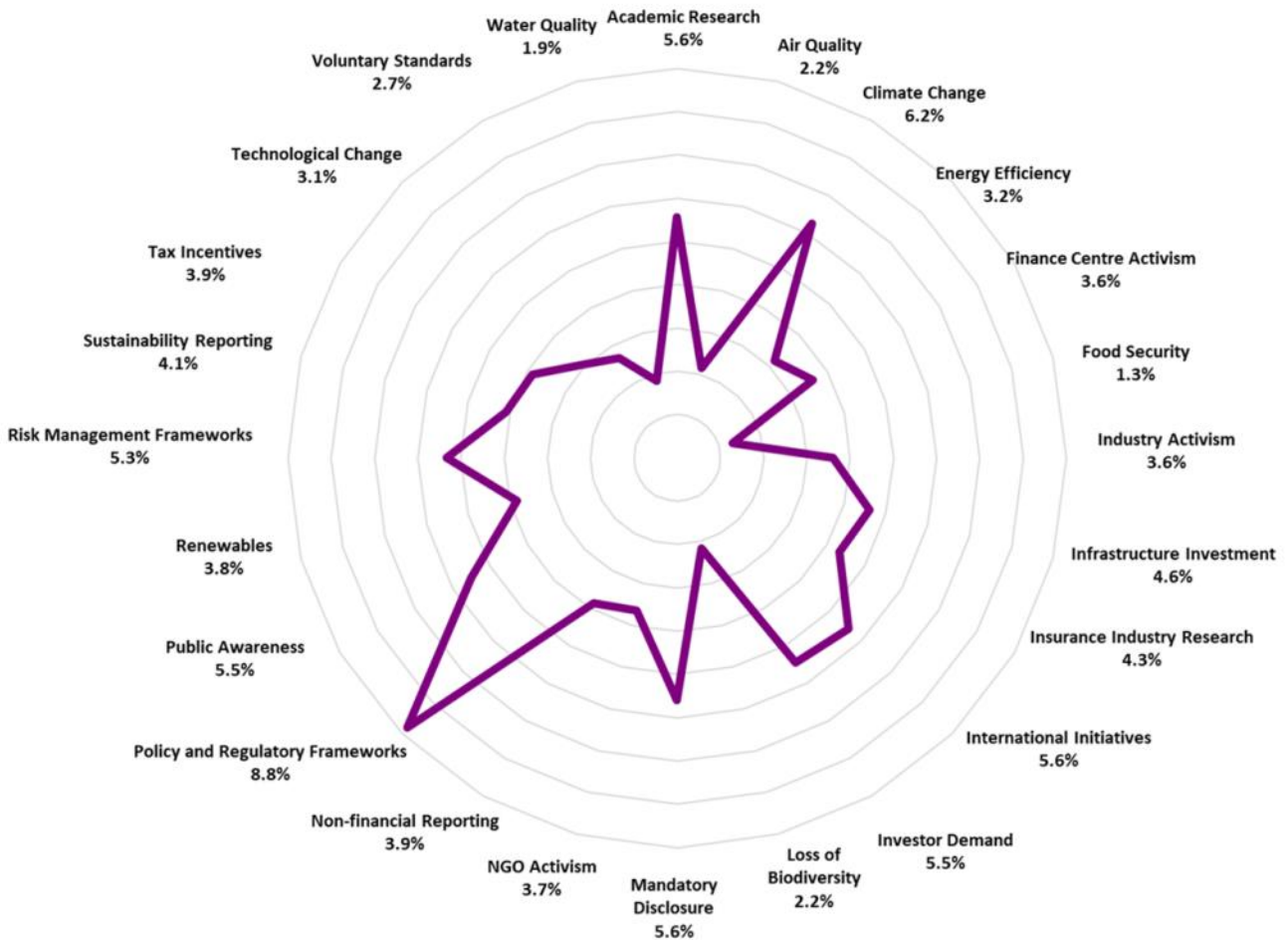


### Drivers Of Green Finance

Finally, we asked respondents to identify the four areas that they considered were driving the development of Green Finance. The results are shown in Chart 57 below. The top drivers identified were Policy And Regulatory Frameworks, Climate Change, International Initiatives, and Mandatory Disclosure.

Policy and Regulatory Frameworks and Climate Change have been consistently in the top four drivers in each edition of the GGFI.

Chart 57 | Leading Drivers Of Green Finance





## Appendix 1: Assessment Details

Table 28 | Details Of Assessments Of Green Finance Depth By Centre

Centre	GGFI 6	GGFI 6	Assessments		
			Number	Average	St. Dev
Amsterdam	1	574	74	676	242
Zurich	2	571	97	627	261
Copenhagen	3	558	31	663	207
London	4	554	152	608	270
Luxembourg	5	553	75	621	260
Stockholm	6	550	54	614	254
San Francisco	7	549	59	669	263
Paris	8	545	95	556	256
Geneva	9	544	59	561	270
Oslo	10	543	23	641	261
Vancouver	11	536	35	566	273
Los Angeles	12	534	47	618	273
Shanghai	13	533	152	728	281
Beijing	14	532	129	721	243
Vienna	15=	531	22	561	219
Brussels	15=	531	53	606	235
Montreal	15=	531	46	516	278
Sydney	18	527	46	608	273
Tokyo	19=	526	87	596	313
Helsinki	19=	526	25	656	153
Toronto	21	518	57	531	280
Edinburgh	22=	517	46	597	248
Washington DC	22=	517	50	594	275
Shenzhen	22=	517	65	668	253
Wellington	25=	516	22	673	233
Guangzhou	25=	516	73	759	203
Hamburg	25=	516	39	671	229
Boston	25=	516	57	583	253
Casablanca	29	515	21	588	194
Munich	30=	511	27	602	234
Singapore	30=	511	108	544	263
Seoul	30=	511	33	538	276
Lisbon	33	508	20	610	213
Osaka	34	507	34	619	297
Melbourne	35	502	28	591	291
Frankfurt	36	501	87	537	253
Dublin	37	496	47	466	245

Centre	GGFI 6	GGFI 6	Assessments		
			Number	Average	St. Dev
Chicago	38	495	55	495	264
Qingdao	39	494	152	868	142
New York	40	493	175	501	286
Hong Kong	41	489	123	493	272
Madrid	42	486	36	542	229
Rome	43	482	29	529	220
Calgary	44	481	24	438	303
Glasgow	45	480	21	498	250
New Delhi	46	475	21	476	306
Prague	47	473	22	436	227
Gujarat	48	472	176	991	55
Mauritius	49	467	25	532	230
Dubai	50	466	96	447	287
Mumbai	51=	465	19	487	274
Milan	51=	465	26	425	218
Cape Town	53	464	17	453	245
Guernsey	54=	463	27	541	291
Kuala Lumpur	54=	463	31	515	205
Jakarta	54=	463	18	514	288
Johannesburg	57	460	24	415	275
Tel Aviv	58=	459	21	460	268
Sao Paulo	58=	459	25	420	215
Jersey	60	458	23	478	304
Liechtenstein	61	457	15	493	182
Isle of Man	62	446	18	408	264
Warsaw	63	444	24	358	260
Abu Dhabi	64=	442	47	368	272
Bermuda	64=	442	15	307	271
Malta	66=	437	25	410	189
Cayman Islands	66=	437	28	357	245
Moscow	68=	436	43	435	252
Mexico City	68=	436	28	409	183
Rio de Janeiro	70=	427	26	363	186
Bangkok	70=	427	16	459	250
British Virgin Is-	72	426	23	400	271
Istanbul	73	423	22	400	237
Doha	74	421	20	453	221

**Table 29 | Details Of Assessments Of Green Finance Quality By Centre**

Centre	GGFI 6	GGFI 6	Assessments		
			Number	Average	St. Dev
Zurich	1	580	97	676	259
Amsterdam	2	572	74	688	232
London	3	569	152	655	243
Oslo	4	551	23	657	227
Luxembourg	5	545	75	627	241
Paris	6	544	95	581	239
Stockholm	7	543	54	601	218
Geneva	8	542	59	577	285
Copenhagen	9	540	31	653	174
Munich	10=	537	27	654	215
San Francisco	10=	537	59	706	219
Helsinki	12	525	25	614	162
Vancouver	13	524	35	576	251
Brussels	14	523	53	608	237
Hamburg	15	520	39	641	210
Montreal	16	519	46	540	268
Tokyo	17	518	87	607	285
Vienna	18	516	22	550	160
Shanghai	19=	514	152	717	267
Sydney	19=	514	46	632	243
Singapore	21	512	108	575	249
Beijing	22=	510	129	722	241
Edinburgh	22=	510	46	599	237
New York	24=	509	175	559	268
Los Angeles	24=	509	47	616	265
Guangzhou	26=	508	73	768	187
Frankfurt	26=	508	87	552	242
Casablanca	26=	508	21	567	181
Guernsey	29	503	27	563	273
Shenzhen	30=	500	65	655	239
Toronto	30=	500	57	548	257
Washington DC	32	499	50	588	274
Seoul	33	498	33	561	279
Wellington	34	495	22	643	212
Jersey	35	494	23	498	294
Lisbon	36	493	20	625	205
Boston	37	491	57	598	263

Centre	GGFI 6	GGFI 6	Assessments		
			Number	Average	St. Dev
Osaka	38	490	34	662	265
Calgary	39	489	24	508	324
Tel Aviv	40=	487	21	452	256
Hong Kong	40=	487	123	507	259
Chicago	40=	487	55	518	264
Liechtenstein	40=	487	15	557	193
Dublin	44=	486	47	460	243
Glasgow	44=	486	21	502	281
Qingdao	46	485	152	829	135
Madrid	47=	482	36	561	222
Melbourne	47=	482	28	591	268
Malta	49	479	25	440	191
Mumbai	50	477	19	479	271
Rome	51	476	29	538	237
Milan	52	472	26	479	204
Mauritius	53	471	25	560	230
Gujarat	54=	469	176	990	60
Kuala Lumpur	54=	469	31	523	228
Dubai	56	466	96	455	282
Cayman Islands	57	462	28	379	269
Cape Town	58=	459	17	468	249
Bangkok	58=	459	16	409	289
New Delhi	58=	459	21	471	312
British Virgin	61=	449	23	383	246
Istanbul	61=	449	22	450	270
Jakarta	63	447	18	494	292
Prague	64	444	22	411	193
Isle of Man	65=	440	18	372	260
Sao Paulo	65=	440	25	406	199
Mexico City	65=	440	28	439	194
Johannesburg	68	438	24	371	217
Doha	69	437	20	443	219
Moscow	70	435	43	403	255
Bermuda	71	430	15	257	240
Abu Dhabi	72	425	47	350	247
Warsaw	73	419	24	367	222
Rio de Janeiro	74	410	26	333	168

## Appendix 2: Interest, Impact, And Drivers Details

**Table 30 | Interesting Areas Of Green Finance**

Area Of Green Finance	Number Of Mentions	Percentage Of Total Mentions
Natural Capital Valuation	89	3.7%
Carbon Disclosure	98	4.1%
Carbon Markets	120	5.0%
Climate Risk Stress Testing	130	5.5%
Green Loans	130	5.5%
Greentech Venture Capital	132	5.5%
Disinvestment from Fossil Fuels	148	6.2%
Energy Efficient Investment	165	6.9%
Green Insurance	168	7.0%
Renewable Energy Investment	177	7.4%
SRI Investment	180	7.6%
Green Bonds	209	8.8%
Social and Impact Investment	212	8.9%
Environment, Social and Governance (ESG) Analytics	213	8.9%
Sustainable Infrastructure Finance	213	8.9%
<b>Totals</b>	<b>2,384</b>	<b>100.0%</b>

**Table 31 | Areas Of Green Finance With Most Impact On Sustainability**

Area Of Green Finance	Number Of Mentions	Percentage Of Total Mentions
Greentech Venture Capital	84	3.6%
Natural Capital Valuation	93	4.0%
Climate Risk Stress Testing	112	4.9%
Carbon Markets	122	5.3%
Green Loans	139	6.0%
Carbon Disclosure	140	6.1%
Sustainable Infrastructure Finance	169	7.3%
Energy Efficient Investment	172	7.5%
Disinvestment from Fossil Fuels	174	7.5%
Renewable Energy Investment	178	7.7%
Green Insurance	181	7.8%
SRI Investment	181	7.8%
Environment, Social and Governance (ESG) Analytics	183	7.9%
Green Bonds	188	8.1%
Social and Impact Investment	192	8.3%
<b>Totals</b>	<b>2,308</b>	<b>100.0%</b>

**Table 32 | Drivers Of Green Finance**

<b>Driver</b>	<b>Number Of Mentions</b>	<b>Percentage Of Total Mentions</b>
Food Security	31	1.3%
Water Quality	43	1.9%
Air Quality	50	2.2%
Loss of Biodiversity	50	2.2%
Voluntary Standards	62	2.7%
Technological Change	71	3.1%
Energy Efficiency	74	3.2%
Finance Centre Activism	84	3.6%
Industry Activism	84	3.6%
NGO Activism	85	3.7%
Renewables	89	3.8%
Non-financial Reporting	90	3.9%
Tax Incentives	90	3.9%
Sustainability Reporting	95	4.1%
Insurance Industry Research	101	4.3%
Infrastructure Investment	107	4.6%
Risk Management Frameworks	124	5.3%
Investor Demand	127	5.5%
Public Awareness	128	5.5%
Academic Research	129	5.6%
International Initiatives	130	5.6%
Mandatory Disclosure	130	5.6%
Climate Change	145	6.2%
Policy and Regulatory Frameworks	205	8.8%
<b>Totals</b>	<b>2,324</b>	<b>100.0%</b>

## Appendix 3: Respondents' Details

**Table 33 | Respondents By Industry Sector**

Industry Sector	Number Of Respondents	Percentage Of Respondents
Banking	54	8.75%
Debt Capital Market	37	6.00%
Equity Capital Markets	47	7.62%
Insurance	27	4.38%
Investment	64	10.37%
Knowledge	82	13.29%
Local Green Initiatives	23	3.73%
Other	28	4.54%
Policy and Public Finance	47	7.62%
Professional Services	128	20.75%
Trading	80	12.97%
<b>Total</b>	<b>617</b>	<b>100.00%</b>

**Table 34 | Respondents By Region**

Region	Number Of Respondents	Percentage Of Respondents
Western Europe	207	33.55%
Asia/Pacific	202	32.74%
North America	62	10.05%
Middle East & Africa	38	6.16%
Eastern Europe & Central Asia	55	8.91%
Latin America & the Caribbean	45	7.29%
Other	8	1.30%
<b>Total</b>	<b>617</b>	<b>100.00%</b>

**Table 35 | Respondents By Engagement In Green Finance**

### a. All Respondents

Engagement In Green Finance	Number Of Respondents	Percentage Of Respondents
Working on Green Finance (All)	397	64.34%
Interested in Green Finance	196	31.77%
Other/Not Given	24	3.89%
<b>Total</b>	<b>617</b>	<b>100.00%</b>

### b. Recent Respondents (where we asked for respondents to identify whether full- or part-time)

Engagement In Green Finance	Number Of Respondents	Percentage Of Respondents
Working Full-time On Green Finance	257	41.65%
Working Part-time On Green Finance	140	22.69%
Interested in Green Finance	196	31.77%
Other/not given	24	3.89%
<b>Total</b>	<b>617</b>	<b>100.00%</b>

**Table 36 | Respondents By Size Of Organisation**

Size Of Organisation	Number Of Respondents	Percentage Of Respondents
<100	315	51.05%
100-500	48	7.78%
500-1000	45	7.29%
1000-2000	55	8.91%
2000-5000	43	6.97%
>5000	82	13.29%
Other/not given	29	4.70%
<b>Total</b>	<b>617</b>	<b>100.00%</b>

**Table 37 | Respondents By Gender**

Gender	Number Of Respondents	Percentage Of Respondents
Female	207	33.55%
Male	393	63.70%
Other	1	0.16%
Prefer not to say/not given	16	2.59%
<b>Total</b>	<b>617</b>	<b>100.00%</b>

**Table 38 | Respondents By Age**

Age Band	Number Of Respondents	Percentage Of Respondents
18-30	233	37.76%
30-45	171	27.71%
45-60	148	23.99%
60+	48	7.78%
Other/not given	17	2.76%
<b>Total</b>	<b>617</b>	<b>100.00%</b>



## Appendix 4: Methodology

The GGFI provides ratings for the depth and quality 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 ranking.

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, a support vector engine uses a database of indicators, or Instrumental Factors, that contains quantitative data about each financial centre, to predict how each respondent would have rated the financial centres they do not know. These instrumental factors draw on data from 135 different sources covering sustainability, comprising green finance activities as well as the physical attributes of a centre, such as air quality and local carbon emissions; business, including legal and policy factors and statistics on economic performance; human capital, reflecting educational development and social factors; 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.

### **Factors Affecting The Inclusion Of Centres In The GGFI**

The questionnaire lists a total of 120 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 a GGFI rating and ranking if it receives a statistically significant minimum number of assessments from individuals based in other geographical locations - at least 20 in GGFI 6. This means that not all 120 centres in the questionnaire receive a ranking. We will keep this number under review for further editions of the index as the number of assessments increases.

We will also develop rules as successive indices are published as to when a centre may be removed from the rankings, for example, if over a 24 month period, a centre has not received a minimum number of assessments.

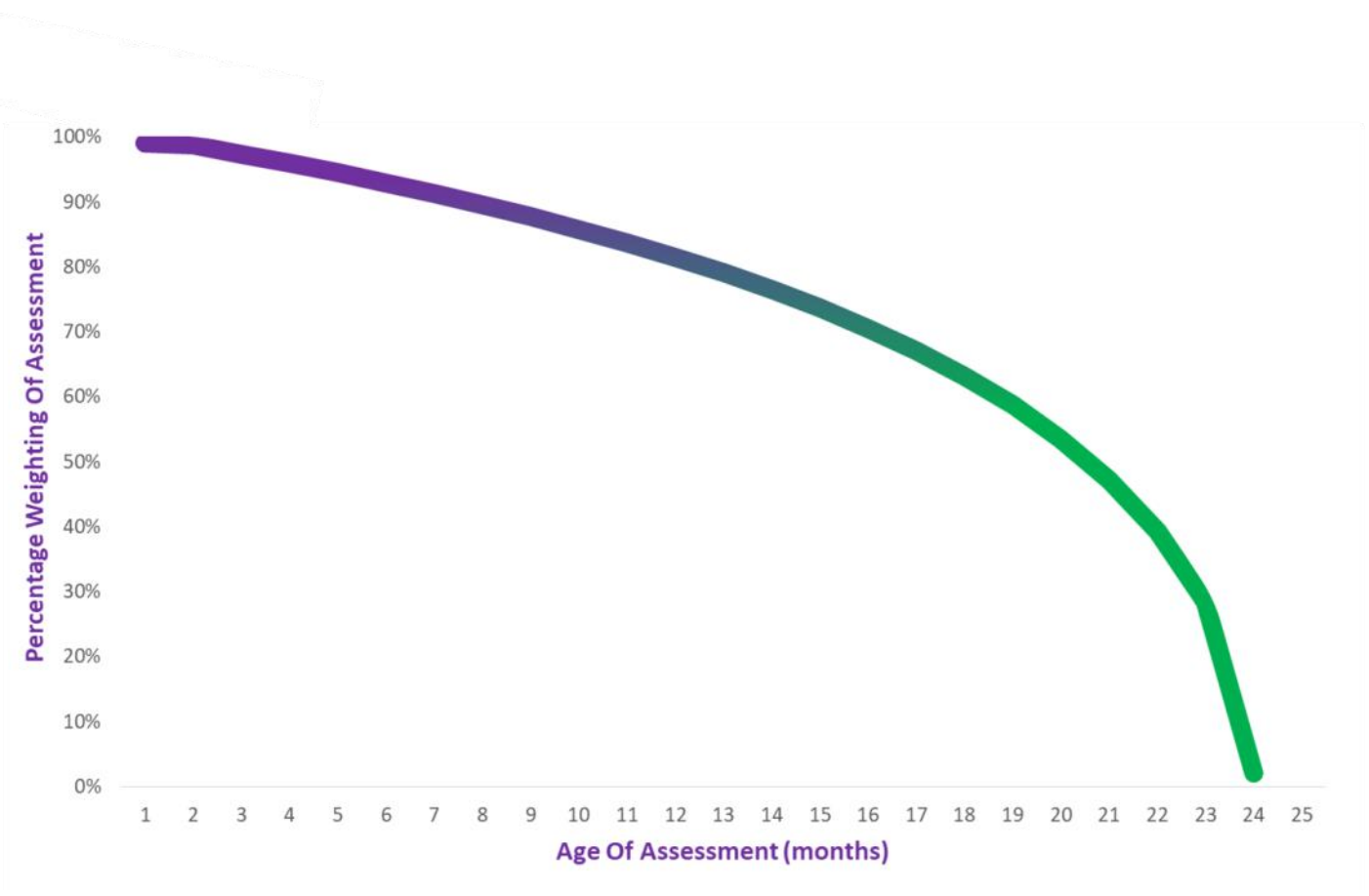
## Financial Centre Assessments

Financial centre assessments are collected via an online questionnaire which will run continuously and which is at [greenfinanceindex.net/survey/](https://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 GGFI publications.

In calculating the 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 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 GGFI is created will be given full weighting with earlier responses given a reduced weighting on a logarithmic scale as shown in Chart 58 - this recognises that older ratings, while still valid, are less likely to be up-to-date.

**Chart 58 | 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 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).

## Factor Assessment

Neither the financial centre assessments nor the instrumental factors on their own can provide a basis for the construction of the GGFI.

The financial centre assessments rate centres on their green finance performance, but each individual completing the questionnaire will:

- be familiar with only a limited number of centres - probably no more than 10 or 15 centres;
- rate a different group of centres making it difficult to compare data sets; and
- consider different aspects of centres' performance in their ratings.

The instrumental factors are based on a range of different models. Using just these factors would require some system of totaling or averaging scores across instrumental factors. Such an approach would involve a number of difficulties:

- Indices are published in a variety of different forms: an average or base point of 100 with scores above and below this; a simple ranking; actual values, e.g., \$ per square foot of occupancy costs; or a composite 'score';
- Indices would have to be normalised, e.g., in some indices, a high score is positive while in others a low score is positive;
- Not all centres are included in all indices; and
- The indices would have to be weighted.

Given these issues, the GGFI uses a statistical model to combine the financial centre assessments and instrumental factors.

This is done by conducting an analysis to determine whether there is a correlation between the financial centre assessments and the instrumental factors we have collected about financial centres. This involves building a predictive model of the rating of centres' green financial offerings using a support vector machine (SVM).

The details of the methodology can be accessed at <http://www.longfinance.net/programmes/the-global-green-finance-index/methodology.html>. The statistical model is developed in R, an open source language and environment for statistical computing and graphics.

An SVM is a supervised learning model with associated learning algorithms that analyses data used for classification and regression analysis. SVMs are based upon statistical techniques that classify and model complex historic data in order to make predictions on new data. SVMs work well on discrete, categorical data but also handle continuous numerical or time series data.

The SVM used for the GGFI provides information about the confidence with which each specific rating is made and the likelihood of other possible ratings being made by the same respondent.

The model then predicts how respondents would have assessed centres with which they are unfamiliar, by answering questions such as:

*If a respondent gives Singapore and Sydney certain assessments then, based on the instrumental factors for Singapore, Sydney, and Paris, how would that person assess Paris?*

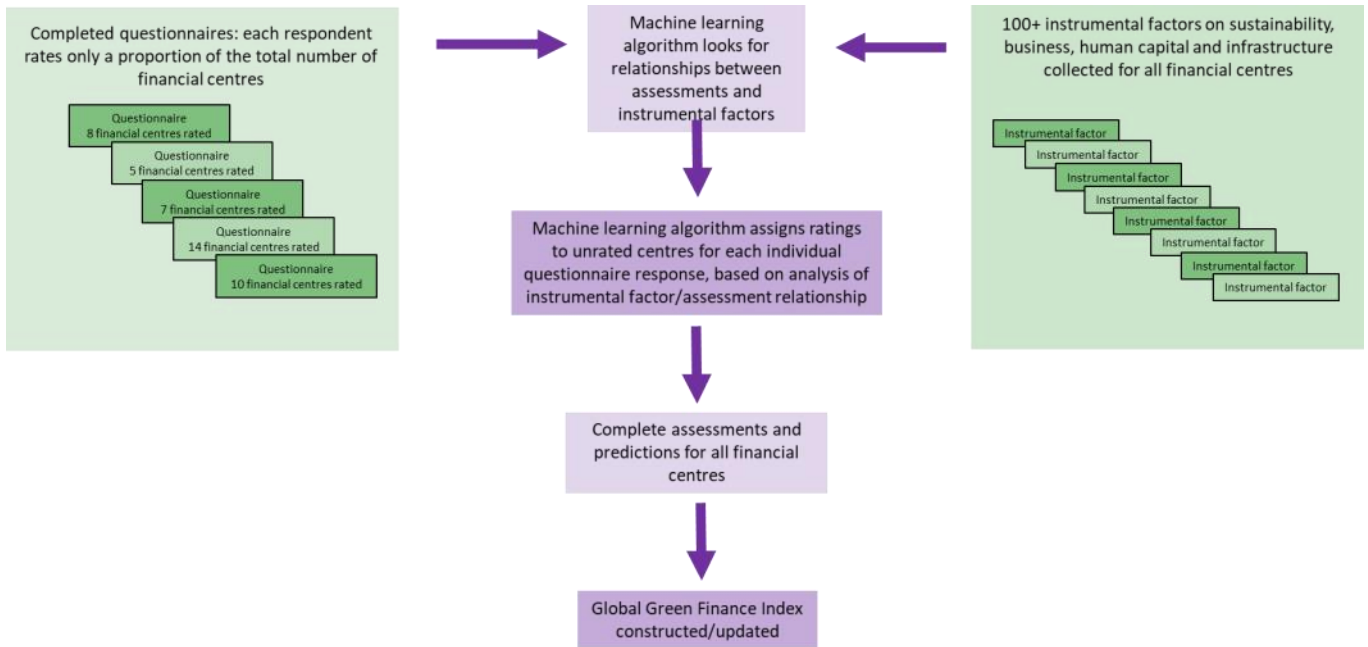
Or

*If Edinburgh and Munich have been given a certain assessment by this respondent, then, based on the instrumental factors for Edinburgh, Munich, and Zurich, how would that person assess Zurich?*

Financial centre rating predictions from the SVM are re-combined with actual financial centre assessments to produce the GGFI – a set of ratings for financial centres' green finance performance.

The process of creating the GGFI is outlined in Chart 59.

**Chart 59 | The GGFI Process**



## Appendix 5: Instrumental Factors

**Table 39 | Sustainability Instrumental Factor Correlation With Depth Ratings - Highest 15 Factors**

Instrumental Factors	R-squared
Water Quality	0.574
IESE Cities In Motion Index	0.434
Quality of Living City Rankings	0.428
Sustainable Cities Index	0.411
Sustainable Economic Development	0.310
Environmental Performance	0.296
Financial Centre Corporate Sustainability Performance	0.294
Global Sustainable Competitiveness Index	0.251
World Energy Trilemma Index	0.206
Quality of Life Index	0.156
Stock Exchanges With A Green Bond Segment (Y/N)	0.138
Air Quality Data	0.133
Financial Centre Sustainability Disclosure	0.129
Total Number Of Labelled Green Bonds Issued To December 2018	0.108
City Commitment To Carbon Reduction (Individual Action)	0.107

**Table 40 | Sustainability Instrumental Factor Correlation With Quality Ratings - Highest 15 Factors**

Instrumental Factors	R-squared
Water Quality	0.474
IESE Cities In Motion Index	0.466
Sustainable Cities Index	0.458
Quality of Living City Rankings	0.425
Sustainable Economic Development	0.348
Environmental Performance	0.332
Global Sustainable Competitiveness Index	0.298
World Energy Trilemma Index	0.269
Financial Centre Corporate Sustainability Performance	0.257
Stock Exchanges With A Green Bond Segment (Y/N)	0.162
Air Quality Data	0.154
Quality of Life Index	0.149
Financial Centre Sustainability Disclosure	0.135
Total Number Of Labelled Green Bonds Issued To December 2018	0.128
Total Issuance Of Labelled Green Bonds To December 2018, USD million	0.123

**Table 41 | Sustainability Factors**

Instrumental Factor	Source	Website	Updated
Air Quality Data	WHO	<a href="http://www.who.int/airpollution/data/cities/en/">http://www.who.int/airpollution/data/cities/en/</a>	N
Average Precipitation In Depth (mm Per Year)	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&amp;series=AG.LND.PRPC.MM">http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&amp;series=AG.LND.PRPC.MM</a>	N
Buildings Energy Efficiency Policies Database (Y/N)	IEA	<a href="https://www.iea.org/policies">https://www.iea.org/policies</a>	N
Certified Climate Bonds Issued To December 2018, % Of Centre Total	CBI	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
City Commitment To Carbon Reduction (Cooperative Action)	UNFCCC	<a href="http://climateaction.unfccc.int/views/stakeholders.html?type=cities">http://climateaction.unfccc.int/views/stakeholders.html?type=cities</a>	Y
City Commitment To Carbon Reduction (Individual Action)	UNFCCC	<a href="http://climateaction.unfccc.int/views/stakeholders.html?type=cities">http://climateaction.unfccc.int/views/stakeholders.html?type=cities</a>	Y
Climate-Aligned Bonds Outstanding by Country Of Issuer	CBI	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
CO2 Emissions Per Capita	World Bank	<a href="https://data.worldbank.org/indicator/EN.ATM.CO2E.PC">https://data.worldbank.org/indicator/EN.ATM.CO2E.PC</a>	Y
Energy Intensity Of GDP	Enerdata Statistical Yearbook	<a href="https://yearbook.enerdata.net/download/">https://yearbook.enerdata.net/download/</a>	Y
World Energy Trilemma Index	World Energy Council	<a href="https://trilemma.worldenergy.org/">https://trilemma.worldenergy.org/</a>	N
Environmental Performance	Yale University	<a href="https://epi.yale.edu/epi-results/2020/component/epi">https://epi.yale.edu/epi-results/2020/component/epi</a>	Y
Externally-Reviewed (excl CCB) Labelled Green Bonds Issued To December 2018, % of centre total	CBI	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Financial Centre Carbon Intensity	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Financial Centre Clean To Fossil-Fuel Related Revenue (Clean Revenue)	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Financial Centre Clean To Fossil-Fuel Related Revenue (Dirty Revenue)	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Financial Centre Corporate Sustainability Performance	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Financial Centre Sustainability Disclosure	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Financial Centres Green Alignment - Non-Regulatory Actors	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Financial Centres Green Alignment - Regulators And Stock Exchanges	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Forestry Area	World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=2&amp;series=AG.LND.FRST.ZS&amp;country=">http://databank.worldbank.org/data/reports.aspx?source=2&amp;series=AG.LND.FRST.ZS&amp;country=</a>	Y
Global Sustainable Competitiveness Index	Solability	<a href="http://solability.com/the-global-sustainable-competitiveness-index/the-index">http://solability.com/the-global-sustainable-competitiveness-index/the-index</a>	N
GRESB Green Real Estate And Infrastructure Investment Score	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
IESE Cities In Motion Index	IESE	<a href="http://citiesinmotion.iese.edu/indicecim/?lang=en">http://citiesinmotion.iese.edu/indicecim/?lang=en</a>	Y
Labelled Green Bonds Issued By Country Of Issuer	CBI	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Not-Externally-Reviewed Labelled Green Bonds Issued To December 2018, % of centre total	CBI	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Protected Land Area % Of Land Area	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=2&amp;series=ER.LND.PTLD.ZS&amp;country=">http://databank.worldbank.org/data/reports.aspx?source=2&amp;series=ER.LND.PTLD.ZS&amp;country=</a>	N
Quality of Life Index	Numbeo	<a href="http://www.numbeo.com/quality-of-life/rankings.jsp">http://www.numbeo.com/quality-of-life/rankings.jsp</a>	Y
Quality of Living City Rankings	Mercer	<a href="https://mobilityexchange.mercer.com/Insights/quality-of-living-rankings">https://mobilityexchange.mercer.com/Insights/quality-of-living-rankings</a>	N
Ratio Climate-Aligned Bonds To Total Debt Securities By Issuer Location	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N

**Table 41 (continued) | Sustainability Factors**

Instrumental Factor	Source	Website	Updated
Ratio Labelled Green Bonds To Total Debt Securities By Issuer Location	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Share Of Renewables In Electricity Production	Enerdata Statistical Yearbook	<a href="https://yearbook.enerdata.net/download/">https://yearbook.enerdata.net/download/</a>	Y
Share Of Wind And Solar In Electricity Production	Enerdata Statistical Yearbook	<a href="https://yearbook.enerdata.net/download/">https://yearbook.enerdata.net/download/</a>	Y
Stock Exchanges With A Green Bond Segment (Y/N)	CBI	<a href="https://www.climatebonds.net/green-bond-segments-stock-exchanges">https://www.climatebonds.net/green-bond-segments-stock-exchanges</a>	N
Sum Of GHG Emissions	Corporate Knights	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Sustainable Cities Index	Arcadis	<a href="https://www.arcadis.com/en/global/our-perspectives/sustainable-cities-index-2018/citizen-centric-cities/">https://www.arcadis.com/en/global/our-perspectives/sustainable-cities-index-2018/citizen-centric-cities/</a>	N
Sustainable Economic Development	Boston Consulting Group	<a href="https://www.bcg.com/en-gb/publications/2019/seda-measuring-well-being.aspx">https://www.bcg.com/en-gb/publications/2019/seda-measuring-well-being.aspx</a>	N
Sustainable Stock Exchanges (Y/N)	UN Sustainable Stock Exchange Initiative	<a href="https://sseinitiative.org/members/">https://sseinitiative.org/members/</a>	Y
Total Issuance Of Labelled Green Bonds To December 2018, USDm	CBI	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Total Number Of Labelled Green Bonds Issued To December 2018	CBI	<a href="https://www.finance-watch.org/publication/global-green-finance-index-3/">https://www.finance-watch.org/publication/global-green-finance-index-3/</a>	N
Water Quality	OECD	<a href="https://stats.oecd.org/Index.aspx?DataSetCode=BLI">https://stats.oecd.org/Index.aspx?DataSetCode=BLI</a>	N



**Table 42 | Human Capital Factors**

Instrumental Factor	Source	Website	Updated
Citizens Domestic Purchasing Power	UBS	<a href="https://www.ubs.com/microsites/prices-earnings/en/">https://www.ubs.com/microsites/prices-earnings/en/</a>	N
Corruption Perception Index	Transparency International	<a href="https://www.transparency.org/en/cpi/2019/">https://www.transparency.org/en/cpi/2019/</a>	Y
Cost of Living City Rankings	Mercer	<a href="https://www.mercer.com/our-thinking/career/cost-of-living.html">https://www.mercer.com/our-thinking/career/cost-of-living.html</a>	Y
Crime Index	Numbeo	<a href="http://www.numbeo.com/crime/rankings.jsp#">http://www.numbeo.com/crime/rankings.jsp#</a>	Y
Educational Attainment	OECD	<a href="https://stats.oecd.org/Index.aspx?DataSetCode=BLI">https://stats.oecd.org/Index.aspx?DataSetCode=BLI</a>	N
Employees Working Very Long Hours	OECD	<a href="https://stats.oecd.org/Index.aspx?DataSetCode=BLI">https://stats.oecd.org/Index.aspx?DataSetCode=BLI</a>	N
GDP per Person Employed(constant 2017 PPP \$)	The World Bank	<a href="https://databank.worldbank.org/reports.aspx?source=world-development-indicators&amp;series=SL.GDP.PCAP.EM.KD">https://databank.worldbank.org/reports.aspx?source=world-development-indicators&amp;series=SL.GDP.PCAP.EM.KD</a>	Y
Global Cities Index	AT Kearney	<a href="https://www.atkearney.com/global-cities/2019">https://www.atkearney.com/global-cities/2019</a>	N
Global Innovation Index	INSEAD	<a href="http://www.globalinnovationindex.org/content.aspx?page=GII-Home">http://www.globalinnovationindex.org/content.aspx?page=GII-Home</a>	N
Global Intellectual Property Index	Taylor Wessing	<a href="https://united-kingdom.taylorwessing.com/en/ip-index/reports">https://united-kingdom.taylorwessing.com/en/ip-index/reports</a>	N
Global Peace Index	Institute for Economics & Peace	<a href="http://www.visionofhumanity.org/">http://www.visionofhumanity.org/</a>	Y
Global Skills Index	Hays	<a href="http://www.hays-index.com/">http://www.hays-index.com/</a>	N
Global Terrorism Index	Institute for Economics & Peace	<a href="http://visionofhumanity.org/indexes/terrorism-index/">http://visionofhumanity.org/indexes/terrorism-index/</a>	N
Good Country Index	Good Country Party	<a href="https://www.goodcountry.org/index/results">https://www.goodcountry.org/index/results</a>	N
Government Effectiveness	The World Bank	<a href="http://info.worldbank.org/governance/wgi/index.aspx#home">http://info.worldbank.org/governance/wgi/index.aspx#home</a>	N
Graduates In Social Science, Business And Law (As % Of Total Graduates)	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=Education%20Statistics&amp;series=UIS.FOSGP.5T8.F400">http://databank.worldbank.org/data/reports.aspx?source=Education%20Statistics&amp;series=UIS.FOSGP.5T8.F400</a>	Y
Gross Tertiary Graduation Ratio	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=Education%20Statistics&amp;series=SE.TER.CMPL.ZS">http://databank.worldbank.org/data/reports.aspx?source=Education%20Statistics&amp;series=SE.TER.CMPL.ZS</a>	Y
Health Care Index	Numbeo	<a href="http://www.numbeo.com/health-care/rankings.jsp">http://www.numbeo.com/health-care/rankings.jsp</a>	Y
Homicide Rates	UN Office of Drugs & Crime	<a href="https://dataunodc.un.org/content/data/homicide/homicide-rate">https://dataunodc.un.org/content/data/homicide/homicide-rate</a>	Y
Household Net Adjusted Disposable Income	OECD	<a href="https://stats.oecd.org/Index.aspx?DataSetCode=BLI">https://stats.oecd.org/Index.aspx?DataSetCode=BLI</a>	N
Household Net Financial Wealth	OECD	<a href="https://stats.oecd.org/Index.aspx?DataSetCode=BLI">https://stats.oecd.org/Index.aspx?DataSetCode=BLI</a>	N
Human Development Index	UN Development Programme	<a href="http://hdr.undp.org/en/2019-report/download">http://hdr.undp.org/en/2019-report/download</a>	Y
Human Freedom Index	Cato Institute	<a href="https://www.cato.org/human-freedom-index">https://www.cato.org/human-freedom-index</a>	N
ICT Development Index	United Nations	<a href="http://www.itu.int/net4/ITU-D/idi/2017/index.html">http://www.itu.int/net4/ITU-D/idi/2017/index.html</a>	N
Individual Income Tax Rates	KPMG	<a href="https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/individual-income-tax-rates-table.html">https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/individual-income-tax-rates-table.html</a>	Y

**Table 42 (continued) | Human Capital Factors**

Instrumental Factor	Source	Website	Updated
Innovation Cities Global Index	2ThinkNow Innovation Cities	<a href="https://www.innovation-cities.com/index-2019-global-city-rankings/18842/">https://www.innovation-cities.com/index-2019-global-city-rankings/18842/</a>	N
Legatum Prosperity Index	Legatum Institute	<a href="http://www.prosperity.com/#/ranking">http://www.prosperity.com/#/ranking</a>	N
Life Expectancy	OECD	<a href="https://stats.oecd.org/Index.aspx?DataSetCode=BLI">https://stats.oecd.org/Index.aspx?DataSetCode=BLI</a>	N
Linguistic Diversity	Ethnologue	<a href="http://www.ethnologue.com/statistics/country">http://www.ethnologue.com/statistics/country</a>	N
Lloyd's City Risk Index 2015-2025	Lloyd's	<a href="https://cityriskindex.lloyds.com/about/">https://cityriskindex.lloyds.com/about/</a>	N
Number Of High Net Worth Individuals	Capgemini	<a href="https://www.worldwealthreport.com/">https://www.worldwealthreport.com/</a>	N
Number Of International Association Meetings	World Economic Forum	<a href="http://reports.weforum.org/travel-and-tourism-competitiveness-report-2019/rankings/#series=NRFAIREX">http://reports.weforum.org/travel-and-tourism-competitiveness-report-2019/rankings/#series=NRFAIREX</a>	N
OECD Country Risk Classification	OECD	<a href="http://www.oecd.org/trade/topics/export-credits/documents/cre-crc-current-english.pdf">http://www.oecd.org/trade/topics/export-credits/documents/cre-crc-current-english.pdf</a>	Y
Open Data Barometer	World Wide Web Foundation	<a href="https://opendatabarometer.org/4thedition/?_year=2016&amp;indicator=ODB">https://opendatabarometer.org/4thedition/?_year=2016&amp;indicator=ODB</a>	N
Open Government	World Justice Project	<a href="http://worldjusticeproject.org/rule-of-law-index">http://worldjusticeproject.org/rule-of-law-index</a>	Y
Henley Passport Index	Henley Partners	<a href="https://www.henleypassportindex.com/passport">https://www.henleypassportindex.com/passport</a>	Y
Personal Tax Rates	OECD	<a href="https://stats.oecd.org/index.aspx?DataSetCode=TABLE_I6">https://stats.oecd.org/index.aspx?DataSetCode=TABLE_I6</a>	Y
Political Stability And Absence Of Violence/Terrorism	The World Bank	<a href="http://info.worldbank.org/governance/wgi/index.aspx#home">http://info.worldbank.org/governance/wgi/index.aspx#home</a>	N
Press Freedom Index	Reporters Without Borders (RSF)	<a href="https://rsf.org/en/ranking/2020">https://rsf.org/en/ranking/2020</a>	Y
Prime International Residential Index	Knight Frank	<a href="http://www.knightfrank.com/wealthreport">http://www.knightfrank.com/wealthreport</a>	Y
Regulatory Quality	The World Bank	<a href="http://info.worldbank.org/governance/wgi/index.aspx#home">http://info.worldbank.org/governance/wgi/index.aspx#home</a>	N
Tax Revenue as Percentage of GDP	The World Bank	<a href="https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS">https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS</a>	Y
Top Tourism Destinations	Euromonitor	<a href="https://go.euromonitor.com/white-paper-travel-2019-100-cities.html">https://go.euromonitor.com/white-paper-travel-2019-100-cities.html</a>	N
Wage Comparison Index	UBS	<a href="https://www.ubs.com/microsites/prices-earnings/en/">https://www.ubs.com/microsites/prices-earnings/en/</a>	N
World Talent Rankings	IMD	<a href="https://www.imd.org/wcc/world-competitiveness-center-rankings/world-talent-ranking-2019/">https://www.imd.org/wcc/world-competitiveness-center-rankings/world-talent-ranking-2019/</a>	N



**Table 43 | Business Factors**

Instrumental Factor	Source	Website	Updated
Best Countries For Business	Forbes	<a href="http://www.forbes.com/best-countries-for-business/list/#tab:overall">http://www.forbes.com/best-countries-for-business/list/#tab:overall</a>	N
Bilateral Tax Information Exchange Agreements	OECD	<a href="http://www.oecd.org/ctp/exchange-of-tax-information/taxinformationexchangeagreementsstieas.htm">http://www.oecd.org/ctp/exchange-of-tax-information/taxinformationexchangeagreementsstieas.htm</a>	N
Broad Stock Index Levels	The World Federation of Stock Exchanges	<a href="https://focus.world-exchanges.org/issue/july-2020/market-statistics">https://focus.world-exchanges.org/issue/july-2020/market-statistics</a>	Y
Business Environment Rankings	EIU	<a href="http://country.eiu.com/All">http://country.eiu.com/All</a>	Y
Capitalisation Of Stock Exchanges	The World Federation of Stock Exchanges	<a href="https://focus.world-exchanges.org/issue/july-2020/market-statistics">https://focus.world-exchanges.org/issue/july-2020/market-statistics</a>	Y
Common Law Countries	CIA	<a href="https://www.cia.gov/library/publications/the-world-factbook/fields/308.html">https://www.cia.gov/library/publications/the-world-factbook/fields/308.html</a>	N
Corporate Tax Rates	PWC	<a href="https://www.pwc.com/payingtaxes">https://www.pwc.com/payingtaxes</a>	N
Democracy Index	The Economist	<a href="https://www.eiu.com/topic/democracy-index">https://www.eiu.com/topic/democracy-index</a>	Y
Domestic Credit Provided By Banking Sector (% Of GDP)	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&amp;series=FS.AST.DOMS.GD.ZS">http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&amp;series=FS.AST.DOMS.GD.ZS</a>	Y
Ease Of Doing Business Index	The World Bank	<a href="https://www.doingbusiness.org/en/reports/global-reports/doing-business-2020">https://www.doingbusiness.org/en/reports/global-reports/doing-business-2020</a>	N
Economic Performance Index	The Brookings Institution	<a href="https://www.brookings.edu/research/global-metro-monitor-2018/#rank">https://www.brookings.edu/research/global-metro-monitor-2018/#rank</a>	N
External Positions Of Central Banks As A Share Of GDP	The Bank for International Settlements	<a href="http://www.bis.org/statistics/annex_map.htm">http://www.bis.org/statistics/annex_map.htm</a>	Y
FDI Confidence Index	AT Kearney	<a href="https://www.atkearney.com/foreign-direct-investment-confidence-index">https://www.atkearney.com/foreign-direct-investment-confidence-index</a>	Y
FDI Inward Stock(in million dollars)	UNCTAD	<a href="http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx">http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx</a>	Y
Financial Secrecy Index	Tax Justice Network	<a href="http://www.financialsecrecyindex.com/">http://www.financialsecrecyindex.com/</a>	Y
Foreign Direct Investment Inflows	UNCTAD	<a href="http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=96740">http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=96740</a>	N
Global Connectedness Index	DHL	<a href="http://www.logistics.dhl/gci">www.logistics.dhl/gci</a>	N
Global Enabling Trade Report	World Economic Forum	<a href="https://www.weforum.org/focus/global-enabling-trade-report-2016">https://www.weforum.org/focus/global-enabling-trade-report-2016</a>	N
Global Services Location	AT Kearney	<a href="https://www.atkearney.com/digital-transformation/ggli">https://www.atkearney.com/digital-transformation/ggli</a>	N
Government Debt as % of GDP	CIA	<a href="https://www.cia.gov/library/publications/the-world-factbook/rankorder/2186rank.html">https://www.cia.gov/library/publications/the-world-factbook/rankorder/2186rank.html</a>	N
Net External Positions Of Banks	The Bank for International Settlements	<a href="http://www.bis.org/statistics/annex_map.htm">http://www.bis.org/statistics/annex_map.htm</a>	Y
Office Occupancy Cost	CBRE Research	<a href="https://www.cbre.com/research-and-reports/Global-Prime-Office-Occupancy-Costs-2019">https://www.cbre.com/research-and-reports/Global-Prime-Office-Occupancy-Costs-2019</a>	N
Open Budget Survey	International Budget Partnership	<a href="http://survey.internationalbudget.org/#download">http://survey.internationalbudget.org/#download</a>	Y
Open Budget Survey	International Budget Partnership	<a href="http://survey.internationalbudget.org/#download">http://survey.internationalbudget.org/#download</a>	N
Operational Risk Rating	EIU	<a href="http://viewswire.eiu.com/site_info.asp?info_name=VW2_RISK_nib&amp;page=rk&amp;page_title=Risk%20table">http://viewswire.eiu.com/site_info.asp?info_name=VW2_RISK_nib&amp;page=rk&amp;page_title=Risk%20table</a>	Y

**Table 43 (continued) | Business Factors**

Instrumental Factor	Source	Website	Updated
Percentage Of Firms Using Banks To Finance Investment	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&amp;series=IC.FRM.BNKS.ZS">http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&amp;series=IC.FRM.BNKS.ZS</a>	Y
Real Interest Rate	The World Bank	<a href="https://databank.worldbank.org/reports.aspx?source=world-development-indicators&amp;series=FR.INR.RINR">https://databank.worldbank.org/reports.aspx?source=world-development-indicators&amp;series=FR.INR.RINR</a>	Y
Total Net Assets Of Regulated Open-End Funds	Investment Company Institute	<a href="http://www.icifactbook.org/">http://www.icifactbook.org/</a>	Y
Value Of Bond Trading	The World Federation of Stock Exchanges	<a href="https://statistics.world-exchanges.org/ReportGenerator/Generator#">https://statistics.world-exchanges.org/ReportGenerator/Generator#</a>	Y
Value Of Share Trading	The World Federation of Stock Exchanges	<a href="https://focus.world-exchanges.org/issue/july-2020/market-statistics">https://focus.world-exchanges.org/issue/july-2020/market-statistics</a>	Y
Volume Of Share Trading	The World Federation of Stock Exchanges	<a href="https://statistics.world-exchanges.org/ReportGenerator/Generator#">https://statistics.world-exchanges.org/ReportGenerator/Generator#</a>	Y
World Competitiveness Scoreboard	IMD	<a href="https://www.imd.org/wcc/world-competitiveness-center-rankings/world-competitiveness-ranking-2019/">https://www.imd.org/wcc/world-competitiveness-center-rankings/world-competitiveness-ranking-2019/</a>	N
The Global Financial Centres Index	Z/Yen	<a href="https://www.longfinance.net/programmes/financial-centre-futures/global-financial-centres-index/">https://www.longfinance.net/programmes/financial-centre-futures/global-financial-centres-index/</a>	Y
The Global Fintech Index	Findexable	<a href="https://findexable.com/">https://findexable.com/</a>	N
TRACE Bribery Risk Matrix	Trace International	<a href="https://matrixbrowser.traceinternational.org/">https://matrixbrowser.traceinternational.org/</a>	N
Jurisdictions Participating In The Convention On Mutual Administrative Assistance In Tax Matters	OECD	<a href="https://www.oecd.org/tax/exchange-of-tax-information/convention-on-mutual-administrative-assistance-in-tax-matters.htm">https://www.oecd.org/tax/exchange-of-tax-information/convention-on-mutual-administrative-assistance-in-tax-matters.htm</a>	New

**Table 44 | Infrastructure Factors**

Instrumental Factor	Source	Website	Updated
Refined oil products production	Enerdata Statistical Yearbook	<a href="https://yearbook.enerdata.net/download/">https://yearbook.enerdata.net/download/</a>	Y
Global Competitiveness Index	World Economic Forum	<a href="http://reports.weforum.org/global-competitiveness-report-2019/competitiveness-rankings/">http://reports.weforum.org/global-competitiveness-report-2019/competitiveness-rankings/</a>	N
INRIX Traffic Scorecard	INRIX	<a href="http://inrix.com/scorecard/">http://inrix.com/scorecard/</a>	Y
JLL Real Estate Transparency Index	Jones Lang LaSalle	<a href="http://greti.jll.com/greti/rankings">http://greti.jll.com/greti/rankings</a>	Y
Liner Shipping Connectivity Index	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=2&amp;series=IS.SHP.GCNW.XQ">http://databank.worldbank.org/data/reports.aspx?source=2&amp;series=IS.SHP.GCNW.XQ</a>	Y
Logistics Performance Index	The World Bank	<a href="http://lpi.worldbank.org/international/global">http://lpi.worldbank.org/international/global</a>	N
Metro Network Length	Metro Bits	<a href="http://mic-ro.com/metro/table.html">http://mic-ro.com/metro/table.html</a>	Y
Networked Readiness Index	World Economic Forum	<a href="http://reports.weforum.org/global-information-technology-report-2016/">http://reports.weforum.org/global-information-technology-report-2016/</a>	N
Networked Society Index	Ericsson	<a href="https://www.ericsson.com/en/reports-and-papers/networked-society-insights/city-index">https://www.ericsson.com/en/reports-and-papers/networked-society-insights/city-index</a>	N
Quality Of Domestic Transport Network	World Economic Forum	<a href="http://reports.weforum.org/travel-and-tourism-competitiveness-report-2019/rankings/#series=TRSPEFFICY">http://reports.weforum.org/travel-and-tourism-competitiveness-report-2019/rankings/#series=TRSPEFFICY</a>	N
Quality of Road Infrastructure	World Economic Forum	<a href="http://reports.weforum.org/travel-and-tourism-competitiveness-report-2019/rankings/#series=EOSQ057">http://reports.weforum.org/travel-and-tourism-competitiveness-report-2019/rankings/#series=EOSQ057</a>	N
Railways Per Land Area	CIA	<a href="https://www.cia.gov/library/publications/the-world-factbook/rankorder/2121rank.html">https://www.cia.gov/library/publications/the-world-factbook/rankorder/2121rank.html</a>	N
Roadways Per Land Area	CIA	<a href="https://www.cia.gov/library/publications/the-world-factbook/rankorder/2085rank.html">https://www.cia.gov/library/publications/the-world-factbook/rankorder/2085rank.html</a>	N
Telecommunication Infrastructure Index	United Nations	<a href="https://publicadministration.un.org/egovkb/en-us/Data-Center">https://publicadministration.un.org/egovkb/en-us/Data-Center</a>	Y
TomTom Traffic Index	TomTom	<a href="https://www.tomtom.com/en_gb/traffic-index/ranking/">https://www.tomtom.com/en_gb/traffic-index/ranking/</a>	Y

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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 GGFI and GFCI data, marketing opportunities, and training for centres seeking to enhance their profile and reputation.



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 believe 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.

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[/www.seoul.go.kr/main/index.jsp](http://www.seoul.go.kr/main/index.jsp)**



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.

**[enquiry@fsdc.org.hk](mailto:enquiry@fsdc.org.hk)  
<https://www.fsdc.org.hk/en>**



Luxembourg for Finance (LFF) is the Agency for the Development of the Financial Centre. It is a public-private partnership between the Luxembourg Government and the Luxembourg Financial Industry Federation (PROFIL). Founded in 2008, its objective is to develop Luxembourg's financial services industry and identify new business opportunities.

LFF connects international investors to the range of financial services provided in Luxembourg, such as investment funds, wealth management, capital market operations or advisory services. In addition to being the first port of call for foreign journalists, LFF cooperates with the various professional associations and monitors global trends in finance, providing the necessary material on products and services available in Luxembourg.

Furthermore, LFF manages multiple communication channels, organises seminars in international business locations, and takes part in selected world-class trade fairs and congresses.

**[iff@lff.lu](mailto:iff@lff.lu)  
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Finance Montreal's mandate is to promote Montreal as a world-class financial hub and foster cooperation among its member institutions to accelerate the industry's growth. With renowned research capacities in artificial intelligence and a booming fintech sector, Montreal offers an experienced, diversified and innovative pool of talent as well as a stable, low cost and dynamic business environment.

For financial institutions searching for an ideal location to set up an intelligent service centre and operationalize their digital transformation, Finance Montreal can advise on the advantageous tax incentives aimed at facilitating the establishment and development of financial services corporations in the city.

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Since 2009 Busan Metropolitan City has been developing a financial hub specialized 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. Following the successful launch of the 63-story Busan International Finance Center in 2014, the second phase development of the Busan Financial Hub was completed in 2018, residing the fintech hub center and financial museum. In addition, Busan has been designated as a Regulation-Free Blockchain Zone by the government, becoming a hub of the financial industry that applies the new technology.

With this world-class business infrastructure, BIFC offers an attractive incentive package to global financial leaders, including 25 years of free office rentals to be offered to a small number of companies.

BIFC will support you to identify opportunities in Busan, one of the fastest developing cities in Asia.

[bifc@bepa.kr](mailto:bifc@bepa.kr)  
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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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Approved by the China’s State Council, China Development Institute (CDI) was founded in 1989 with one hundred and sixteen 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 evokes 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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AIFC is an all-around financial centre located in Nur-Sultan, the capital of Kazakhstan, which offers ample opportunities for businesses to grow. AIFC provides greater access to world-class capital markets and the asset management industry. It also promotes financial technology and drives the development of niche markets such as Islamic and green finance in the region.

AIFC provides unprecedented conditions and opportunities for its participants and investors: legal system based on the principles of English law, independent judicial system, regulatory framework consistent with internationally recognised standards, wide range of financial services and instruments, simplified visa and labour regimes, zero corporate tax rate, and English as a working language.

Located in the heart of Eurasia, AIFC is striving to become the gateway to the Eurasian Economic Union, Central Asia and Caucasus, and play a key role in the Belt and Road Initiative. AIFC is already gaining tremendous recognition as a leading financial hub in the region: recently, Asiamoney Awards recognised it as the best Belt and Road Initiative project of 2019.

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**Vantage**

**Financial Centres**

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 GGFI and GFCI data, marketing opportunities, and training for centres seeking to enhance their profile and reputation.



The Long Finance initiative grew out of the London Accord, a 2005 agreement among investment researchers to share environmental, social and governance research with policy-makers 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](http://www.longfinance.net)



Dubai International Financial Centre (DIFC) is one of the world's most advanced financial centres, and the leading financial hub for the Middle East, Africa and South Asia (MEASA), which comprises 72 countries with an approximate population of 3 billion and a nominal GDP of US\$ 7.7 trillion.

DIFC is home to an internationally recognised, independent regulator and a proven judicial system with an English common law framework, as well as the region's largest financial ecosystem of more than 24,000 professionals working across over 2,200 active registered companies – making up the largest and most diverse pool of industry talent in the region. The Centre's vision is to drive the future of finance. Today, it offers one of the region's most comprehensive FinTech and venture capital environments, including cost-effective licensing solutions, fit-for-purpose regulation, innovative accelerator programmes, and funding for growth-stage start-ups.

Comprising a variety of world-renowned retail and dining venues, a dynamic art and culture scene, residential apartments, hotels and public spaces, DIFC continues to be one of Dubai's most sought-after business and lifestyle destinations.

[www.difc.ae](http://www.difc.ae) [Twitter @DIFC](#)



Global Times Consulting

Global Times Consulting Co. is a strategic consultancy with a focus on China. We help Chinese (local) governments at all levels to build their reputation globally, providing strategic counsel, stakeholder outreach and communications to support their sustainable development. We also partner with multinational companies operating in this dynamic but challenging market, serving as a gateway to China. In addition, we help Chinese companies extend their reach overseas.

Global Times Consulting Co. adopts a research and knowledge-based approach. With extensive contacts and deep insights into China's political and economic landscape, we develop and execute integrated programs for stakeholder relations and reputation management. Our extensive relationship with media and government organizations in China and worldwide helps us successfully execute programs and achieve desired goals.

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ABU DHABI GLOBAL MARKET  
سوق أبوظبي العالمي

Abu Dhabi Global Market (ADGM), an award-winning financial centre in the capital of the UAE, opened for business in October 2015, consisting of three independent authorities: the Registration Authority (RA); the Financial Services Regulatory Authority (FSRA); and ADGM Courts. Comprised of the three independent authorities where Common English Law is directly applicable, ADGM plays an essential role in the diversification of the economy in the UAE and is committed to providing a comprehensive business ecosystem operating with the highest standards of integrity and is renowned for its ease of doing business.

Strategically situated in Abu Dhabi, home to one of the world's largest sovereign wealth funds, ADGM plays a vital role in positioning Abu Dhabi as a global trade and business hub and serves as a link between the growing economies of the Middle East, Africa and South Asia to the rest of the world. ADGM has earned industry recognition as the Financial Centre of the Year (MENA) four years in a row as well as being recognized as the leading FinTech Hub in the region.

[www.adgm.com/](http://www.adgm.com/) [info@adgm.com](mailto:info@adgm.com)

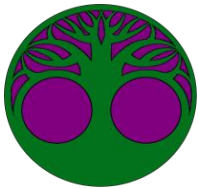
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[www.zyen.com](http://www.zyen.com)

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 GLOBAL GREEN FINANCE INDEX



[www.greenfinanceindex.net](http://www.greenfinanceindex.net)

The 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 GGFI, the programme supports the [London Accord](#), a free to access collection of nearly 600 environmental social and governance research reports from financial services, NGO, academic and policy making institutions.

### PUBLISHED BY LONG FINANCE AND FINANCIAL CENTRE FUTURES



[www.longfinance.net](http://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](http://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.