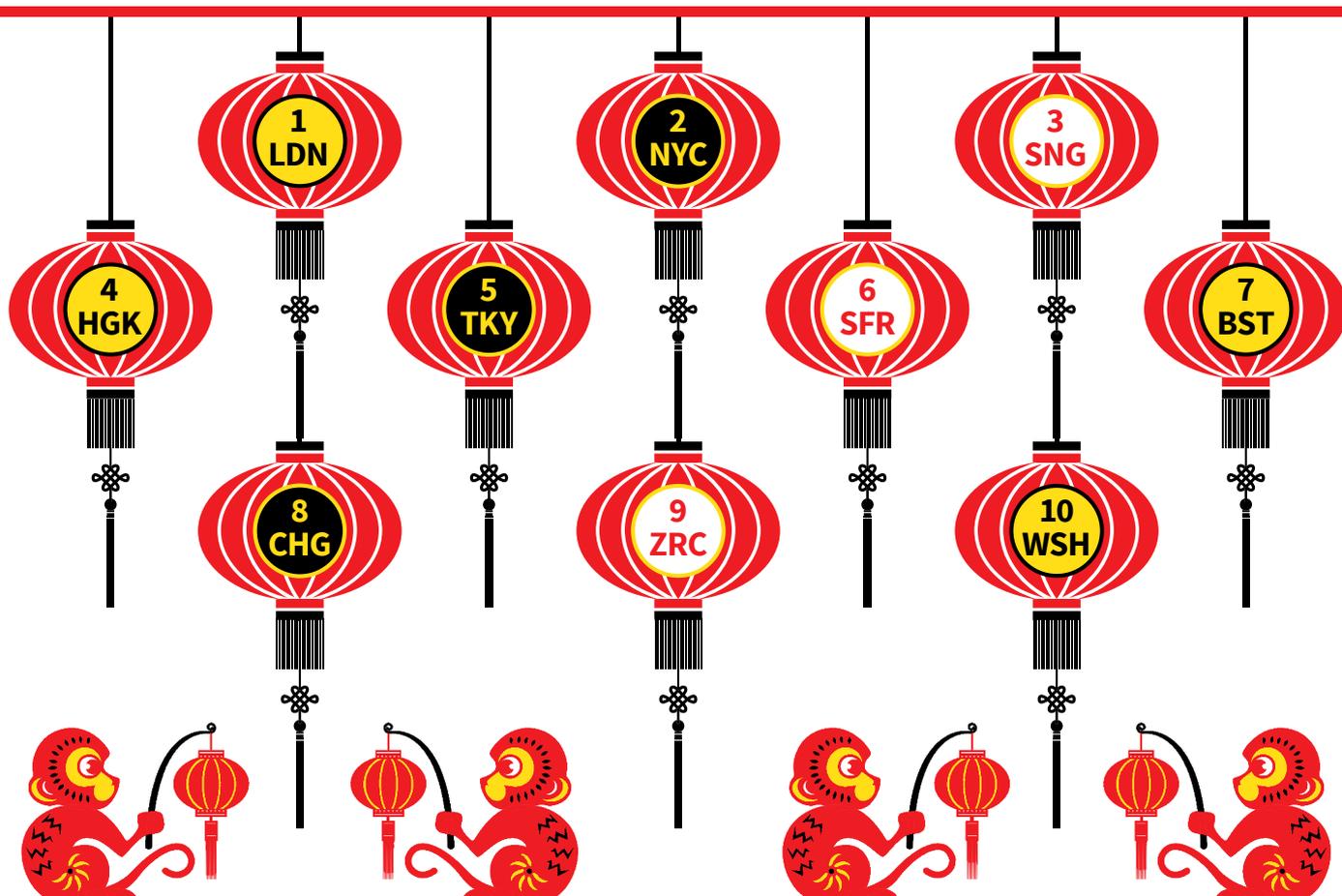




# The Global Financial Centres Index **20**

SEPTEMBER 2016



Financial Centre Futures





We are very pleased to present the twentieth edition of the Global Financial Centres Index (GFCI 20). This is a special occasion because the Z/Yen Group in London (Z/Yen) and the China Development Institute in Shenzhen (CDI), two leading think tanks have started a collaborative relationship. In September 2015 the two think tanks jointly launched GFCI 18 in Shenzhen and in July 2016 we have established a strategic partnership for research into financial centres.

In March 2007, the Z/Yen Group released the first edition of the Global Financial Centres Index (GFCI), which continues to provide evaluations of competitiveness and rankings for the major financial centres around the world. The GFCI is updated every March and September and continues to receive considerable attention from the global financial community. The index serves as a valuable reference for policy and investment decision-making.

The China Development Institute (CDI) is a non-governmental think tank that develops solutions to public policy challenges through broad-scope and in-depth research to help advance China's reform and opening-up to world markets. The CDI has been working on the promotion and development of China's financial system since its establishment 28 years ago. Based on rigorous research and objective analysis, CDI is committed to providing prospective, innovative and pragmatic reports for governments at different levels in China and corporations at home and abroad.

In December 2015, the CDI was designated as one of the top think tanks in China and worked on a pilot project with the central Chinese government aiming at developing and promoting new style think tanks with Chinese characteristics.

The author of this report, Mark Yeandle, would like to thank Michael Mainelli, Xueyi Jiang, Carol Feng and the rest of the GFCI team for their contributions with research, modelling and ideas.

# Foreword

The GFCI shows that London, New York, Singapore and Hong Kong have maintained their strong positions as the four leading global financial centres. They compete and collaborate with each other. As the power of global financial markets is shifting from North America and Europe to Asia, the financial centres on the Chinese mainland are rapidly rising in importance with five cities included in the GFCI top fifty.

Shanghai, Shenzhen and Beijing rank as the top three financial centres on the Chinese mainland. The three have their own merits and play a complementary role to each other. Shanghai, the birthplace of China's modern finance industry, has stepped up its efforts to transform itself into a major international financial centre since 2009.

Tremendous progress has been made by Shanghai - the value added contribution to GDP of financial services is now over 16%. The number of financial institutions is almost 1,500, the stock trading volume ranks second in the world, the stock market capitalization ranks fourth in the world and the trading volume of spot gold is the largest in the world. With the promising opportunities of the 'Belt and Road' initiative, Shanghai is now conducting such pilot projects as RMB trading and financial services internationalization.

Shenzhen is now established as China's second-largest financial market, with Shenzhen Stock Exchange, one of the two stock exchanges in China, located in the city. The city is a 'test field' for China's reform and internationalization. During the past three decades of development, Shenzhen Ping An Insurance Group, China Merchants Bank, Guosen Securities, and several other local financial institutions have performed very well, and are now opening branches all over China.

Co-operation between Shenzhen and Hong Kong in financial services has now entered a new phase. Each city helps the other in establishing financial institutions, cross-border lending, cross-border financing, the RQFII system and other practices.

Beijing, as the Chinese capital, has become the financial services regulatory centre of China. It is also the headquarters of the financial regulatory authorities and the Four Major National Banks - ABC, BOA, ICBC and CCB. Finance is one of the 'pillar' industries in Beijing and the contribution to economic growth of financial services was 40% in 2015. As the headquarters of the Asian Infrastructure Investment Bank and the Silk Road Fund, Beijing is poised to increase its strength in the financial sector.

Not only does CDI participate in updating and publishing the GFCI, but also it researches and publishes the China Financial Centres Index (CFCI). According to the latest CFCI 7 (published in 2015), Shanghai, Beijing, Shenzhen, Guangzhou, Tianjin, Chengdu, Hangzhou, Chongqing, Nanjing and Suzhou are China's top ten financial centres. CFCI is intended to track China's financial services development in different cities, identify the regional disparity in the financial sector, and contribute to the goal of building local financial centres.

We sincerely hope that our work will continue be useful for financial policy makers, financial institutions and financial researchers all over the world, as well as contributing to the development of China's financial markets.



**Professor Fan Gang**  
President, China Development Institute

# Global Financial Centres Index 20

## Introduction

The Global Financial Centres Index (GFCI) provides ratings, rankings and profiles for financial centres, drawing on two separate sources of data – instrumental factors and responses to an online survey. The GFCI was created in 2005 and first published by Z/Yen Group in March 2007. The GFCI is updated and republished each September and March. This is the twentieth edition (GFCI 20). 103 financial centres are actively researched. 87 financial centres appear in GFCI 20. The remaining 16 ‘associate centres’ will join the index when they receive sufficient assessments.

**Instrumental factors:** many factors combine to make a financial centre competitive. We group these factors into five broad ‘areas of competitiveness’: **Business Environment, Financial Sector Development, Infrastructure, Human Capital and Reputational Factors.** Evidence of a centre’s performance in these areas is drawn from a range of external measures. For example, evidence about the telecommunications infrastructure competitiveness of a financial centre is drawn from the ICT Development Index (supplied by the United Nations), the Networked Readiness Index (supplied by the World Economic Forum), the Telecommunication Infrastructure Index (supplied by the United Nations) and the Web Index (supplied by the World Wide Web Foundation). 101 factors have been used in GFCI 20.

**Financial centre assessments:** GFCI uses responses to an ongoing online questionnaire<sup>1</sup> completed by international financial services professionals. Respondents are asked to rate those centres with which they are familiar and to answer a number of questions relating to their perceptions of competitiveness. Responses from over 2,400 financial services professionals were collected in the 24 months to the end of June 2016. Of these 1,852 provided 23,006 valid financial centre assessments which were used to compute GFCI 20, with older assessments discounted according to age. More details of the methodology behind GFCI 20 can be found in Appendix 3.

## Main Headlines

### **London, New York, Hong Kong, Singapore and Tokyo remain the five leading global financial centres.**

London is one point ahead of New York (on a scale of 1,000 points this is insignificant). Singapore is 42 points behind New York in third place. Tokyo, in fifth place, is 60 points behind New York.

### **The UK ‘Brexit’ referendum result is not reflected in the GFCI 20 results so far<sup>2</sup>.**

GFCI 20 was calculated based on data collected up to the end of June 2016 – a few days after the referendum result on 24 June. Looking ahead to GFCI 21, assessments given to London in July and August are significantly down from previous levels. GFCI 21 may show some significant changes.

### **All North American centres except Calgary are up in the ratings.**

Calgary focuses on energy finance and the recent volatility in oil prices is likely to have caused a decline in Calgary’s rating. San Francisco and Boston are second and third in North America – reflecting the growing importance of FinTech. Chicago re-enters the GFCI top ten and Toronto, the leading Canadian centre, is now 13th having been eighth a year ago.

### **Western Europe remains a region in flux.**

Luxembourg and Dublin show strong rises in the ratings whilst Geneva and Amsterdam fall. Early indications following the Brexit referendum result are that decision-makers are looking around and considering Luxembourg and Dublin as potential locations if they need to leave the UK. Wealth management in Geneva may be suffering from increased transparency requirements of international regulators.

### **Some Eastern European and Central Asian centres prosper whilst others struggle.**

Warsaw, Tallinn and Riga are now the leaders in this region. Istanbul, Moscow, St Petersburg and Athens continue to languish. Turkey and Russia are both involved in armed conflict. Although geographically removed from the fighting, the financial centres in these countries are clearly affected by the uncertainty this creates.

<sup>1</sup> [www.zyen.info/gfci](http://www.zyen.info/gfci)

**Australasian centres are doing well.** Three of the top five global centres are Asian. Hong Kong and Singapore had some small declines. Sydney and Melbourne both saw solid increases in their ratings.

**Offshore financial centres are recovering lost ground.** Jersey, Guernsey, the Isle of Man, the Cayman Islands, Bermuda, the British Virgin Islands, and are all up in the GFCI 20 ratings.

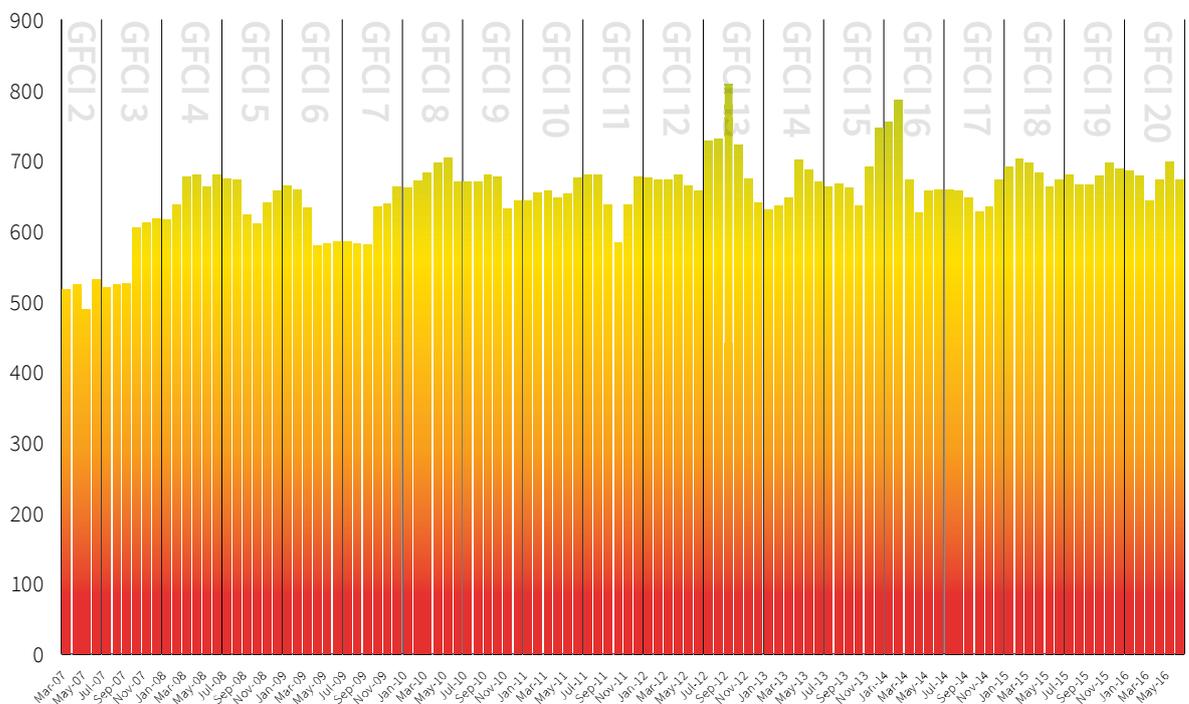
**Middle Eastern centres decline.** With the exception of Bahrain which saw a modest rise, all Middle Eastern centres were somewhat down, although Dubai only fell by a single point, remaining well ahead of other centres in the region.

**Sao Paulo, Rio de Janeiro and Mexico continue to struggle.** Sao Paulo remains the top Latin American centre in GFCI 20, despite falling eight places. Trinidad and Tobago has entered the index for the first time in 71st place. They have made a concerted effort with their international marketing recently (disclosure: Z/Yen has been paid to assist them on certain aspects).

**GFCI ratings volatility remains low.** Overall, 39 centres rose in the ranks whilst 41 went down and six remained in the same place. It is interesting to note that 15 of top 20 centres see a rise in their ratings whilst 14 of the bottom 20 centres decreased in the ratings. This represents a widening of the ‘spread’ of ratings with the leading centres becoming stronger whilst the lesser centres continue to struggle.

The full set of GFCI 20 ranks and ratings are shown in Table 1 overleaf:

Chart 1 | 3 Month Rolling Average Assessments of the Top 50 Centre



<sup>2</sup> On 23 June 2016 the United Kingdom voted in a referendum to leave the European Union. This could potentially have very significant effects on the financial centres in Europe and beyond.

Table 1 | GFCI 20 Ranks and Ratings

Centre	GFCI 20		GFCI 19		CHANGES	
	Rank	Rating	Rank	Rating	Rank	Rating
London	1	795	1	800	◀▶ 0	▼ 5
New York	2	794	2	792	◀▶ 0	▲ 2
Singapore	3	752	3	755	◀▶ 0	▼ 3
Hong Kong	4	748	4	753	◀▶ 0	▼ 5
Tokyo	5	734	5	728	◀▶ 0	▲ 6
San Francisco	6	720	8	711	▲ 2	▲ 9
Boston	7	719	9	709	▲ 2	▲ 10
Chicago	8	718	11	706	▲ 3	▲ 12
Zurich	9	716	6	714	▼ 3	▲ 2
Washington DC	10	713	7	712	▼ 3	▲ 1
Sydney	11	712	17	692	▲ 6	▲ 20
Luxembourg	12	711	14	698	▲ 2	▲ 13
Toronto	13	710	10	707	▼ 3	▲ 3
Seoul	14	704	12	705	▼ 2	▼ 1
Montreal	15	703	21	686	▲ 6	▲ 17
Shanghai	16	700	16	693	◀▶ 0	▲ 7
Osaka	17	699	20	687	▲ 3	▲ 12
Dubai	18	698	13	699	▼ 5	▼ 1
Frankfurt	19	695	18	689	▼ 1	▲ 6
Vancouver	20	694	22	684	▲ 2	▲ 10
Taipei	21	692	24	677	▲ 3	▲ 15
Shenzhen	22	691	19	688	▼ 3	▲ 3
Geneva	23	689	15	694	▼ 8	▼ 5
Melbourne	24	687	30	669	▲ 6	▲ 18
Los Angeles	25	685	29	670	▲ 4	▲ 15
Beijing	26	683	23	682	▼ 3	▲ 1
Munich	27	680	27	672	◀▶ 0	▲ 8
Cayman Islands	28	676	41	641	▲ 13	▲ 35
Paris	29	672	32	667	▲ 3	▲ 5
Casablanca	30	671	33	665	▲ 3	▲ 6
Dublin	31	663	39	643	▲ 8	▲ 20
Abu Dhabi	32	662	26	675	▼ 6	▼ 13
Amsterdam	33	659	34	664	▲ 1	▼ 5
Calgary	34	658	28	671	▼ 6	▼ 13
Bermuda	35	654	50	629	▲ 15	▲ 25
British Virgin Islands	36	653	46	635	▲ 10	▲ 18
Vienna	37	645	40	642	▲ 3	▲ 3
Tel Aviv	38	643	25	676	▼ 13	▼ 33
Bangkok	39	642	47	633	▲ 8	▲ 9
Doha	40	641	35	652	▼ 5	▼ 11
Busan	41	640	38	644	▼ 3	▼ 4
Jersey	42	639	62	617	▲ 20	▲ 22
Kuala Lumpur	43	638	36	649	▼ 7	▼ 11
Stockholm	44	636	37	648	▼ 7	▼ 12

Table 1 | GFCI 20 Ranks and Ratings continued

Centre	GFCI 20		GFCI 19		CHANGES	
	Rank	Rating	Rank	Rating	Rank	Rating
Warsaw	45	633	48	631	▲ 3	▲ 2
Qingdao	46	631	79	594	▲ 33	▲ 37
Guernsey	47	630	66	613	▲ 19	▲ 17
Dalian	48	629	31	668	▼ 17	▼ 39
Oslo	49	628	65	614	▲ 16	▲ 14
Tallinn	50	627	78	596	▲ 28	▲ 31
Sao Paulo	51	626	43	639	▼ 8	▼ 13
Riga	52	625	71	605	▲ 19	▲ 20
Milan	53	624	54	625	▲ 1	▼ 1
Rio de Janeiro	54	623	44	637	▼ 10	▼ 14
Gibraltar	55	622	61	618	▲ 6	▲ 4
Liechtenstein	56	621	76	598	▲ 20	▲ 23
Istanbul	57	620	45	636	▼ 12	▼ 16
Bahrain	58	619	69	609	▲ 11	▲ 10
Johannesburg	59	618	51	628	▼ 8	▼ 10
Copenhagen	60	616	49	630	▼ 11	▼ 14
Glasgow	61	615	59	620	▼ 2	▼ 5
Brussels	62	614	52	627	▼ 10	▼ 13
Panama	63	613	72	603	▲ 9	▲ 10
Rome	64	612	63	616	▼ 1	▼ 4
Isle of Man	65	611	68	610	▲ 3	▲ 1
Edinburgh	66	610	56	623	▼ 10	▼ 13
Monaco	67	609	80	590	▲ 13	▲ 19
Madrid	68	608	64	615	▼ 4	▼ 7
Lisbon	69	607	75	599	▲ 6	▲ 8
Almaty	70	605	77	597	▲ 7	▲ 8
Trinidad and Tobago	71	604	–	–	–	–
Prague	72	603	57	622	▼ 15	▼ 19
Mexico City	73	600	53	626	▼ 20	▼ 26
Malta	74	599	81	587	▲ 7	▲ 12
Mumbai	75	598	42	640	▼ 33	▼ 42
Jakarta	76	597	58	621	▼ 18	▼ 24
Budapest	77	596	74	600	▼ 3	▼ 4
Manila	78	595	55	624	▼ 23	▼ 29
Mauritius	79	594	73	601	▼ 6	▼ 7
Cyprus	80	593	83	576	▲ 3	▲ 17
Helsinki	81	586	60	619	▼ 21	▼ 33
Riyadh	82	585	70	606	▼ 12	▼ 21
Reykjavik	83	573	85	562	▲ 2	▲ 11
Moscow	84	568	67	611	▼ 17	▼ 43
St Petersburg	85	567	82	585	▼ 3	▼ 18
Bahamas	86	566	84	568	▼ 2	▼ 2
Athens	87	535	86	558	▼ 1	▼ 23

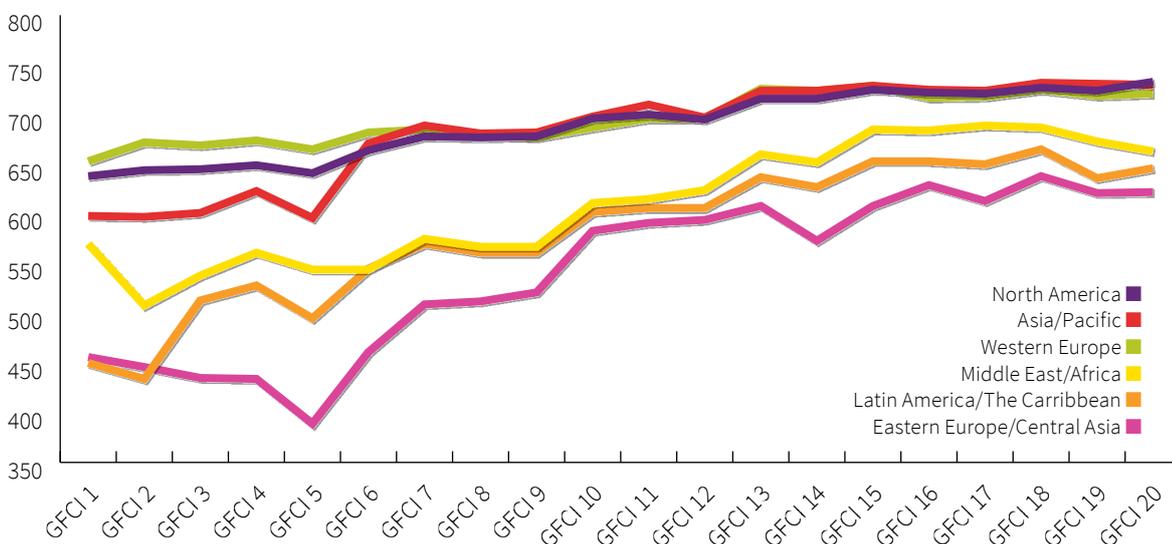
The following ‘associate centres’ are included within the GFCI questionnaire but have yet to acquire the number of assessments necessary to be included in the GFCI:

**Table 2 | Associate Centres**

Centre	Number of assessments in last 24 months	Mean of Assessments
Guangzhou	167	677
New Delhi	114	495
Tianjin	101	631
Baku	97	511
Buenos Aires	84	533
Sofia	74	573
Santiago	66	630
Nairobi	61	484
Kuwait City	60	590
Wellington	59	688
Barbados	59	514
Hamburg	57	609
Bratislava	53	547
Cape Town	44	600
Tehran	16	406
Gujarat	3	200

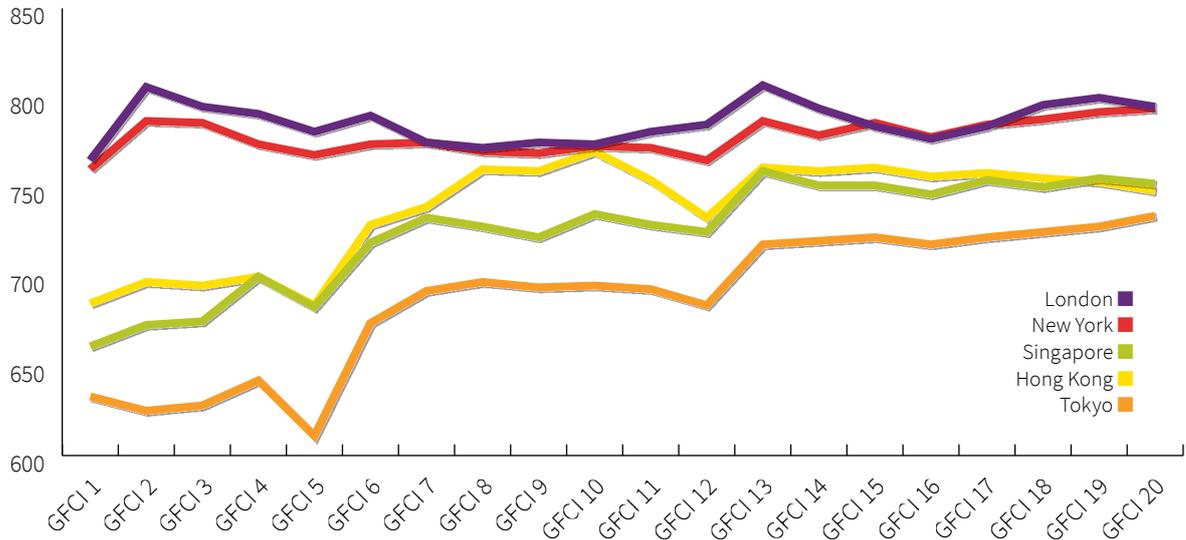
The average rating of the top five centres in each region shows that the historical dominance of the leading centres in Western Europe and North America have been eroded over time by the leading centres in Asia. The top five centres in North America have a slightly higher mean rating than those in Western Europe and Asia. The top centres in other regions, especially in Latin America and Eastern Europe/Central Asia, are also closing the gap:

**Chart 2 | The mean of the top five centres in each region**



The performance over time of the top five centres is shown below:

Chart 3 | Top Five Centres GFCI Ratings Over Time



The GFCI questionnaire asks respondents which centres they consider likely to become more significant in the next few years. Eight of the top 15 are in the Asia-Pacific region:

Table 3 | The 15 Centres Likely to Become More Significant

Centre	Mentions within the last 24 months
Shanghai	108
Qingdao	92
Dubai	47
Hong Kong	41
Casablanca	35
Singapore	29
Shenzhen	28
Luxembourg	27
Toronto	27
Gibraltar	26
Dalian	24
Beijing	20
Busan	17
Trinidad and Tobago	12
Almaty	8

Whilst the GFCI itself is calculated using only foreign assessments, we ask professionals about the prospects for the centre in which they work (whether their ‘home’ centre would become Much Less Competitive, become a Little Less Competitive, Remain About the Same, become a Little More Competitive or become Much More Competitive). In general, respondents are far more optimistic about the future of their ‘home’ centres than people outside that centre.

Chart 4 | Home Centre Prospects – London

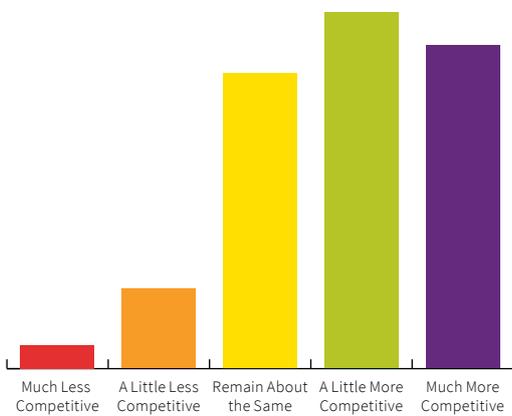


Chart 5 | Home Centre Prospects – New York

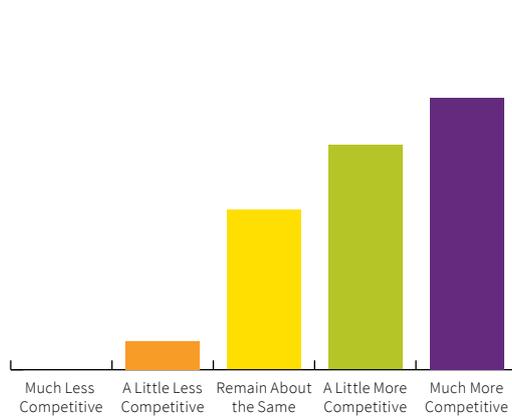


Chart 6 | Home Centre Prospects – Hong Kong

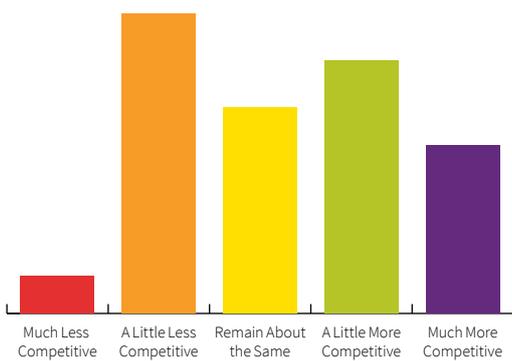
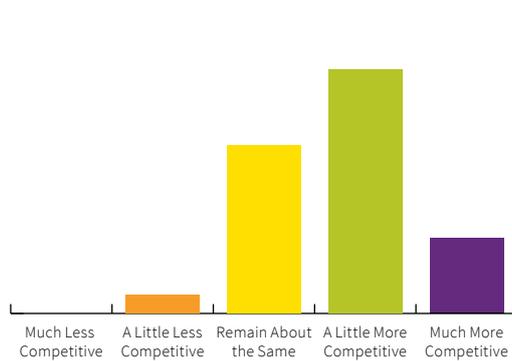


Chart 7 | Home Centre Prospects – Frankfurt



*“We are seriously considering leaving London for the EU. The UK just has too many ‘moving parts’ to make us feel comfortable.”*

US INSURER BASED IN LONDON

Chart 8 | Home Centre Prospects – Shanghai

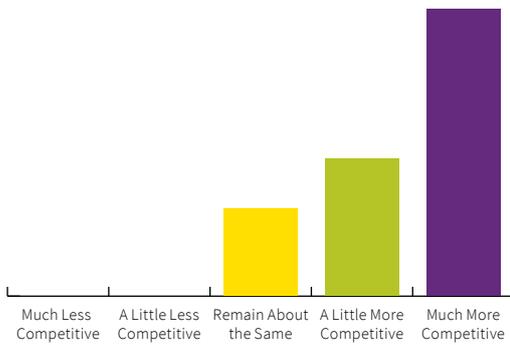
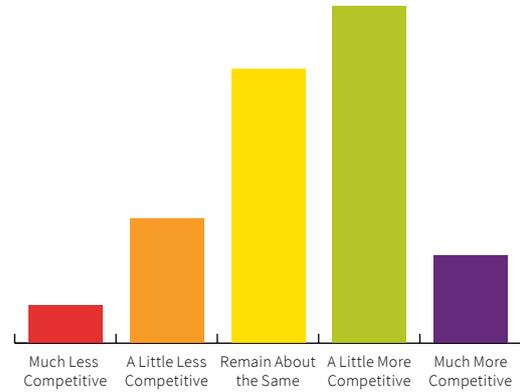


Chart 9 | Home Centre Prospects – Paris



*“First we had the Scottish referendum and then the general election and now the Brexit referendum. What bankers want is certainty not uncertainty! I feel like packing my bags and going off to Singapore.”*

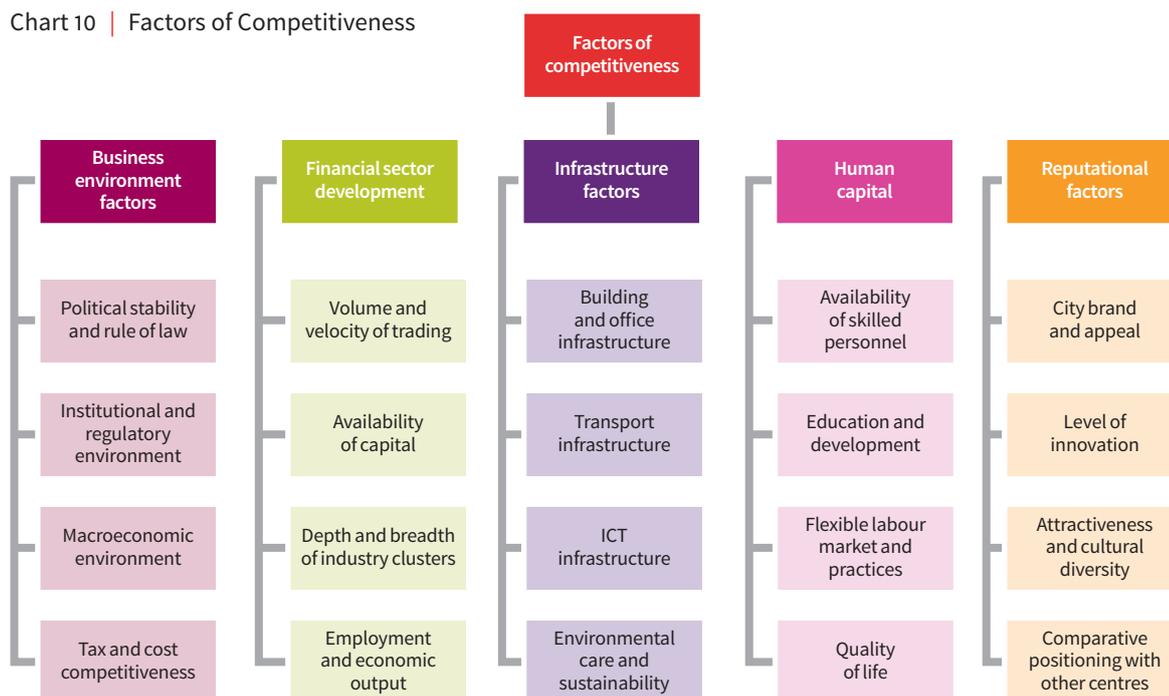
INVESTMENT BANKER BASED IN LONDON



# Areas of Competitiveness

The instrumental factors used in the GFCI model are grouped into five key factors of competitiveness – Business Environment, Financial Sector Development, Infrastructure, Human Capital and Reputational Factors:

Chart 10 | Factors of Competitiveness



To assess how financial centres perform in each of these areas, the GFCI 20 factor assessment model is run with only one of the five groups of instrumental factors at a time. The top ten ranked centres in each sub-index are:

Table 4 | GFCI 20 Area of Competitiveness Sub-indices – Top Ten

Rank	Business environment	Financial sector development	Infrastructure	Human capital	Reputational & general
1	London (-)	London (-)	London (-)	New York (+1)	London (-)
2	New York (-)	New York (-)	New York (-)	London (-1)	New York (-)
3	Singapore (+1)	Singapore (+1)	Hong Kong (-)	Hong Kong (+1)	Singapore (+1)
4	Hong Kong (-1)	Hong Kong (-1)	Singapore (-)	Singapore (-1)	Hong Kong (-1)
5	Tokyo (+2)	Boston (+1)	Tokyo (-)	Tokyo (+1)	Chicago (+1)
6	Chicago (-)	Tokyo (-1)	San Francisco (-)	Los Angeles (-1)	Boston (+3)
7	Los Angeles (-2)	San Francisco (-1)	Boston (+4)	Chicago (-)	San Francisco (+2)
8	Toronto (-)	Chicago (-)	Washington DC (+2)	San Francisco (+1)	Washington DC (-3)
9	Zurich (+1)	Washington DC (-1)	Shanghai (+2)	Boston (+2)	Los Angeles (-1)
10	Sydney (-1)	Zurich (-)	Sydney (-1)	Washington DC (-1)	Sydney (-2)

The top financial centres of the world are very well developed, sophisticated and cosmopolitan cities in their own right. Successful people are attracted to successful cities and it is perhaps no surprise that these centers are ranked so high by financial services professionals. The top five GFCI centres are in the top five of the Business Environment, Human Capital and Infrastructure sub-indices.

The GFCI questionnaire asks respondents to indicate which factors of competitiveness they consider the most important at the moment. The number of times that each area is mentioned is summarised in Table 5:

**Table 5 | Main Areas of Competitiveness**

Area of Competitiveness	Number of Mentions	Main Issues
Business Environment	751	<ul style="list-style-type: none"> <li>• Levels of corruption and the rule of law are becoming critical</li> <li>• Data protection is a major talking point as many will not be able to comply with GDPR</li> <li>• Brexit is adding more uncertainty – many think Brexit will be destabilising for all centres</li> </ul>
Human Capital	679	<ul style="list-style-type: none"> <li>• Security, safety and human rights are extremely important</li> <li>• The international market- place for the very best is getting more competitive</li> </ul>
Taxation	645	<ul style="list-style-type: none"> <li>• A vital issue for firms looking to relocate</li> <li>• Tax rules must be harmonised internationally</li> </ul>
Reputation	605	<ul style="list-style-type: none"> <li>• Centres need to market themselves more – competition is getting stronger</li> <li>• A reputation as a good and safe place to live is particularly important</li> </ul>
Infrastructure	580	<ul style="list-style-type: none"> <li>• Good air transport links are taken for granted – unless they are missing</li> <li>• ICT infrastructure spending is growing and may become a more competitive issue</li> </ul>
Financial Sector Development	509	<ul style="list-style-type: none"> <li>• The EU ‘cluster’ is seen as a great benefit</li> <li>• Post-Brexit London may lose its critical mass</li> </ul>

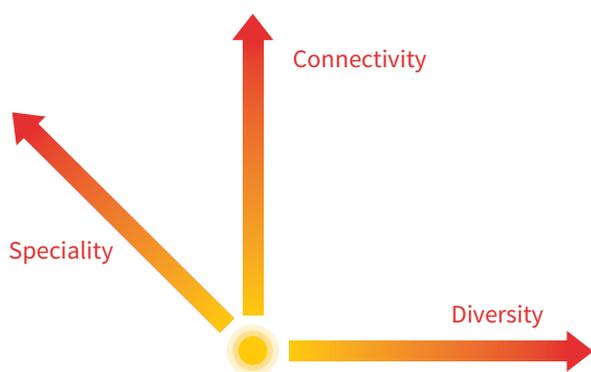
*“Data Protection is the hot topic right now – nobody can get close to the GDPR that Brussels expects.”<sup>3</sup>*

CONSULTANT BASED IN BERLIN

<sup>3</sup>[en.wikipedia.org/wiki/General\\_Data\\_Protection\\_Regulation#External\\_links](https://en.wikipedia.org/wiki/General_Data_Protection_Regulation#External_links)

# Financial Centre Profiles

Using clustering and correlation analysis we have identified three key measures (axes) that determine a financial centre's profile along different dimensions of competitiveness:



'Connectivity' – the extent to which a centre is well known around the world, and how much non-resident professionals believe it is connected to other financial centres. Respondents are asked to assess only those centres with which they are personally familiar. A centre's connectivity is assessed using a combination 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). If the weighted assessments for a centre are provided by over 50% of other centres, this centre is deemed to be 'Global'. If the ratings are provided by over 40 of other centres, this centre is deemed to be 'Transnational'.

'Diversity' – the breadth of financial industry sectors that flourish in a financial centre. We consider this sector 'richness' to be measurable in a similar way to that of the natural environment and therefore, use a combination of biodiversity indices (calculated on the instrumental factors) to assess a centre's diversity. 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 the following industry sectors: investment management, banking, insurance, professional services and government and regulatory. A centre's 'speciality' performance is calculated from the difference between the GFCI rating and the industry sector ratings.

In Table 6 opposite, 'Diversity' (Breadth) and 'Speciality' (Depth) are combined on one axis to create a two dimensional table of financial centre profiles. The 87 centres in GFCI 20 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 11 Global Leaders (in the top left of the table) have both broad and deep financial services activities and are connected with many other financial centres. This list includes London, New York, Hong Kong and Singapore, the top four global financial centres. Other leading centres are profiled at Established Transnational Centres. Significant changes in GFCI 20 include Jersey becoming a Global Contender (previously a Transnational Specialist), Edinburgh becoming a Transnational Diversified centre (previously a Transnational Contender) and Seoul becoming an Established Transnational centre (previously a Global Leader).

*"It is interesting that your profiling is done mathematically rather than by 'perception'. There are a few anomalies but overall a very interesting and thought-provoking analysis."*

ASSET MANAGER BASED IN SINGAPORE

Table 6 | GFCI 20 Financial Centre Profiles

	Broad & deep	Relatively broad	Relatively deep	Emerging
Global	Global Leaders	Global Diversified	Global Specialists	Global Contenders
	Amsterdam	Brussels	Beijing	Jersey
	Dublin	Shanghai	Dubai	
	Frankfurt		Luxembourg	
	Geneva		Moscow	
	Hong Kong			
	London			
	New York			
	Paris			
	Singapore			
	Toronto			
	Zurich			
Transnational	Established Transnational	Transnational Diversified	Transnational Specialists	Transnational Contenders
	Boston	Copenhagen	British Virgin Islands	Abu Dhabi
	Chicago	Edinburgh	Casablanca	Almaty
	Istanbul	Kuala Lumpur	Cayman Islands	Bangkok
	Madrid	Lisbon	Doha	Bahamas
	Montreal	Los Angeles	Guernsey	Dalian
	Munich	Prague	Mauritius	Gibraltar
	San Francisco		Shenzhen	
	Seoul			
	Stockholm			
	Sydney			
	Tokyo			
	Vancouver			
	Washington DC			
Local	Established Players	Local Diversified	Local Specialists	Evolving Centres
	Tel Aviv	Budapest	Panama	Athens
	Warsaw	Busan	Qingdao	Bahrain
		Calgary	Riga	Cyprus
		Glasgow	Rio de Janeiro	Bermuda
		Helsinki	Sao Paulo	Isle of Man
		Melbourne	Taipei	Jakarta
		Mexico City	Tallinn	Johannesburg
		Milan		Liechtenstein
		Osaka		Malta
		Oslo		Manila
		Rome		Monaco
		Vienna		Mumbai
				Reykjavik
				Riyadh
			St Petersburg	
			Trinidad and Tobago	

# Western Europe

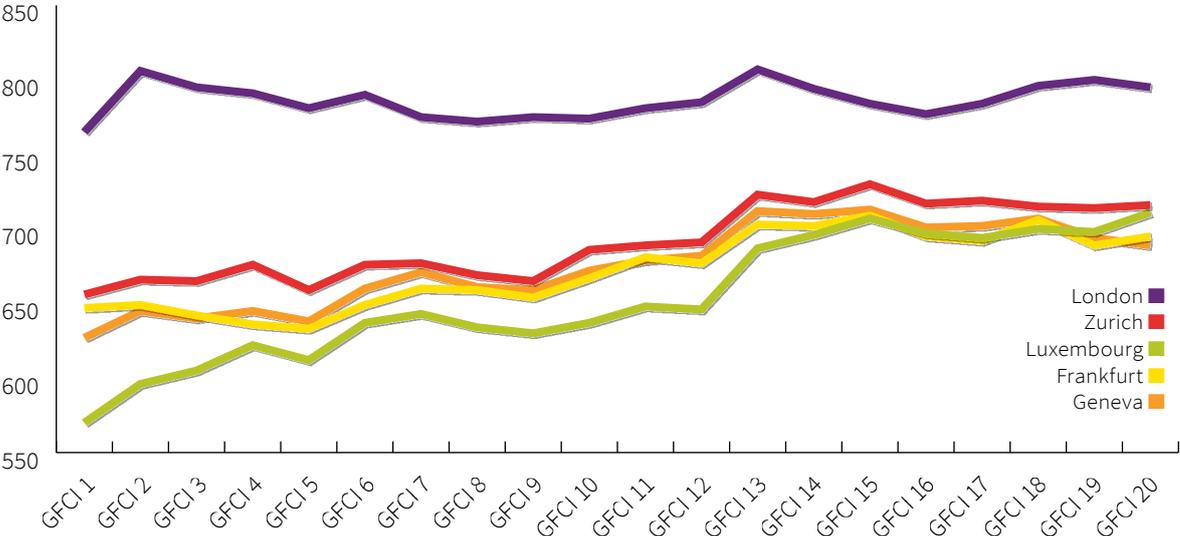
Table 7 shows the Western European financial centres in GFCI 20. The leading centres in Europe are London, Zurich, Luxembourg and Frankfurt. London, Geneva, Amsterdam and Stockholm have fallen in the ratings whilst the other centres in the top 50 have all risen.

Table 7 | Western European Centres in GFCI 20

Centre	GFCI 20 Rank	GFCI 20 Rating	GFCI 19 Rank	GFCI 19 Rating	Change in Rank	Change in Rating
London	1	795	1	800	▶ 0	▼ 5
Zurich	9	716	6	714	▼ 3	▼ 2
Luxembourg	12	711	14	698	▼ 2	▼ 13
Frankfurt	19	695	18	689	▼ 1	▼ 6
Geneva	23	689	15	694	▼ 8	▼ 5
Munich	27	680	27	672	▶ 0	▼ 8
Paris	29	672	32	667	▼ 3	▼ 5
Dublin	31	663	39	643	▼ 8	▼ 20
Amsterdam	33	659	34	664	▼ 1	▼ 5
Vienna	37	645	40	642	▼ 3	▼ 3
Jersey	42	639	62	617	▼ 20	▼ 22
Stockholm	44	636	37	648	▼ 7	▼ 12
Guernsey	47	630	66	613	▼ 19	▼ 17
Oslo	49	628	65	614	▼ 16	▼ 14
Milan	53	624	54	625	▼ 1	▼ 1
Gibraltar	55	622	61	618	▼ 6	▼ 4
Liechtenstein	56	621	76	598	▼ 20	▼ 23
Copenhagen	60	616	49	630	▼ 11	▼ 14
Glasgow	61	615	59	620	▼ 2	▼ 5
Brussels	62	614	52	627	▼ 10	▼ 13
Rome	64	612	63	616	▼ 1	▼ 4
Isle of Man	65	611	68	610	▼ 3	▼ 1
Edinburgh	66	610	56	623	▼ 10	▼ 13
Monaco	67	609	80	590	▼ 13	▼ 19
Madrid	68	608	64	615	▼ 4	▼ 7
Lisbon	69	607	75	599	▼ 6	▼ 8
Malta	74	599	81	587	▼ 7	▼ 12
Helsinki	81	586	60	619	▼ 21	▼ 33
Reykjavik	83	573	85	562	▼ 2	▼ 11

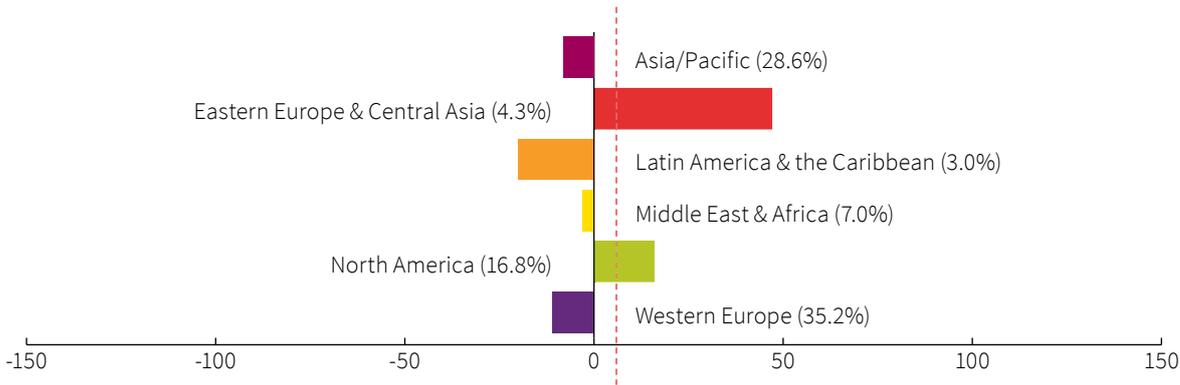
Chart 11 opposite shows the progress of the top five European centres over time:

Chart 11 | Top Five European Centres over GFCI Editions



Examining the assessments given to each major centre is a useful means of assessing the relative strength and weakness of their reputations in different regions. It is important to note that assessments given to a centre by people based in that centre are excluded from the GFCI model to eliminate ‘home preference’. The charts below show the difference between the overall mean and the mean of assessments by region. The additional vertical axis shows the mean when assessments from the home region are removed:

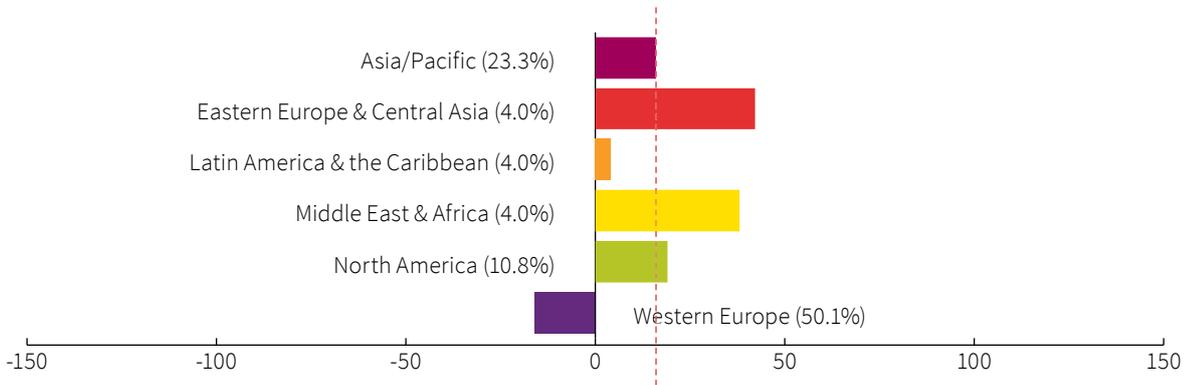
Chart 12 | Assessments by Region – Difference from the Mean – London



London’s overall average assessment (foreign assessments only) is 846, up from 839 in GFCI 19. Respondents from the Asia/Pacific region, Latin America and Western Europe are the least favourable to London, while North Americans and Eastern European respondents are the most favourable.

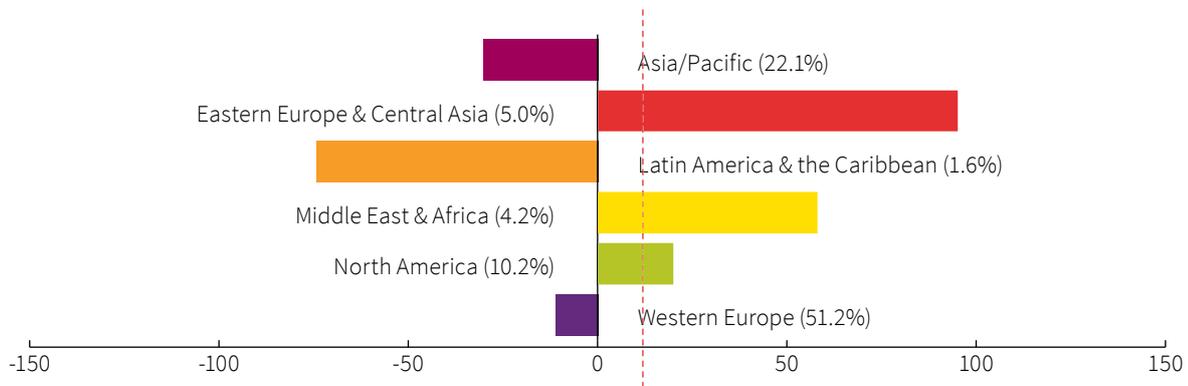
Zurich's overall average assessment is 753 up from 741 in GFCI 19. Eastern European and Middle Eastern respondents are significantly more favourable than the mean.

Chart 13 | Assessments by Region – Difference from the Mean – Zurich



Luxembourg's overall average assessment is 736 up from 730 in GFCI 19. Eastern European, Middle Eastern and North American respondents are more favourable than the mean.

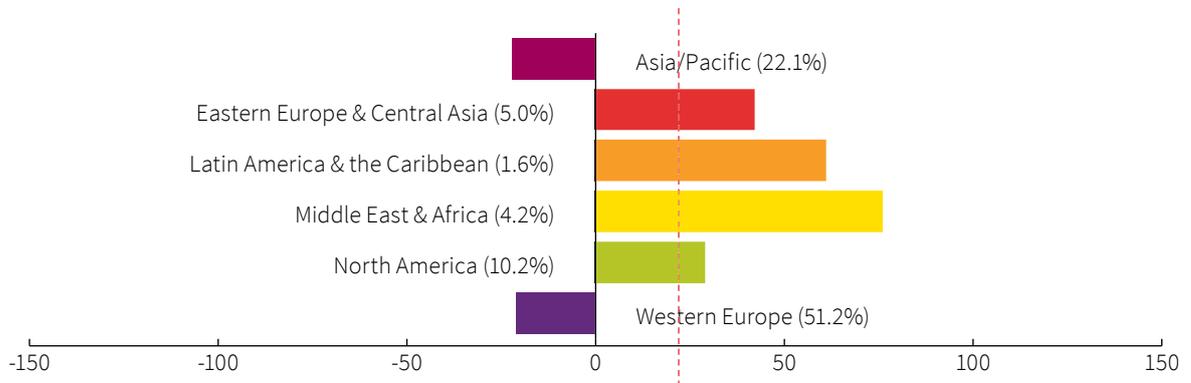
Chart 14 | Assessments by Region – Difference from the Mean – Luxembourg



*“Even if we vote to leave the EU, commercial and retail banks will remain where their customers are. I cannot envisage a mass exodus from the UK.”*

COMMERCIAL BANKER BASED IN LONDON

Chart 15 | Assessments by Region – Difference from the Mean – Frankfurt



Frankfurt's overall average assessment is 714, the same as in GFCI 19. Western Europeans are the largest regional group of respondents (51% of the total) and together with Asia/Pacific respondents their assessments are less favourable than the average.

*“If the UK leaves the EU and there is a migration away from London, then surely there is no one centre that can become the ‘New London’ – financial services in Europe will be split between several centres – Zurich, Frankfurt, Luxembourg and Dublin get my vote.”*

PENSION FUND MANAGER BASED IN ZURICH



# Eastern Europe and Central Asia

Table 8 shows the Eastern European and Central Asian financial centres in GFCI 20. The leading centre in this region is now Warsaw in 45th place. Tallinn and Riga both made strong gains and are now just ahead of Istanbul. The top seven centres all saw an increase in their ratings. The largest declines in this region were for Moscow and Athens:

Table 8 | Eastern European and Central Asian Centres in GFCI 20

Centre	GFCI 20 Rank	GFCI 20 Rating	GFCI 19 Rank	GFCI 19 Rating	Change in Rank	Change in Rating
Warsaw	45	633	48	631	▲ 3	▲ 2
Tallinn	50	627	78	596	▲ 28	▲ 31
Riga	52	625	71	605	▲ 19	▲ 20
Istanbul	57	620	45	636	▼ 12	▼ 16
Almaty	70	605	77	597	▲ 7	▲ 8
Prague	72	603	57	622	▼ 15	▼ 19
Budapest	77	596	74	600	▼ 3	▼ 4
Cyprus	80	593	83	576	▲ 3	▲ 17
Moscow	84	568	67	611	▼ 17	▼ 43
St Petersburg	85	567	82	585	▼ 3	▼ 18
Athens	87	535	86	558	▼ 1	▼ 23

Chart 16 below shows the progress over time made by the top centres in this region:

Chart 16 | Top Five Eastern European and Central Asian Centres over GFCI Editions

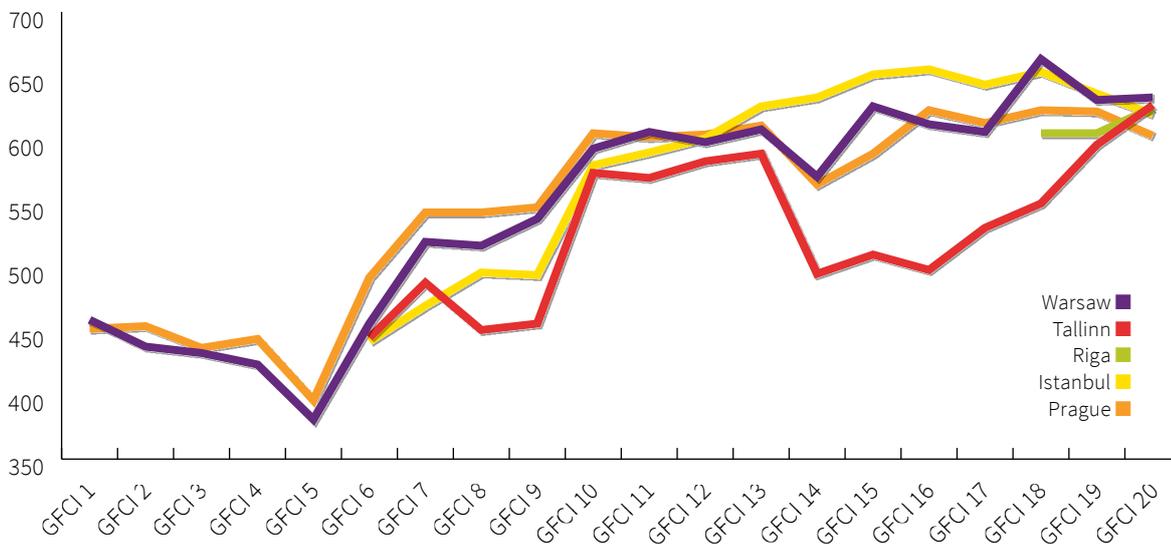
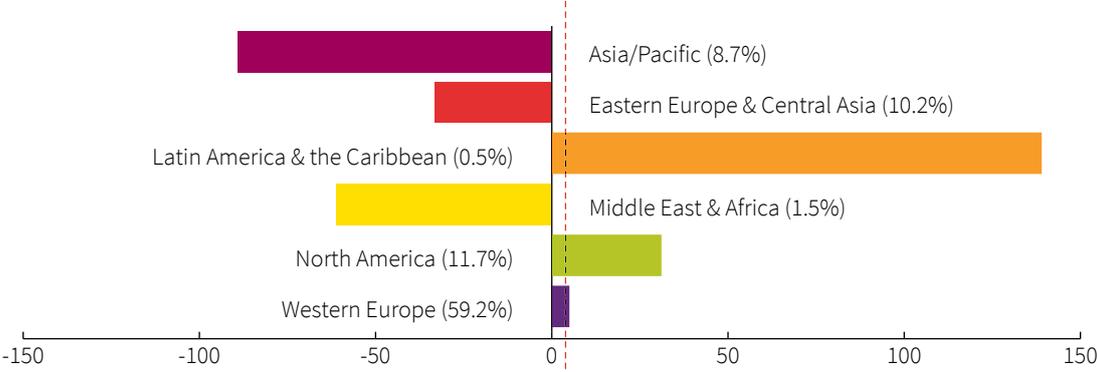
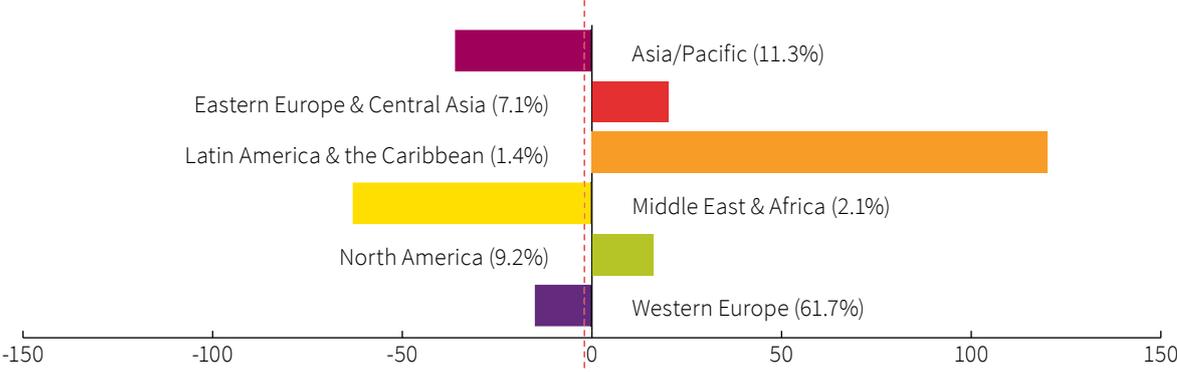


Chart 17 | Assessments by Region – Difference from the Mean – Warsaw



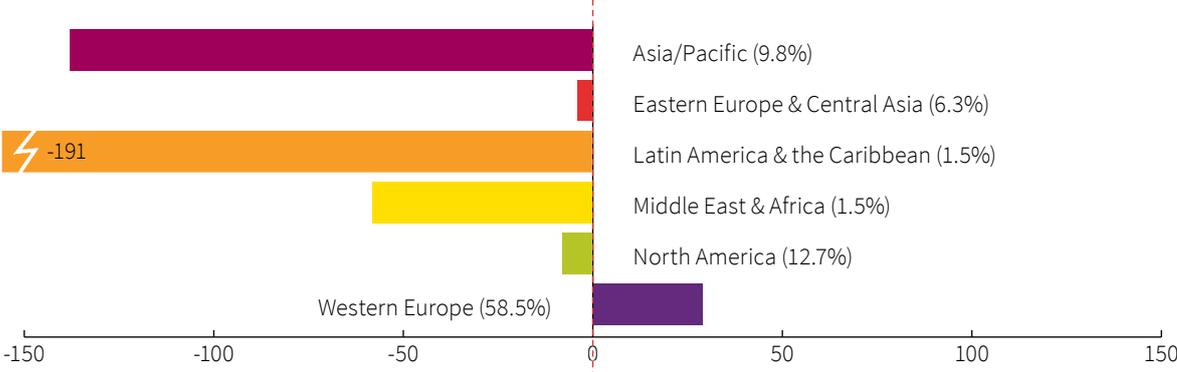
Warsaw’s overall average assessment is 661 up from 646 in GFCI 19.

Chart 18 | Assessments by Region – Difference from the Mean – Tallinn



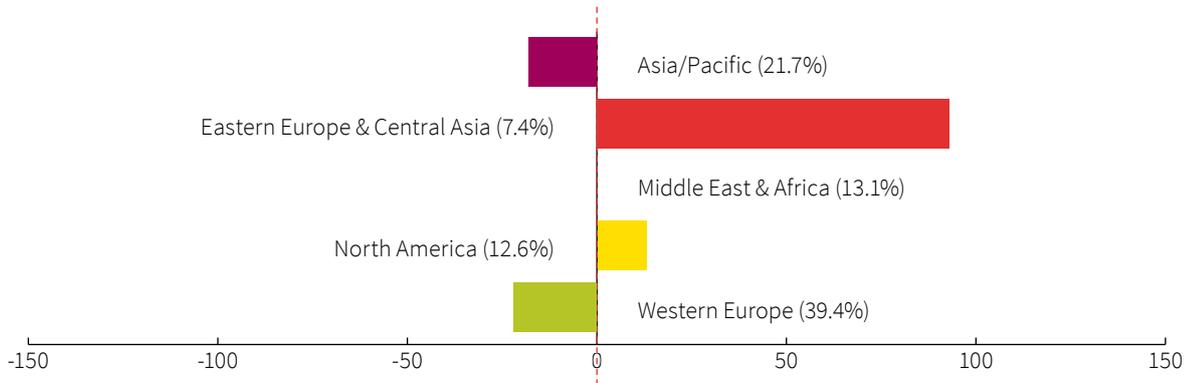
Tallinn’s overall average assessment is 630, up from 605 in GFCI 19.

Chart 19 | Assessments by Region – Difference from the Mean – Riga



Riga’s overall average assessment is 658 up from 644 in GFCI 19. Respondents from Western Europe are more favourable to Riga than the mean.

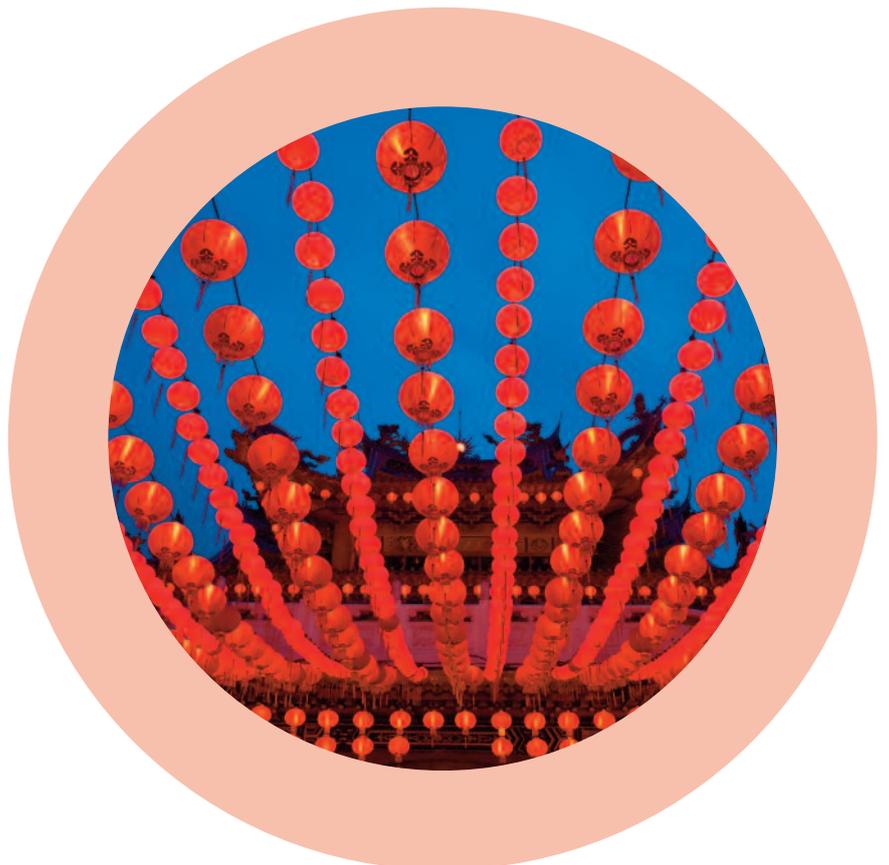
Chart 20 | Assessments by Region – Difference from the Mean – Istanbul



Istanbul's overall average assessment is 591 down from 594 in GFCI 19. Political uncertainty and proximity to military conflict no doubt contribute to this decline.

*“Speaking anomalously, Eastern Europe is becoming more like Latin America all the time. Corruption combined with no rule of law seem to be ubiquitous. Russia remains a huge problem – nobody wants to invest there right now.”*

FINANCIAL SERVICES REGULATOR BASED IN BRUSSELS



# Asia/Pacific

With the exceptions of Hong Kong, Singapore and Seoul which saw modest declines, the top Asia/Pacific financial centres have all seen their ratings increase in GFCI 20. Sydney and Melbourne have both made good gains.

Table 9 | Asia/Pacific Centres in GFCI 20

Centre	GFCI 20 Rank	GFCI 20 Rating	GFCI 19 Rank	GFCI 19 Rating	Change in Rank	Change in Rating
Singapore	3	752	3	755	◀▶ 0	▼ 3
Hong Kong	4	748	4	753	◀▶ 0	▼ 5
Tokyo	5	734	5	728	◀▶ 0	▲ 6
Sydney	11	712	17	692	▲ 6	▲ 20
Seoul	14	704	12	705	▼ 2	▼ 1
Shanghai	16	700	16	693	◀▶ 0	▲ 7
Osaka	17	699	20	687	▲ 3	▲ 12
Taipei	21	692	24	677	▲ 3	▲ 15
Shenzhen	22	691	19	688	▼ 3	▲ 3
Melbourne	24	687	30	669	▲ 6	▲ 18
Beijing	26	683	23	682	▼ 3	▲ 1
Bangkok	39	642	47	633	▲ 8	▲ 9
Busan	41	640	38	644	▼ 3	▼ 4
Kuala Lumpur	43	638	36	649	▼ 7	▼ 11
Qingdao	46	631	79	594	▲ 33	▲ 37
Dalian	48	629	31	668	▼ 17	▼ 39
Mumbai	75	598	42	640	▼ 33	▼ 42
Jakarta	76	597	58	621	▼ 18	▼ 24
Manila	78	595	55	624	▼ 23	▼ 29

Chart 21 overleaf shows a stable performance for the top Asia/Pacific centres over the past four years. The graph shows a rapid but turbulent rise in these centres from 2007 (GFCI 1) to 2009 (GFCI 6) followed by a period of relatively stable performance which continues into 2016.

Chart 21 | Top Five Asia/Pacific Centres over GFCI Editions

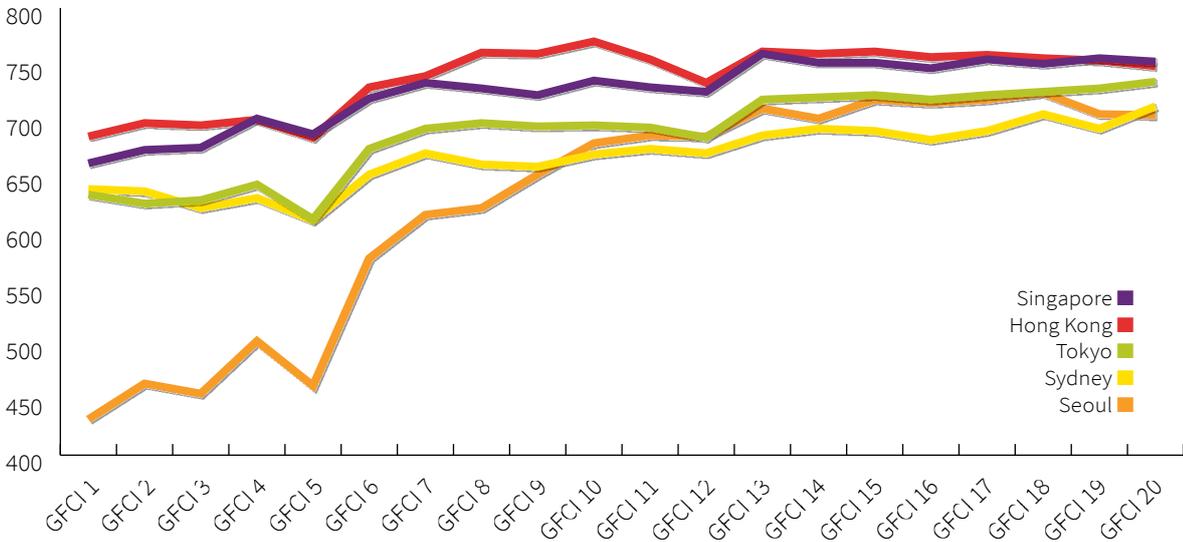
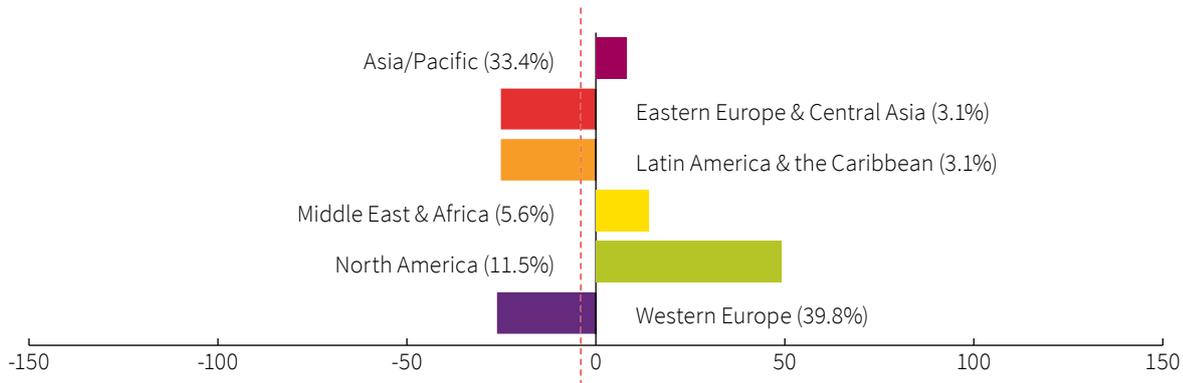
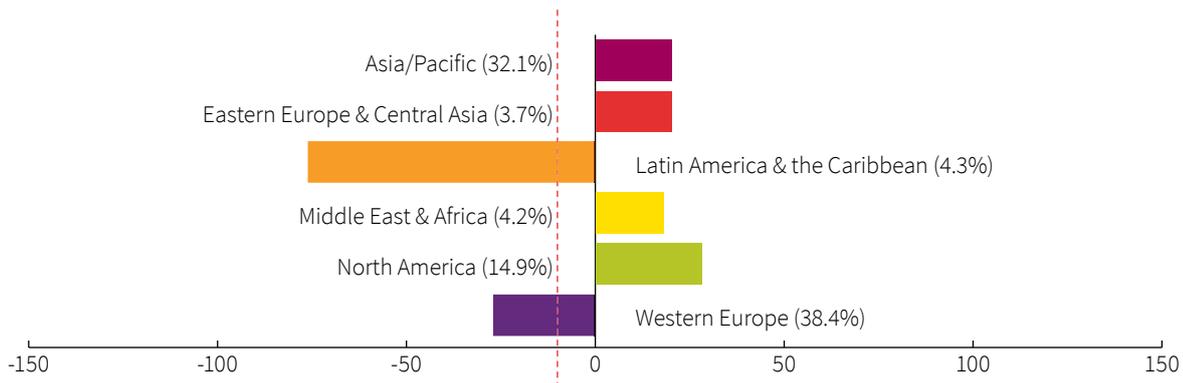


Chart 22 | Assessments by Region – Difference from the Mean – Singapore



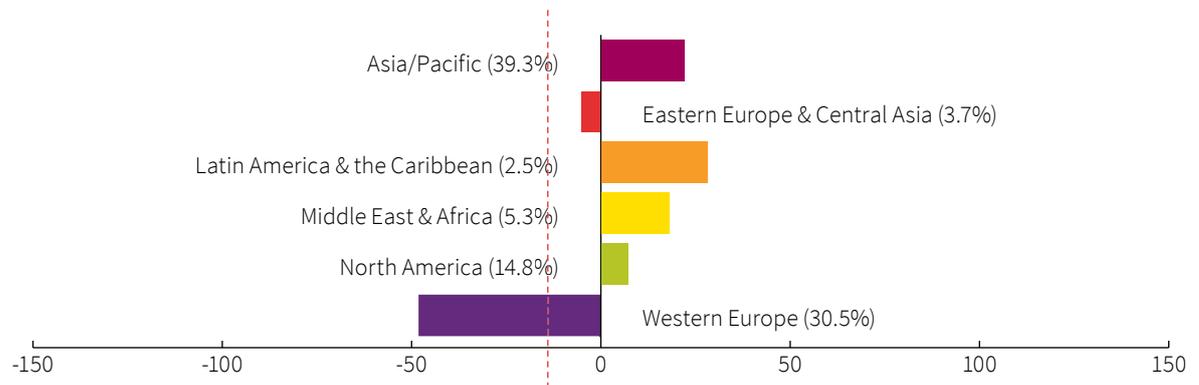
Singapore’s average assessment is 830 up slightly from 827 in GFCI 19. North Americans’ ratings were the most favourable; Western European responses, the largest group of respondents gave lower than average assessments.

Chart 23 | Assessments by Region – Difference from the Mean – Hong Kong



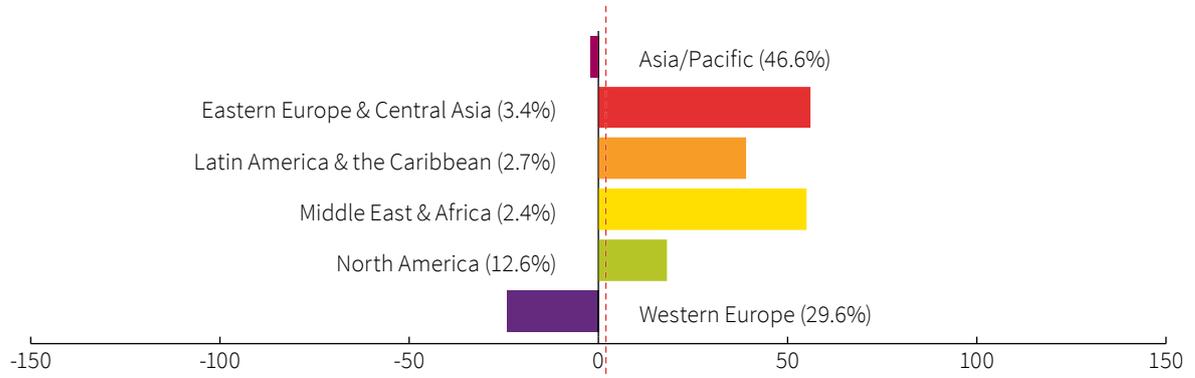
Hong Kong has an average assessment of 803 slightly down from 805 in GFCI 17. Western Europeans, the largest group of respondents, were less positive than the mean.

Chart 24 | Assessments by Region – Difference from the Mean – Tokyo



Tokyo is the third highest centre in the Asia/Pacific region and has an average assessment of 799, up from 794 in GFCI 19.

Chart 25 | Assessments by Region – Difference from the Mean – Sydney



Sydney is the fourth highest centre in Asia/Pacific and has an average assessment of 774 up from 766 in GFCI 19. Western European and Asian respondents gave lower than average assessments for Tokyo.

*“Tokyo seems to be updating itself – still a long way to go but slightly more welcoming to foreign talent than in the past (even to South Koreans!).”*

INVESTMENT BANKER BASED IN SEOUL

# North America

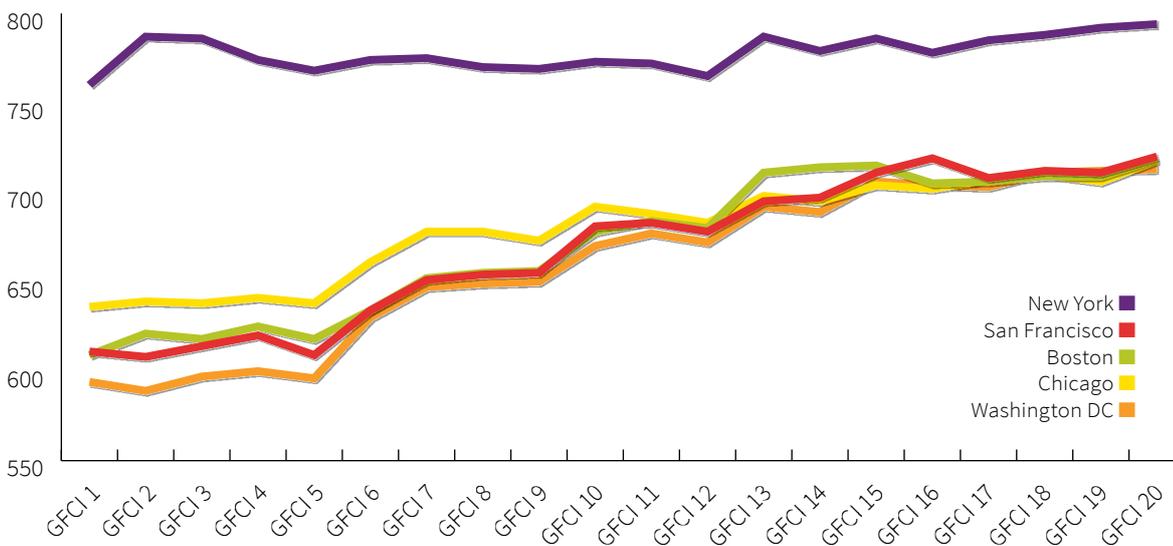
All North American centres (except Calgary) went up in the ratings in GFCI 20. San Francisco and Boston are now in second and third places in North America – both have become successful FinTech centres and the financial services sector has grown to serving this sector. Chicago enters the top ten. Toronto, the leading Canadian centre, is now 13th.

Table 10 | North American Centres in GFCI 20

Centre	GFCI 20 Rank	GFCI 20 Rating	GFCI 19 Rank	GFCI 19 Rating	Change in Rank	Change in Rating
New York	2	794	2	792	◀▶ 0	▲ 2
San Francisco	6	720	8	711	▲ 2	▲ 9
Boston	7	719	9	709	▲ 2	▲ 10
Chicago	8	718	11	706	▲ 3	▲ 12
Washington DC	10	713	7	712	▼ 3	▲ 1
Toronto	13	710	10	707	▼ 3	▲ 3
Montreal	15	703	21	686	▲ 6	▲ 17
Vancouver	20	694	22	684	▲ 2	▲ 10
Los Angeles	25	685	29	670	▲ 4	▲ 15
Calgary	34	658	28	671	▼ 6	▼ 13

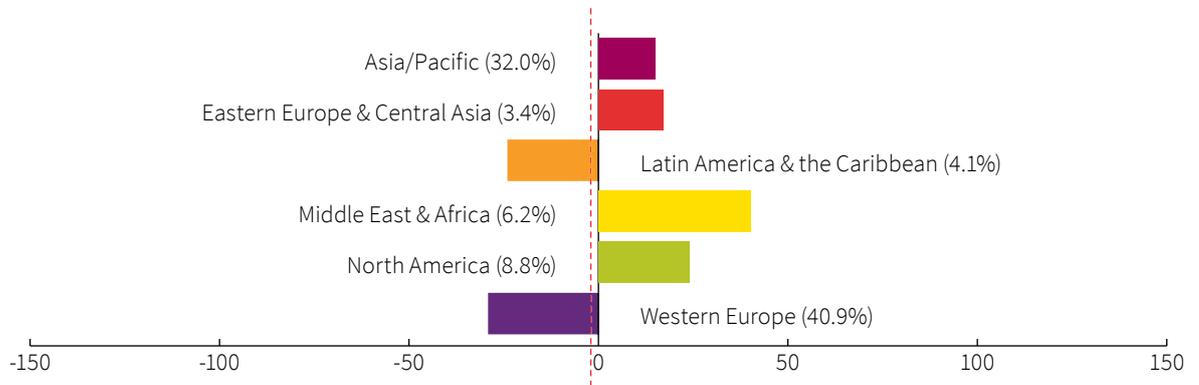
Chart 26 below shows leading American centres' performance. New York is still well ahead of the rest.

Chart 26 | Top Five North American Centres over GFCI Editions



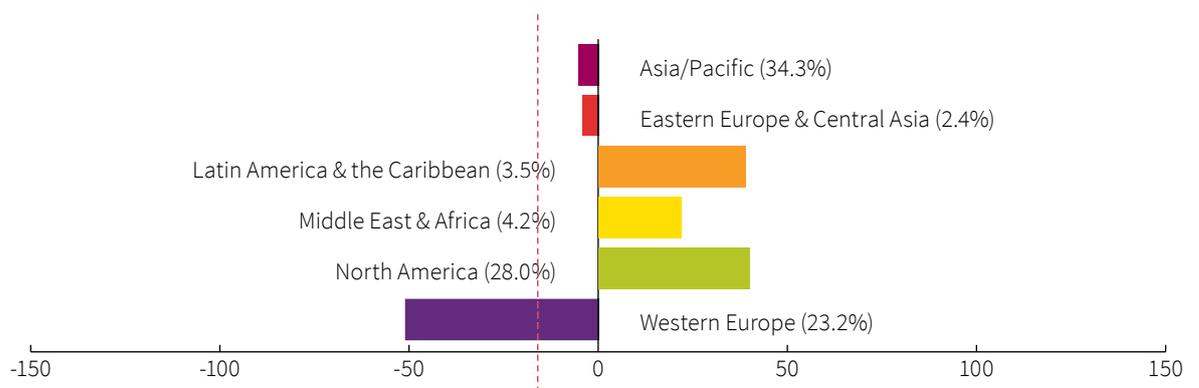
The difference between regional assessments for the leading North American centres is shown below:

Chart 27 | Assessments by Region – Difference from the Mean – New York



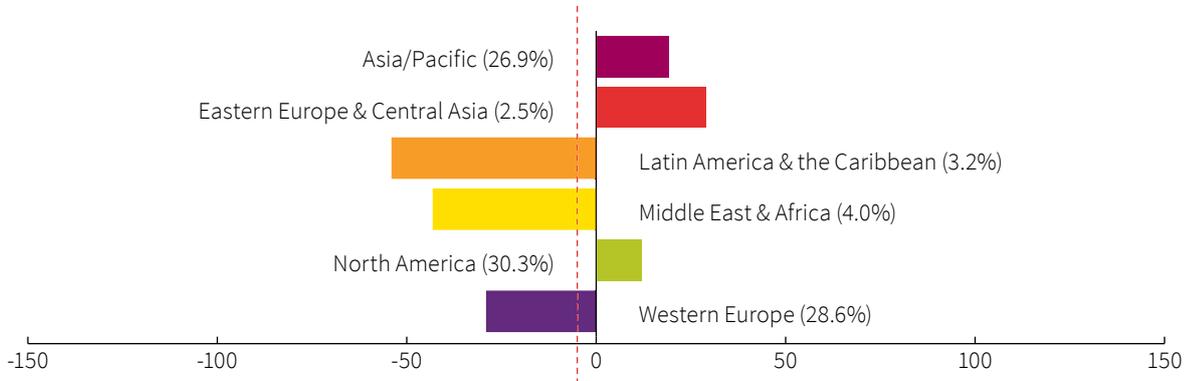
New York's overall average assessment is 848, up from 839 in GFCI 19. Respondents from Western Europe (over 40% of all respondents that assessed New York) were less favourable than the rest.

Chart 28 | Assessments by Region – Difference from the Mean – San Francisco



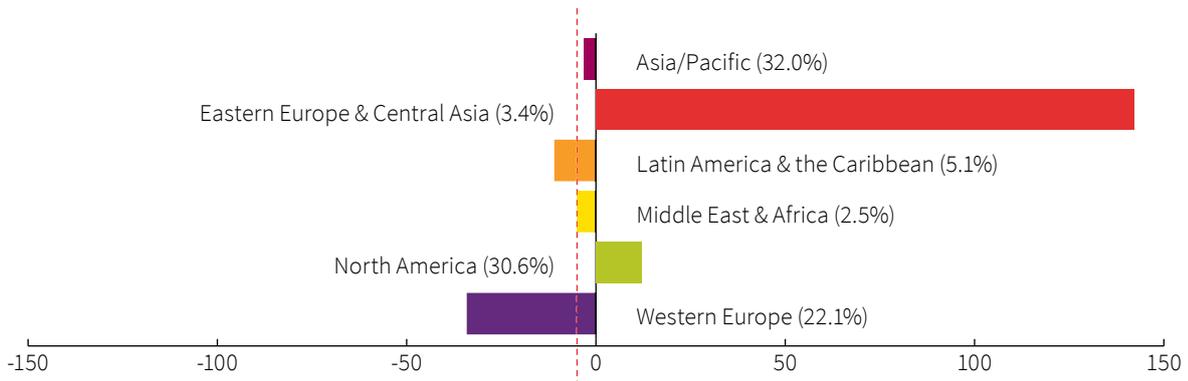
San Francisco has a global average assessment of 761, up from 756 in GFCI 19. Assessments from Western Europe are lower than the mean. In contrast North American respondents are more favourable than the mean to San Francisco.

Chart 29 | Assessments by Region – Difference from the Mean – Boston



Boston’s overall average assessment is 761, up from 752 in GFCI 19. North American and Asian respondents gave more favourable assessments than the mean.

Chart 30 | Assessments by Region – Difference from the Mean – Chicago



Chicago’s overall average assessment is 750, down 1 point since GFCI 19. Western European respondents gave less favourable assessments than the mean.

*“San Francisco has really established itself as a financial centre for the FinTech sector and seems to get stronger and stronger.”*

INVESTMENT BANKER BASED IN NEW YORK

# Latin America and the Caribbean

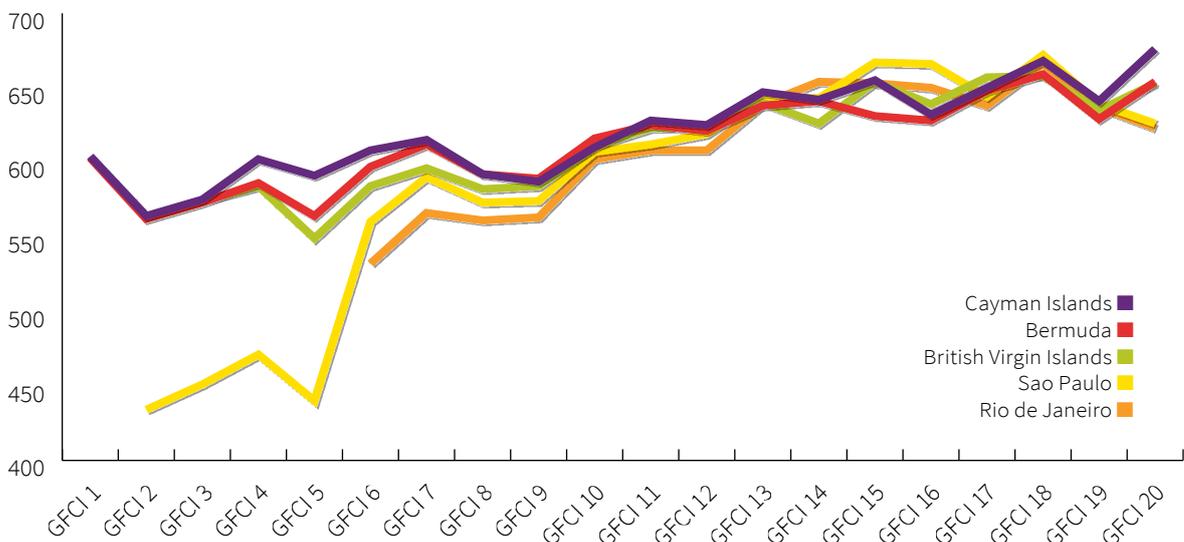
The Caribbean centres generally made up some ground in GFCI 20. Sao Paulo, Rio de Janeiro and Mexico continue to struggle. Sao Paulo remains the top Latin American centre in GFCI 20, despite falling eight places. Trinidad and Tobago have entered the index for the first time in 71st place. They have made a concerted effort with their marketing recently (in which Z/Yen has assisted them).

Table 11: Latin American and Caribbean Centres in GFCI 20

Centre	GFCI 20 Rank	GFCI 20 Rating	GFCI 19 Rank	GFCI 19 Rating	Change in Rank	Change in Rating
Cayman Islands	28	676	41	641	▲ 13	▲ 35
Bermuda	35	654	50	629	▲ 15	▲ 25
British Virgin Islands	36	653	46	635	▲ 10	▲ 18
Sao Paulo	51	626	43	639	▼ 8	▼ 13
Rio de Janeiro	54	623	44	637	▼ 10	▼ 14
Panama	63	613	72	603	▲ 9	▲ 10
Trinidad and Tobago	71	604	–	–	–	–
Mexico City	73	600	53	626	▼ 20	▼ 26
Bahamas	86	566	84	568	▼ 2	▼ 2

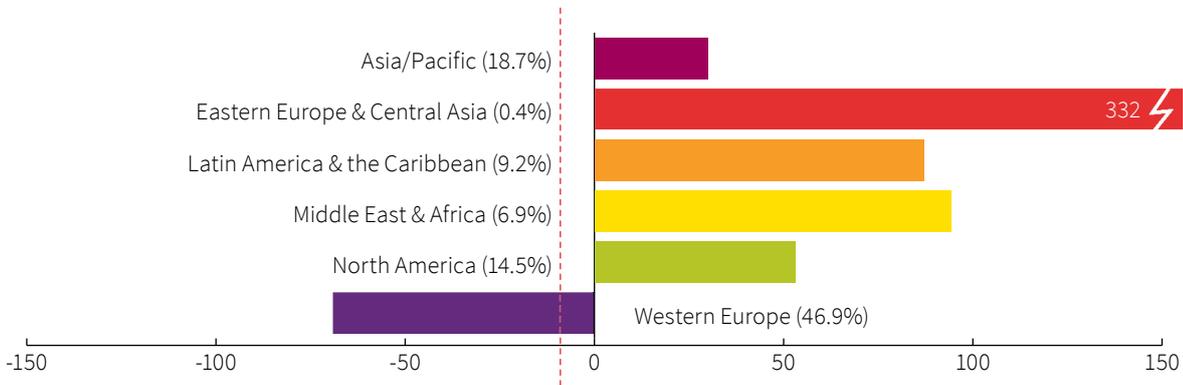
Chart 31 below shows the top five Latin American and Caribbean centres' performance since they joined the index. All centres have risen over time although Sao Paulo has seen the most dramatic rise.

Chart 31 | Top Five North American Centres over GFCI Editions



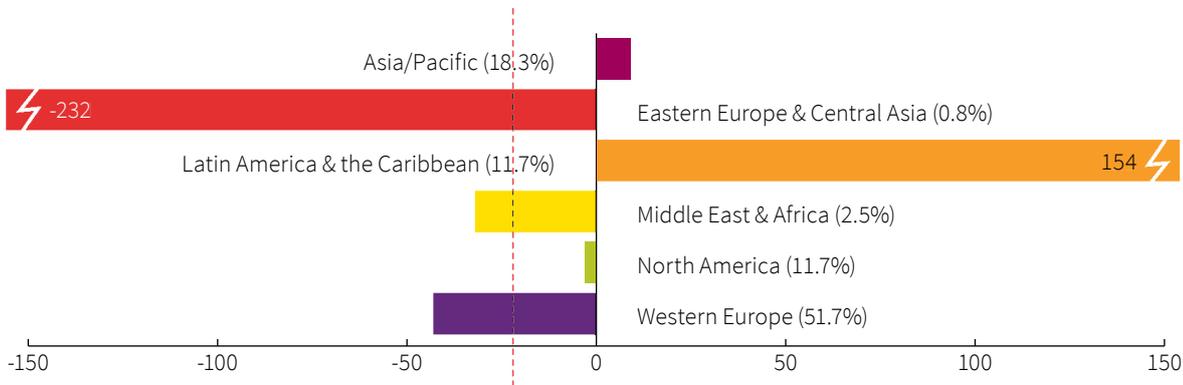
The difference between regional assessments for the top four centres in this region is shown below:

Chart 32 | Assessments by Region – Difference from the Mean – Cayman Islands



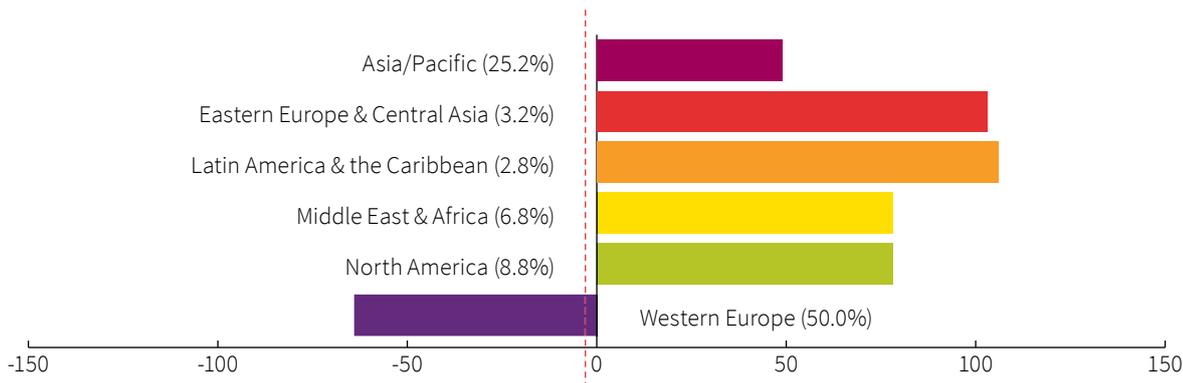
The Cayman Islands have a global average assessment of 668, up from 640 in GFCI 19. Respondents from Western Europe (47% of respondents) give average assessments significantly lower than the mean.

Chart 33 | Assessments by Region – Difference from the Mean – Bermuda



Bermuda has global average assessments of 632 up from 616 in GFCI 19. Respondents from Western Europe and North America gave average assessments higher than the mean.

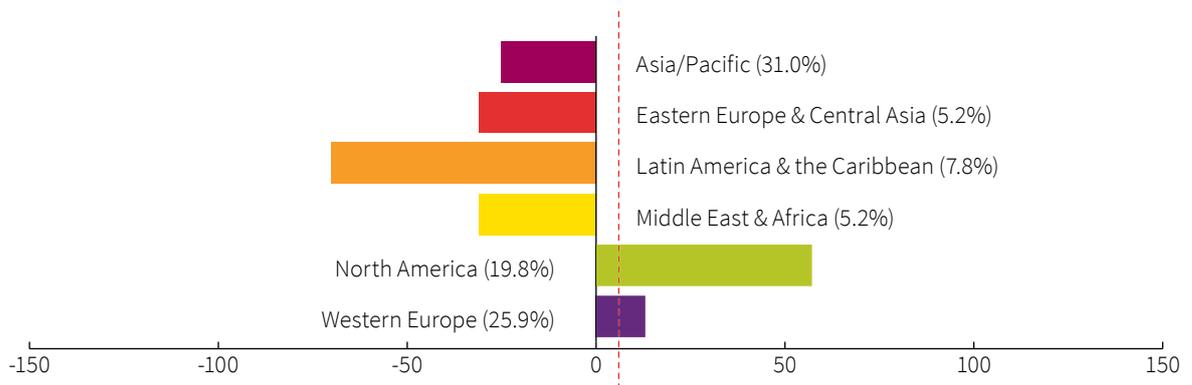
Chart 34 | Assessments by Region – Difference from the Mean – British Virgin Islands



The British Virgin Islands gained global average assessments of 622 up from 601 in GFCI 19. Respondents from Western Europe gave average assessments significantly lower than the mean.

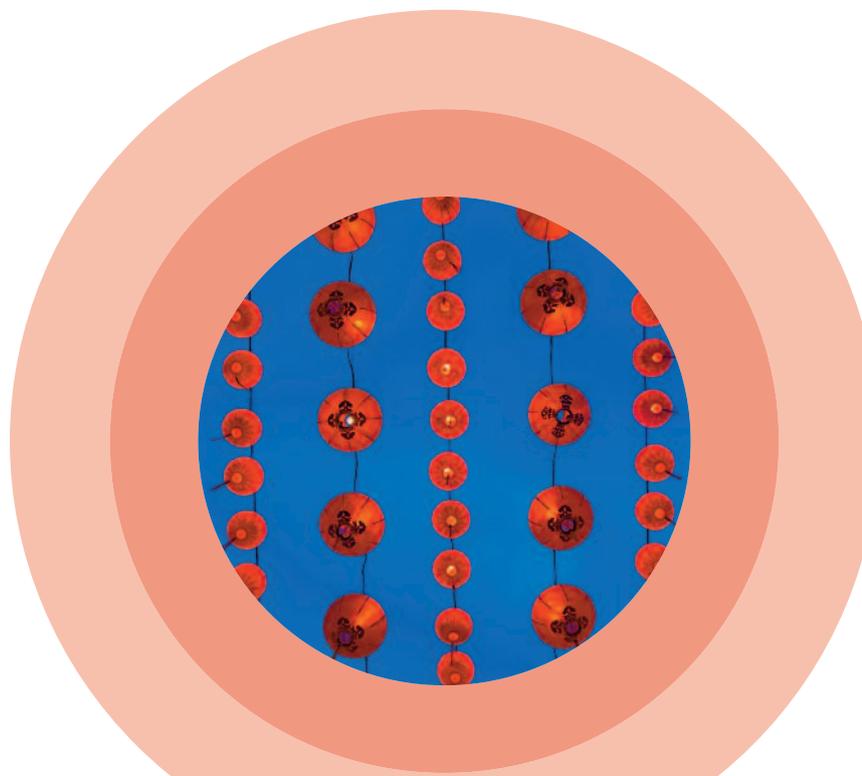
Sao Paulo gained global average assessments of 647 down sharply from 689 in GFCI 19. Respondents from Western Europe and North America gave average assessments higher than the mean.

Chart 35 | Assessments by Region – Difference from the Mean – Sao Paulo



*“Politics and economic conditions continue to blight Latin America and I don’t think that Rio will be able to leverage the ‘Olympic’ effect – there are simply too many impediments to growth.”*

ASSET MANAGER BASED IN LOS ANGELES



# The Middle East and Africa

The Middle Eastern centres have declined in GFCI 20. With the exception of Bahrain which saw a modest rise, all Middle Eastern centres were down. Dubai only fell by a single point and remains well ahead of other centres in the region. With the exception of Casablanca, the African centres also declined.

Table 12 | The Middle Eastern & African Centres in GFCI 20

Centre	GFCI 20 Rank	GFCI 20 Rating	GFCI 19 Rank	GFCI 19 Rating	Change in Rank	Change in Rating
Dubai	18	698	13	699	▼ 5	▼ 1
Casablanca	30	671	33	665	▲ 3	▲ 6
Abu Dhabi	32	662	26	675	▼ 6	▼ 13
Tel Aviv	38	643	25	676	▼ 13	▼ 33
Doha	40	641	35	652	▼ 5	▼ 11
Bahrain	58	619	69	609	▲ 11	▲ 10
Johannesburg	59	618	51	628	▼ 8	▼ 10
Mauritius	79	594	73	601	▼ 6	▼ 7
Riyadh	82	585	70	606	▼ 12	▼ 21

Chart 36 shows the progress of the Middle Eastern centres over the past ten years:

Chart 36 | Top 5 Middle Eastern & African Centres over GFCI Editions

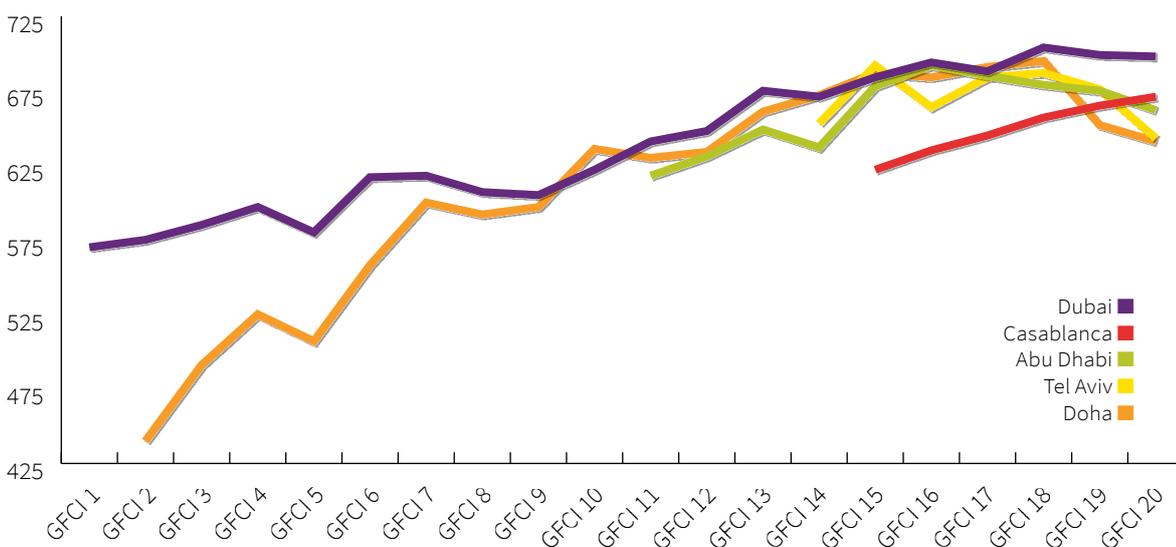
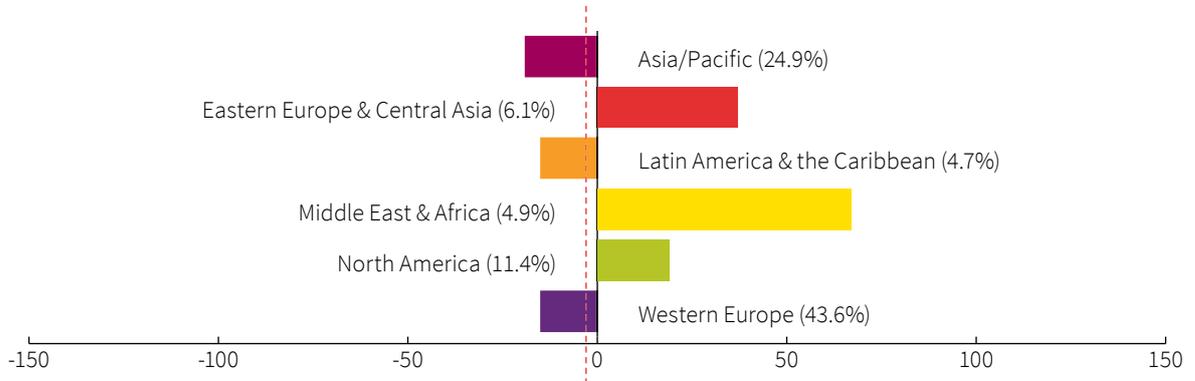
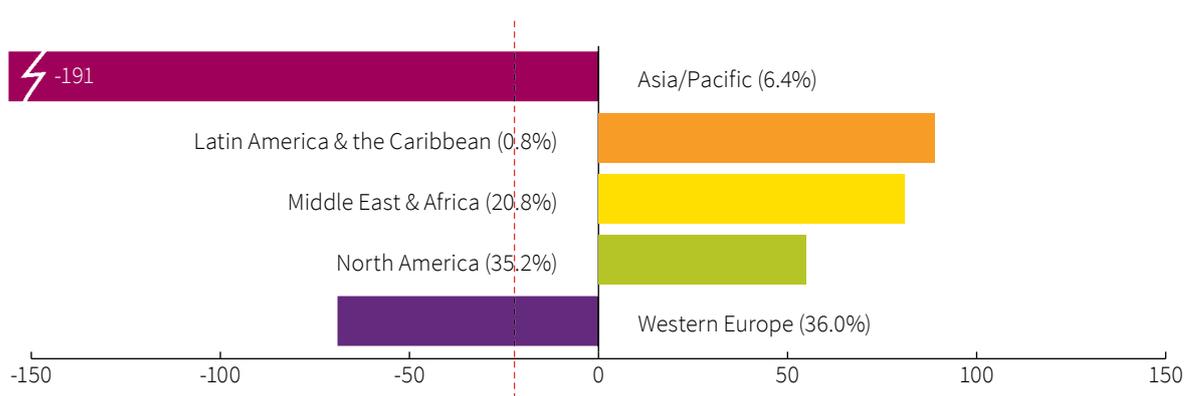


Chart 37 | Assessments by Region – Difference from the Mean – Dubai



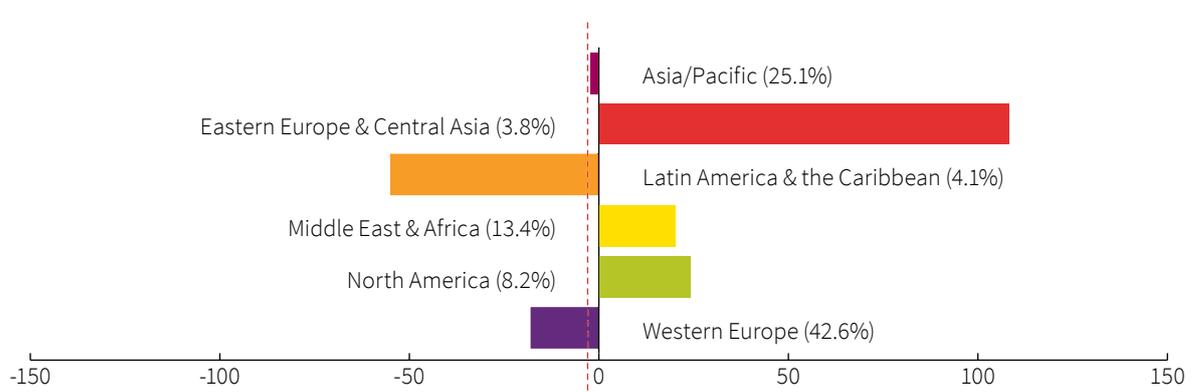
Dubai's global average assessment is 710 down slightly from 713 in GFCI 19. Respondents from Western Europe and Asia/Pacific gave less favourable assessments than the mean.

Chart 38 | Assessments by Region – Difference from the Mean – Casablanca



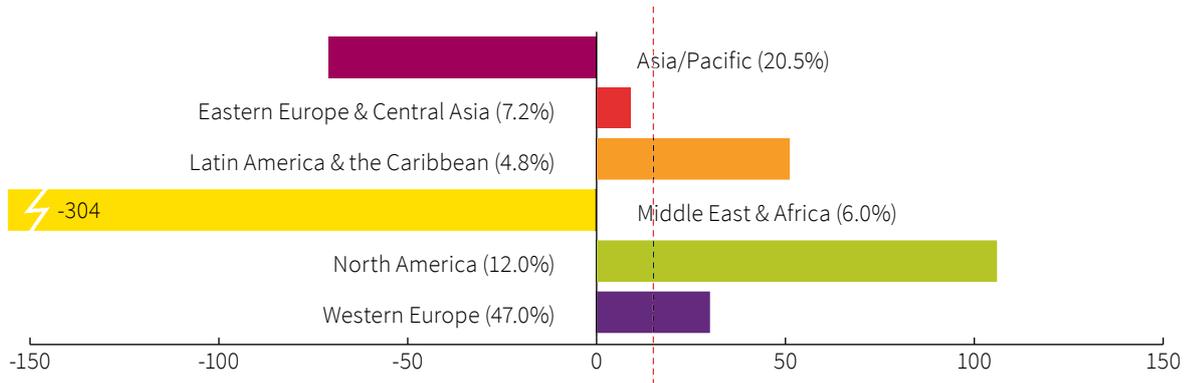
Casablanca's average global assessment is 711. Respondents from Western Europe and Asia/Pacific gave less favourable assessments than the mean.

Chart 39 | Assessments by Region – Difference from the Mean – Abu Dhabi



Abu Dhabi's global average assessment is 747 down from 662 in GFCI 19. Respondents from Western Europe gave less favourable assessments than the mean.

Chart 40 | Assessments by Region – Difference from the Mean – Tel Aviv



Tel Aviv's overall average assessment is 624. Respondents from Asia/Pacific were significantly less favourable than the mean.

*“Dubai continues to rule the roost in the Middle East.”*

ASSET MANAGER BASED IN CASABLANCA

*“We are starting to do more business with Casablanca at the moment.”*

COMMERCIAL BANKER BASED IN DUBAI

# Stability

The GFCI 20 model allows for analysis of the financial centres with the most volatile competitiveness. Chart 41 below contrasts the ‘spread’ or variance of the individual assessments given to each of the top 40 centres with the sensitivity to changes in the instrumental factors:

Chart 41 | GFCI 20 – The Stability of the Top 40 Centres

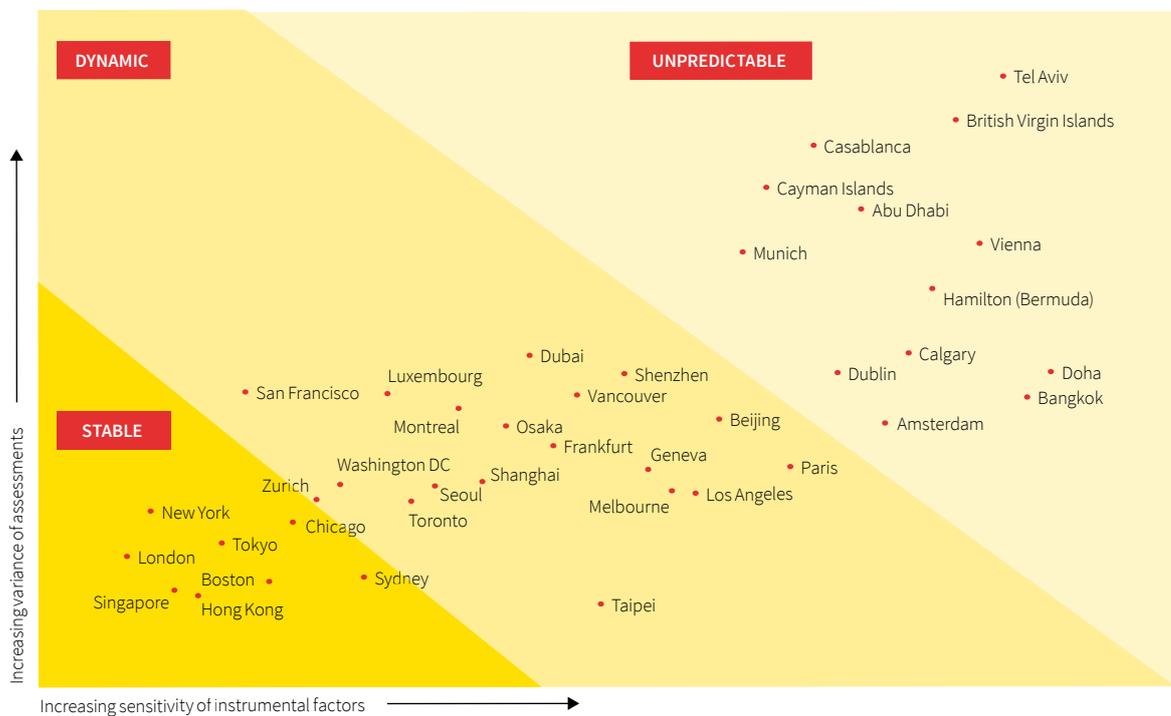
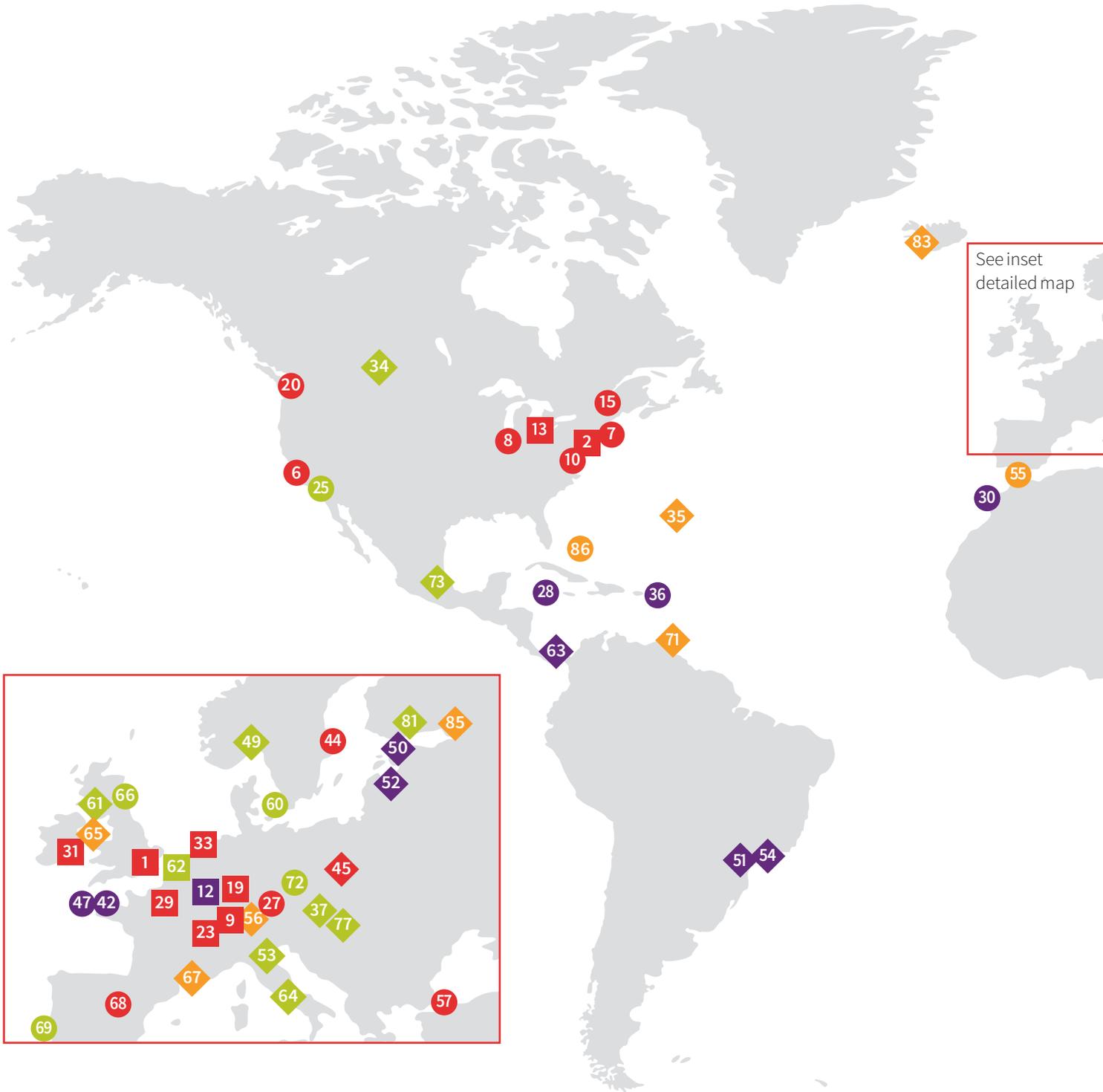


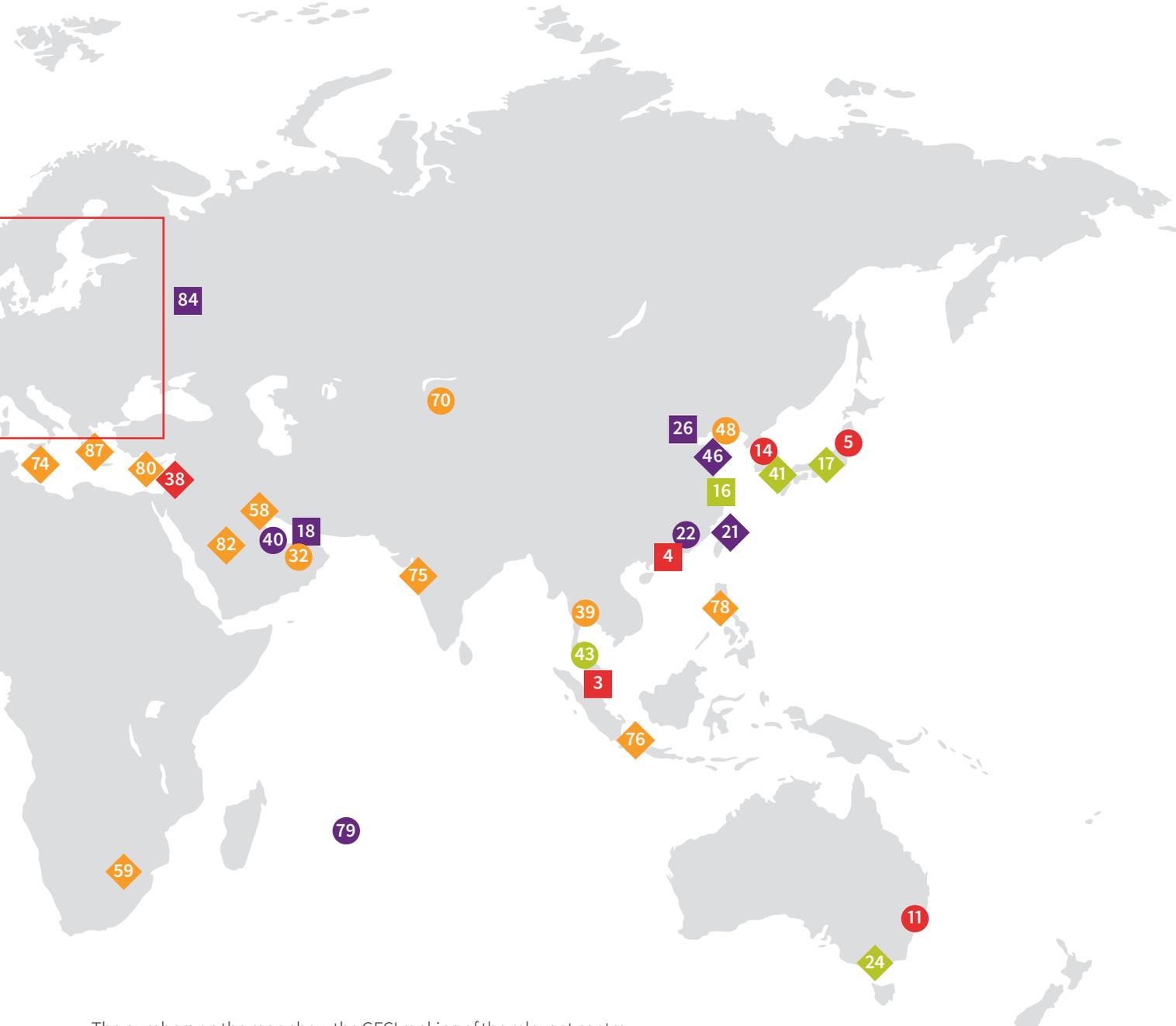
Chart 41 shows three bands of financial centres. The ‘unpredictable’ centres in the top right of the chart have a high sensitivity to changes in the instrumental factors and a high variance of assessments. These centres have the highest potential future movement. Policy changes can make a large difference to their future.

The ‘stable’ centres in the bottom left of the chart (including the top five centres) have a relatively low sensitivity to changes in the instrumental factors and a low variance of assessments. These centres are likely to exhibit the lowest volatility in future GFCI ratings. Looking back at recent GFCI ratings, the stable centres are fairly consistently towards the top of the GFCI ratings.

Chart 41 only plots the top 40 centres for clarity but it is worth noting that many of the centres lower in the index would be in the unpredictable area of the chart if plotted.

# The GFCI World





The numbers on the map show the GFCI ranking of the relevant centre

- |                             |                             |                             |                            |
|-----------------------------|-----------------------------|-----------------------------|----------------------------|
| <b>Broad and deep</b>       | <b>Relatively broad</b>     | <b>Relatively deep</b>      | <b>Emerging</b>            |
| ■ Global leaders            | ■ Global diversified        | ■ Global specialists        | ■ Global contenders        |
| ● Established transnational | ● Transnational diversified | ● Transnational specialists | ● Transnational contenders |
| ◆ Established players       | ◆ Local diversified         | ◆ Local nodes               | ◆ Evolving centres         |

# Industry Sectors

Industry sector sub-indices are created by building the GFCI statistical model using only the questionnaire responses from respondents working in the relevant industry sectors. The GFCI 20 dataset has been used to produce separate sub-indices for the Investment Management, Banking, Government & Regulatory, Insurance and Professional Services sectors.

Table 13 below shows the Top Ten ranked financial centres in the industry sector sub-indices:

**Table 13 | GFCI 20 Industry Sector Sub-indices – Top Ten**

Rank	Investment Management	Banking	Government & regulatory	Insurance	Professional services
1	New York (-)	London (-)	London (-)	New York (-1)	London (-)
2	London (-)	New York (-)	New York (-)	Tokyo (+2)	New York (-)
3	Hong Kong (-)	Hong Kong (-)	Singapore (-)	London (-2)	Singapore (-)
4	Singapore (-)	Singapore (-)	Los Angeles (+1)	Singapore (-2)	Hong Kong (-)
5	Tokyo (-)	Tokyo (-)	Chicago (+4)	Hong Kong (-2)	Zurich (+6)
6	Boston (+2)	Shanghai (+4)	Hong Kong (-2)	Boston (+4)	Luxembourg (+7)
7	San Francisco (+2)	Washington DC (+2)	Tokyo (-1)	Chicago (-)	Shenzhen (-)
8	Sydney (+3)	San Francisco (+14)	Washington DC (-1)	Los Angeles (-3)	Boston (+3)
9	Toronto (-2)	Luxembourg (-3)	Frankfurt (-1)	Washington DC (-3)	San Francisco (-1)
10	Chicago (+3)	Chicago (+6)	Osaka (+9)	San Francisco (+1)	Washington DC (-5)

In the Investment and Banking sub-indices, the top five centres overall occupy the top five places. In the Insurance sub-index, Tokyo is in second place and in the professional services sub-index, Zurich and Luxembourg feature strongly.

*“If the UK leaves the EU and there is a migration away from London, then surely there is no one centre that can become the ‘New London’ – financial services in Europe will be split between several centres – Zurich, Frankfurt, Luxembourg, and Dublin get my vote.”*

PENSION FUND MANAGER BASED IN ZURICH

# Size of Organisation

It is useful to look at how the leading centres are viewed by respondents working for different sizes of organisation. New York is favoured more than London by larger organisations. Hong Kong's highest average assessments come from the very large organisations, Singapore's highest average assessments come from organisations with 500 – 1,000 employees and Tokyo's highest average assessments come from organisations with 1,000 – 2,000 employees:

Chart 42 | Average Assessments by Respondent's Organisation Size – London

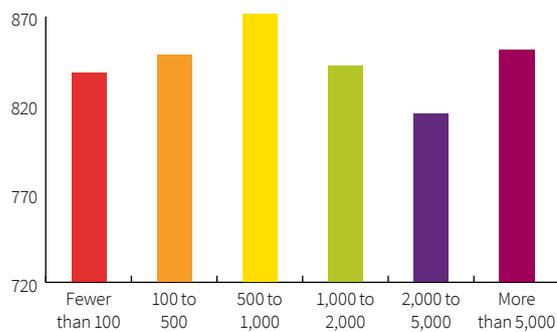


Chart 43 | Average Assessments by Respondent's Organisation Size – New York

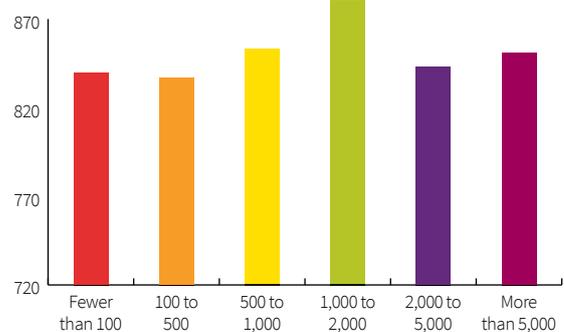


Chart 44 | Average Assessments by Respondent's Organisation Size – Singapore

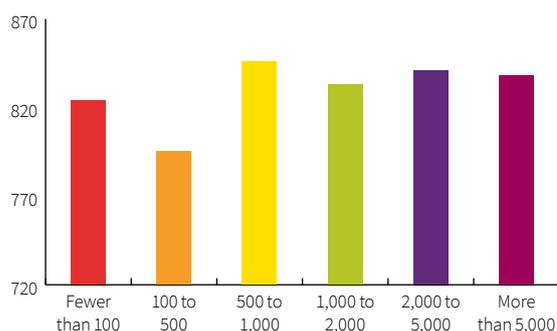
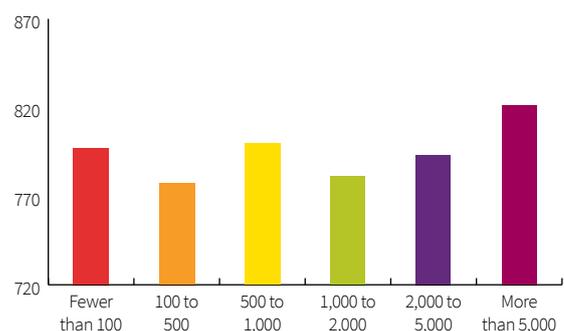


Chart 45 | Average Assessments by Respondent's Organisation Size – Hong Kong



*“The global banks all need to be in the GFCI top centres – London, New York, Singapore, Hong Kong and Tokyo at the very least. Without a base in all five, a bank is not really ‘global.’”*

INVESTMENT BANKER BASED IN HONG KONG

# Reputation

In the GFCI model, we look at reputation by examining the difference between the weighted average assessment given to a centre and its overall rating. The first measure reflects the average score a centre receives from financial professionals across the world, adjusted for time with more recent assessments having more weight (see Appendix 3 for details). The second measure is the GFCI score itself, which represents the average assessment adjusted to reflect the instrumental factors.

If a centre has a higher average assessment than its GFCI 20 rating this indicates that respondents' perceptions of a centre are more favourable than the quantitative measures alone would suggest. This may be due to strong marketing or general awareness. Table 14 below shows the ten centres with the greatest positive difference between average assessment and the GFCI rating:

Table 14 | GFCI 20 Top Ten Centres Assessments & Ratings – Reputational Advantage

Centre – top ten	Average assessment	GFCI 20 rating	Reputational advantage
Singapore	833	752	81
Qingdao	711	631	80
Tokyo	803	734	69
Sydney	774	712	62
Hong Kong	805	748	57
Toronto	766	710	56
New York	850	794	56
London	846	795	51
Casablanca	716	671	45
Boston	762	719	43

The top five centres in terms of reputational advantage are all in the Asia/Pacific region. No Western European centres except London are in the top ten.

*“Russia is still a very hard place to do business and you always feel you can lose everything on a political whim.”*

ASSET MANAGER BASED IN LONDON

Table 15 below shows the ten centres with the greatest reputational disadvantage – an indication that respondents' perceptions of a centre are less favourable than the quantitative measures alone would suggest:

Table 15 | GFCI 20 Bottom Ten Centres Assessments & Ratings – Reputational Disadvantage

Centre – bottom ten	Average assessment	GFCI 20 rating	Reputational advantage
Bangkok	589	642	-53
Reykjavik	518	573	-55
Riyadh	529	585	-56
Moscow	506	568	-62
Gibraltar	553	622	-69
Rio de Janeiro	550	623	-73
Dalian	553	629	-76
St Petersburg	492	567	-75
Busan	566	640	-74
Athens	458	535	-77

Moscow, Athens, Reykjavik, St Petersburg and Cyprus all suffer from strong reputational disadvantages.

*“The major financial centres seem fairly stable but can be unsettled by regulatory and taxation changes. I am sure that the changes within Europe will shake things up a bit!”*

M & A CONSULTANT BASED IN LONDON



# Appendix 1: Assessment Details

Table 16 | Details of Assessments by Centre

Centre	GFCI 20 Rank	GFCI 20 Rating	Number of assessments	Total Average assessment	Standard deviation of assessments	Centre	GFCI 20 Rank	GFCI 20 Rating	Number of assessments	Total Average assessment	Standard deviation of assessments
London	1	795	1029	846	158	Warsaw	45	633	206	661	177
New York	2	794	921	848	166	Qingdao	46	631	485	825	188
Singapore	3	752	610	830	152	Guernsey	47	630	266	623	217
Hong Kong	4	748	698	803	151	Dalian	48	629	411	416	256
Tokyo	5	734	433	799	160	Oslo	49	628	157	613	201
San Francisco	6	720	289	761	185	Tallinn	50	627	141	630	171
Boston	7	719	402	761	153	Sao Paulo	51	626	116	647	193
Chicago	8	718	353	750	164	Riga	52	625	205	658	174
Zurich	9	716	529	753	168	Milan	53	624	209	618	188
Washington DC	10	713	340	743	170	Rio de Janeiro	54	623	97	557	221
Sydney	11	712	294	774	154	Gibraltar	55	622	182	555	217
Luxembourg	12	711	453	736	185	Liechtenstein	56	621	199	599	239
Toronto	13	710	318	768	167	Istanbul	57	620	175	591	205
Seoul	14	704	215	708	170	Bahrain	58	619	151	596	197
Montreal	15	703	203	708	182	Johannesburg	59	618	140	609	197
Shanghai	16	700	454	728	171	Copenhagen	60	616	222	613	187
Osaka	17	699	111	729	180	Glasgow	61	615	198	570	192
Dubai	18	698	429	710	190	Brussels	62	614	414	623	178
Frankfurt	19	695	502	714	176	Panama	63	613	127	578	210
Vancouver	20	694	179	725	184	Rome	64	612	202	562	203
Taipei	21	692	184	727	149	Isle of Man	65	611	261	596	209
Shenzhen	22	691	250	704	188	Edinburgh	66	610	273	623	181
Geneva	23	689	482	689	173	Monaco	67	609	216	592	192
Melbourne	24	687	139	720	169	Madrid	68	608	239	555	217
Los Angeles	25	685	294	714	169	Lisbon	69	607	164	566	222
Beijing	26	683	422	671	181	Almaty	70	605	90	563	234
Munich	27	680	183	650	205	Trinidad and Tobago	71	604	297	593	211
Cayman Islands	28	676	262	668	214	Prague	72	603	143	612	193
Paris	29	672	603	670	173	Mexico City	73	600	131	576	206
Casablanca	30	671	125	711	219	Malta	74	599	196	568	220
Dublin	31	663	453	649	188	Mumbai	75	598	157	574	212
Abu Dhabi	32	662	291	647	211	Jakarta	76	597	127	592	170
Amsterdam	33	659	486	661	180	Budapest	77	596	122	600	202
Calgary	34	658	131	647	191	Manila	78	595	106	571	188
Bermuda	35	654	120	632	200	Mauritius	79	594	111	580	211
British Virgin Islands	36	653	250	622	223	Cyprus	80	593	234	567	217
Vienna	37	645	176	630	206	Helsinki	81	586	179	572	194
Tel Aviv	38	643	83	624	248	Riyadh	82	585	72	524	223
Bangkok	39	642	178	588	184	Reykjavik	83	573	118	507	214
Doha	40	641	120	624	188	Moscow	84	568	326	503	241
Busan	41	640	79	561	203	St Petersburg	85	567	111	490	253
Jersey	42	639	267	630	218	Bahamas	86	566	172	541	215
Kuala Lumpur	43	638	195	634	163	Athens	87	535	150	455	213
Stockholm	44	636	173	641	195						

# Appendix 2: Respondents' Details

Table 17 | Respondents by Industry Sector

Sector	Number
Banking	587
Professional Services	405
Investment	248
Other	217
Insurance	105
Finance	95
Government & Regulatory	83
Trading	65
Trade Association	47
Total	1852

Table 18 | Respondents by Size of Organisation

Size of Organisation	Number
Fewer than 100	412
100 to 500	211
500 to 1,000	149
1,000 to 2,000	103
2,000 to 5,000	167
More than 5,000	810
Total	1852

Table 19 | Respondents by Region

Sector	Number
Western Europe	726
Asia/Pacific	559
North America	264
Middle East & Africa	95
Other	94
Eastern Europe & Central Asia	60
Latin America & the Caribbean	54
Total	1852

# Appendix 3: Methodology

The GFCI provides ratings for financial centres calculated by a ‘factor assessment model’ that uses two distinct sets of input:

- **Instrumental factors:** objective evidence of competitiveness was sought from a wide variety of comparable sources. For example, evidence about the telecommunications infrastructure competitiveness of a financial centre is drawn from the ICT Development Index (supplied by the United Nations), the Networked Readiness Index (supplied by the World Economic Forum), the Telecommunication Infrastructure Index (by the United Nations) and the Web Index (supplied by the World Wide Web Foundation). Evidence about a business-friendly regulatory environment is drawn from the Ease of Doing Business Index (supplied by the World Bank), the Government Effectiveness rating (supplied by the World Bank) and the Corruption Perceptions Index (supplied by Transparency International) amongst others. A total of 101 instrumental factors are used in GFCI 20 (of which 44 were updated since GFCI 19 and six are new to the GFCI). Not all financial centres are represented in all the external sources, and the statistical model takes account of these gaps.
- **Financial centre assessments:** by means of an online questionnaire, running continuously since 2007, we use 23,006 financial centre assessments drawn from 1,852 respondents in GFCI 20.

Financial centres are added to the GFCI questionnaire when they receive five or more mentions in the online questionnaire in response to the question: “Are there any financial centres that might become significantly more important over the next 2 to 3 years?” A centre is only given a GFCI rating and ranking if it receives more than 200 assessments from other centres within the previous 24 months in the online survey. Centres in the GFCI that do not receive 50 assessments in a 24 month period are removed and added to the Associate list until the number of assessments increases.

At the beginning of our work on the GFCI, a number of guidelines were set out. Additional Instrumental Factors are added to the GFCI model when relevant and meaningful ones are discovered:

- indices should come from a reputable body and be derived by a sound methodology;
- indices should be readily available (ideally in the public domain) and be regularly updated;
- updates to the indices are collected and collated every six months;
- no weightings are applied to indices;

- indices are entered into the GFCI 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 (and the method for judging relevance is noted);
- 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);
- if an index does not contain a value for a particular city, a blank is entered against that centre (no average or mean is used).

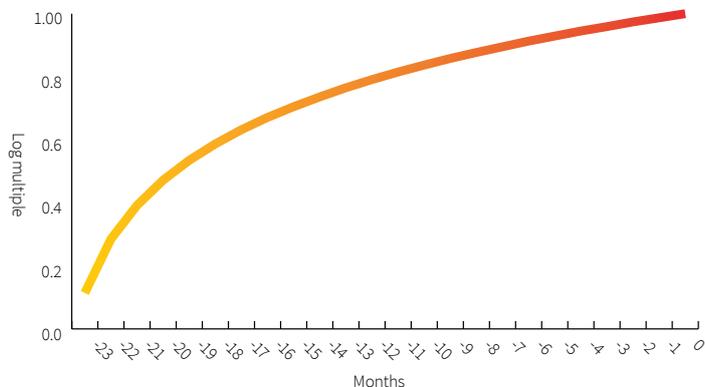
Creating the GFCI does not involve totalling or averaging scores across instrumental factors. An approach involving totalling and averaging would involve a number of difficulties:

- 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); 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;
- the indices would have to be weighted.

The guidelines for financial centre assessments by respondents are:

- responses are collected via an online questionnaire which runs continuously. A link to this questionnaire is emailed to the target list of respondents at regular intervals and other interested parties can fill this in by following the link given in the GFCI publications;
- financial centre assessments will be included in the GFCI model for 24 months after they have been received;
- respondents rating fewer than 3 or more than half of the centres are excluded from the model;
- respondents who do not say where they work are excluded;
- financial centre assessments from the month when the GFCI is created are given full weighting and earlier responses are given a reduced weighting on a log scale.

Chart 46 | Log Scale for Time Weightings



The financial centre assessments and instrumental factors are used to build a predictive model of centre competitiveness using a support vector machine (SVM). SVMs are based upon statistical techniques that classify and model complex historic data in order to make predictions of new data. SVMs work well on discrete, categorical data but also handle continuous numerical or time series data. The SVM used for the GFCI provides information about the confidence with which each specific classification is made and the likelihood of other possible classifications.

A factor assessment model is built using the centre assessments from responses to the online questionnaire. Assessments from respondents' home centres are excluded from the factor assessment model to remove home bias. The model then predicts how respondents would have assessed centres they are not familiar with, by answering questions such as:

- If an investment banker gives Singapore and Sydney certain assessments then, based on the relevant data for Singapore, Sydney and Paris, how would that person assess Paris?

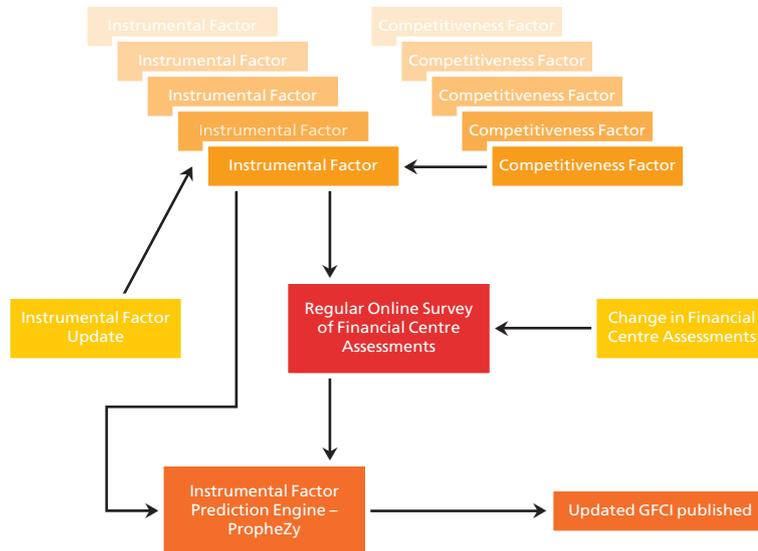
Or

- If a pension fund manager gives Edinburgh and Munich a certain assessment then, based on the relevant data for Edinburgh, Munich and Zurich, how would that person assess Zurich?

Financial centre predictions from the SVM are re-combined with actual financial centre assessments (except those from the respondents' home centres) to produce the GFCI – a set of financial centre ratings. The GFCI is dynamically updated either by updating and adding to the instrumental factors or through new financial centre assessments. These updates permit, for instance, a recently changed index of rental costs to affect the competitiveness rating of the centres.

The process of creating the GFCI is outlined diagrammatically below.

Chart 47 | The GFCI Process



It is worth drawing attention to a few consequences of basing the GFCI on instrumental factors and questionnaire responses.

- several indices can be used for each competitive factor;
- a strong international group of ‘raters’ has developed as the GFCI progresses;
- sector-specific ratings are available – using the business sectors represented by questionnaire respondents. This makes it possible to rate London as competitive in Insurance (for instance) while less competitive in Asset Management (for instance);
- the factor assessment model can be queried in a ‘what if’ mode – “how much would London rental costs need to fall in order to increase London’s ranking against New York?”

Part of the process of building the GFCI is extensive sensitivity testing to changes in factors of competitiveness and financial centre assessments. There are over ten million data points in the current model. The accuracy of predictions given by the SVM are regularly tested against actual assessments.

# Appendix 4: Instrumental Factors

Table 20 | Top 25 Instrumental Factors by correlation with GFCI 20

Instrumental Factors	R-Sq
RF10 Price Levels	0.5028
BE15 OECD Country Risk Classification	0.4569
RF01 World Competitiveness Scoreboard	0.4552
RF02 Global Competitiveness Index	0.4154
BE17 Financial Secrecy Index	0.4101
IF16 Logistics Performance Index	0.4046
RF18 IESE cities in motion index	0.3977
RF15 Global Enabling Trade Report	0.3782
BE01 Business Environment Rankings	0.3706
RF12 Innovation Cities Global Index	0.3508
HC05 Citizens Domestic Purchasing Power	0.3226
HC17 Cost of Living City Rankings	0.3038
HC11 Global Talent Index	0.2924
RF04 FDI Confidence Index	0.2898
BE18 Government Effectiveness	0.2870
FS06 Domestic Credit Provided by Banking Sector (% of GDP)	0.2863
BE07 Wage Comparison Index	0.2817
IF07 Quality of Roads	0.2813
RF07 Global Innovation Index	0.2774
IF10 Networked Readiness Index	0.2774
BE19 City GDP Figures	0.2761
IF01 Office Occupancy Cost	0.2688
HC10 Quality of Living City Rankings	0.2570
BE03 Operational Risk Rating	0.2552
RF17 Legatum Prosperity Index	0.2543
FS08 Total Net Assets of Regulated Open-End Funds	0.2508

Table 21 | Business Environment Factors

Name and Code	Source	Website	Updated Since GFC19
BE01 Business Environment Rankings	EIU	<a href="http://www.eiu.com/public/thankyou_download.aspx?activity=download&amp;campaignid=bizenviro2014">www.eiu.com/public/thankyou_download.aspx?activity=download&amp;campaignid=bizenviro2014</a>	
BE02 Ease of Doing Business Index	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=doing-business">databank.worldbank.org/data/reports.aspx?source=doing-business</a>	
BE03 Operational Risk Rating	EIU	<a href="http://www.viewswire.com/index.asp?layout=homePubTypeRK">www.viewswire.com/index.asp?layout=homePubTypeRK</a>	
BE04 Real Interest Rate	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators">databank.worldbank.org/data/reports.aspx?source=world-development-indicators</a>	Yes
BE05 Global Services Location	AT Kearney	<a href="http://www.atkearney.com/research-studies/global-services-location-index">www.atkearney.com/research-studies/global-services-location-index</a>	
BE06 Corruption Perception Index	Transparency International	<a href="http://www.transparency.org/policy_research/surveys_indices/cpi">www.transparency.org/policy_research/surveys_indices/cpi</a>	
BE07 Wage Comparison Index	UBS	<a href="http://www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html">www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html</a>	
BE08 Corporate Tax Rates	PWC	<a href="http://www.doingbusiness.org/reports/thematic-reports/paying-taxes">www.doingbusiness.org/reports/thematic-reports/paying-taxes</a>	
BE09 Employee Tax Rates	PWC	Supplied Direct	
BE10 Personal Tax Rates	OECD	<a href="http://www.oecd.org/tax/tax-policy/tax-database.htm">www.oecd.org/tax/tax-policy/tax-database.htm</a>	Yes
BE11 Tax as Percentage of GDP	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators">databank.worldbank.org/data/reports.aspx?source=world-development-indicators</a>	Yes
BE12 Bilateral Tax Information Exchange Agreements	OECD	<a href="http://www.oecd.org/document/7/0,3343,en_2649_33767_38312839_1_1_1_1_00.html">www.oecd.org/document/7/0,3343,en_2649_33767_38312839_1_1_1_1_00.html</a>	
BE13 Economic Freedom of the World	Fraser Institute	<a href="http://www.freetheworld.com/release.html">www.freetheworld.com/release.html</a>	
BE14 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>	Yes
BE15 OECD Country Risk Classification	OECD	<a href="http://www.oecd.org/tad/xcred/crc.htm">www.oecd.org/tad/xcred/crc.htm</a>	Yes
BE16 Global Peace Index	Institute for Economics & Peace	<a href="http://www.visionofhumanity.org">www.visionofhumanity.org</a>	Yes
BE17 Financial Secrecy Index	Tax Justice Network	<a href="http://www.financialsecrecyindex.com">www.financialsecrecyindex.com</a>	
BE18 Government Effectiveness	The World Bank	<a href="http://info.worldbank.org/governance/wgi/index.aspx#home">info.worldbank.org/governance/wgi/index.aspx#home</a>	
BE19 City GDP Figures	The Brookings Institution	<a href="http://www.brookings.edu/research/interactives/global-metro-monitor-3">www.brookings.edu/research/interactives/global-metro-monitor-3</a>	
BE20 Open Government	World Justice Project	<a href="http://worldjusticeproject.org/rule-of-law-index">worldjusticeproject.org/rule-of-law-index</a>	
BE21 Regulatory Enforcement	World Justice Project	<a href="http://worldjusticeproject.org/rule-of-law-index">worldjusticeproject.org/rule-of-law-index</a>	
BE22 Press Freedom Index	Reporters Without Borders (RSF)	<a href="http://en.rsf.org">en.rsf.org</a>	Yes
BE23 Currencies	Swiss Association for Standardization (SNV)	<a href="http://www.currency-iso.org/en/home/tables/table-a1.html">www.currency-iso.org/en/home/tables/table-a1.html</a>	Yes
BE24 Commonwealth Countries	The Commonwealth	<a href="http://thecommonwealth.org/member-countries">thecommonwealth.org/member-countries</a>	
BE25 Common Law Countries	CIA	<a href="https://www.cia.gov/library/publications/the-world-factbook/fields/2100.html">https://www.cia.gov/library/publications/the-world-factbook/fields/2100.html</a>	
BE26 Inflation, GDP Deflator	The World Bank	<a href="http://data.worldbank.org/indicator/NY.GDP.DEFL.KD.ZG">data.worldbank.org/indicator/NY.GDP.DEFL.KD.ZG</a>	Yes
BE27 Rule of Law	The World Bank	<a href="http://info.worldbank.org/governance/wgi/index.aspx#home">info.worldbank.org/governance/wgi/index.aspx#home</a>	
BE28 Political Stability and Absence of Violence/Terrorism	The World Bank	<a href="http://info.worldbank.org/governance/wgi/index.aspx#home">info.worldbank.org/governance/wgi/index.aspx#home</a>	NEW
BE29 Regulatory Quality	The World Bank	<a href="http://info.worldbank.org/governance/wgi/index.aspx#home">info.worldbank.org/governance/wgi/index.aspx#home</a>	NEW
BE30 Control of Corruption	The World Bank	<a href="http://info.worldbank.org/governance/wgi/index.aspx#home">info.worldbank.org/governance/wgi/index.aspx#home</a>	NEW
BE31 Best Countries for Business	Forbes	<a href="http://www.forbes.com/best-countries-for-business/list/#tab:overall">www.forbes.com/best-countries-for-business/list/#tab:overall</a>	NEW

Table 22 | Financial Sector Development Factors

Name and Code	Source	Website	Updated since GFCI 19
FS01 Capitalisation of Stock Exchanges	The World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org/home/index.php/statistics/monthly-reports">www.world-exchanges.org/home/index.php/statistics/monthly-reports</a>	Yes
FS02 Value of Share Trading	The World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org/home/index.php/statistics/monthly-reports">www.world-exchanges.org/home/index.php/statistics/monthly-reports</a>	Yes
FS03 Volume of Share Trading	The World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org/home/index.php/statistics/monthly-reports">www.world-exchanges.org/home/index.php/statistics/monthly-reports</a>	Yes
FS04 Broad Stock Index Levels	The World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org/home/index.php/statistics/monthly-reports">www.world-exchanges.org/home/index.php/statistics/monthly-reports</a>	Yes
FS05 Value of Bond Trading	The World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org/home/index.php/statistics/monthly-reports">www.world-exchanges.org/home/index.php/statistics/monthly-reports</a>	Yes
FS06 Domestic Credit Provided by Banking Sector (% of GDP)	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators">databank.worldbank.org/data/reports.aspx?source=world-development-indicators</a>	Yes
FS07 Percentage of Firms Using Banks to Finance Investment	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators">databank.worldbank.org/data/reports.aspx?source=world-development-indicators</a>	Yes
FS08 Total Net Assets of Regulated Open-End Funds	Investment Company Institute	<a href="http://www.icifactbook.org">www.icifactbook.org</a>	Yes
FS09 Islamic Finance Country Index	Islamic Banks and Financial Institutions	<a href="http://www.gifr.net/publications">www.gifr.net/publications</a>	Yes
FS10 Net External Positions of Banks	The Bank for International Settlements	<a href="http://www.bis.org/statistics/bankstats.htm">www.bis.org/statistics/bankstats.htm</a>	Yes
FS11 External Positions of Central Banks as a share of GDP	The Bank for International Settlements	<a href="http://www.bis.org/statistics/bankstats.htm">www.bis.org/statistics/bankstats.htm</a>	Yes
FS12 Liner Shipping Connectivity Index	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators">databank.worldbank.org/data/reports.aspx?source=world-development-indicators</a>	Yes
FS13 Global Connectedness Index	DHL	<a href="http://www.dhl.com/en/about_us/logistics_insights/studies_research/global_connectedness_index/global_connectedness_index.html">www.dhl.com/en/about_us/logistics_insights/studies_research/global_connectedness_index/global_connectedness_index.html</a>	Yes
FS14 City GDP composition (Business/Finance)	The Brookings Institution	<a href="http://www.brookings.edu/research/interactives/global-metro-monitor-3">www.brookings.edu/research/interactives/global-metro-monitor-3</a>	
FS15 Business Process Outsourcing Location Index	Cushman & Wakefield	<a href="http://www.cushmanwakefield.com/en/research-and-insight/2015/business-process-outsourcing-location-index-2015">www.cushmanwakefield.com/en/research-and-insight/2015/business-process-outsourcing-location-index-2015</a>	

Table 23 | Infrastructure Factors

Instrumental factor	Source	Website	Updated since GFCI 19
IF01 Office Occupancy Cost	CBRE Research	<a href="http://www.cbre.com/research-and-reports/Global-Prime-Office-Occupancy-Costs-2016">www.cbre.com/research-and-reports/Global-Prime-Office-Occupancy-Costs-2016</a>	Yes
IF02 IPD Global Property Index	Investment Property Databank	<a href="http://www.msci.com/real-estate">www.msci.com/real-estate</a>	NEW
IF03 JLL Real Estate Transparency Index	Jones Lang LaSalle	<a href="http://www.jll.com/greti/Pages/Rankings.aspx">www.jll.com/greti/Pages/Rankings.aspx</a>	
IF04 ICT Development Index	United Nations	<a href="http://www.itu.int/net4/ITU-D/idi/2015/#">www.itu.int/net4/ITU-D/idi/2015/#</a>	Yes
IF05 Telecommunication Infrastructure Index	United Nations	<a href="http://unpan3.un.org/egovkb/Data-Center">unpan3.un.org/egovkb/Data-Center</a>	
IF06 Quality of Domestic Transport Network	World Economic Forum	<a href="http://reports.weforum.org/travel-and-tourism-competitiveness-report-2015">reports.weforum.org/travel-and-tourism-competitiveness-report-2015</a>	Yes
IF07 Quality of Roads	World Economic Forum	<a href="http://reports.weforum.org/travel-and-tourism-competitiveness-report-2015">reports.weforum.org/travel-and-tourism-competitiveness-report-2015</a>	
IF08 Roadways per Land Area	CIA	<a href="http://www.cia.gov/library/publications/the-world-factbook/rankorder/2085rank.html">www.cia.gov/library/publications/the-world-factbook/rankorder/2085rank.html</a>	
IF09 Railways per Land Area	CIA	<a href="http://www.cia.gov/library/publications/the-world-factbook/rankorder/2121rank.html">www.cia.gov/library/publications/the-world-factbook/rankorder/2121rank.html</a>	
IF10 Networked Readiness Index	World Economic Forum	<a href="http://reports.weforum.org/global-information-technology-report-2016">reports.weforum.org/global-information-technology-report-2016</a>	
IF11 Energy Sustainability Index	World Energy Council	<a href="http://www.worldenergy.org/data/sustainability-index">www.worldenergy.org/data/sustainability-index</a>	Yes
IF12 Metro Network Length	Metro Bits	<a href="http://mic-ro.com/metro/table.html">mic-ro.com/metro/table.html</a>	
IF13 The Web Index	The World Wide Web Foundation	<a href="http://thewebindex.org/about/the-web-index">thewebindex.org/about/the-web-index</a>	Yes
IF14 Environmental Performance	Yale University	<a href="http://epi.yale.edu//epi/country-rankings">epi.yale.edu//epi/country-rankings</a>	
IF15 Global Sustainable Competitiveness Index	Solability	<a href="http://solability.com/the-global-sustainable-competitiveness-index/the-index">solability.com/the-global-sustainable-competitiveness-index/the-index</a>	Yes
IF16 Logistics Performance Index	The World Bank	<a href="http://lpi.worldbank.org/international/global">lpi.worldbank.org/international/global</a>	

Table 24 | Human Capital Factors

Instrumental factor	Source	Website	Updated since GFCI 19
HC01 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">databank.worldbank.org/data/reports.aspx?source=Education%20Statistics</a>	NEW
HC02 Gross Tertiary Graduation Ratio	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=Education%20Statistics">databank.worldbank.org/data/reports.aspx?source=Education%20Statistics</a>	Yes
HC03 Visa Restrictions Index	Henley Partners	<a href="http://www.henleyglobal.com/citizenship/visa-restrictions">www.henleyglobal.com/citizenship/visa-restrictions</a>	Yes
HC04 Human Development Index	UN Development Programme	<a href="http://hdr.undp.org">hdr.undp.org</a>	Yes
HC05 Citizens Domestic Purchasing Power	UBS	<a href="http://www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html">www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html</a>	
HC06 Number of High Net Worth Individuals	Capgemini	<a href="http://www.uk.capgemini.com/thought-leadership/world-wealth-report-2013-from-capgemini-and-rbc-wealth-management">www.uk.capgemini.com/thought-leadership/world-wealth-report-2013-from-capgemini-and-rbc-wealth-management</a>	
HC07 Homicide Rates	UN Office of Drugs & Crime	<a href="http://www.unodc.org/documents/gsh/pdfs/2014_GLOBAL_HOMICIDE_BOOK_web.pdf">www.unodc.org/documents/gsh/pdfs/2014_GLOBAL_HOMICIDE_BOOK_web.pdf</a> (Excel Data <a href="http://www.unodc.org/gsh/en/data.html">www.unodc.org/gsh/en/data.html</a> )	Yes
HC08 Top Tourism Destinations	Euromonitor	<a href="http://blog.euromonitor.com/2016/01/top-100-city-destinations-ranking-2016.html">blog.euromonitor.com/2016/01/top-100-city-destinations-ranking-2016.html</a>	
HC09 Average precipitation in depth	The World Bank	<a href="http://data.worldbank.org/indicator/AG.LND.PRCP.MM">data.worldbank.org/indicator/AG.LND.PRCP.MM</a>	
HC10 Quality of Living City Rankings	Mercer	<a href="http://www.mercer.com">www.mercer.com</a>	
HC11 Global Talent Index	EIU	<a href="http://www.economistinsights.com/search/node/global%20talent%20index%202011%202015">www.economistinsights.com/search/node/global%20talent%20index%202011%202015</a>	Yes
HC12 Health Care Index	Numbeo	<a href="http://www.numbeo.com/health-care/rankings.jsp">www.numbeo.com/health-care/rankings.jsp</a>	
HC13 Global Skills Index	Hays	<a href="http://www.hays-index.com/">www.hays-index.com/</a>	Yes
HC14 Linguistic Diversity	Ethnologue	<a href="http://www.ethnologue.com/statistics/country">www.ethnologue.com/statistics/country</a>	
HC15 Global Terrorism Index	Institute for Economics & Peace	<a href="http://www.visionofhumanity.org">www.visionofhumanity.org</a>	
HC16 World Talent Rankings	IMD	<a href="http://www.imd.org/wcc/news-talent-report">www.imd.org/wcc/news-talent-report</a>	
HC17 Cost of Living City Rankings	Mercer	<a href="http://www.mercer.com">www.mercer.com</a>	
HC18 Health Outcomes and Cost	EIU	<a href="http://www.eiu.com/Handlers/WhitepaperHandler.ashx?fi=Healthcare-outcomes-index-2014.pdf&amp;mode=wp&amp;campaignid=Healthoutcome2014">www.eiu.com/Handlers/WhitepaperHandler.ashx?fi=Healthcare-outcomes-index-2014.pdf&amp;mode=wp&amp;campaignid=Healthoutcome2014</a>	Yes
HC19 Quality of Life Index	Numbeo	<a href="http://www.numbeo.com/quality-of-life/rankings.jsp">www.numbeo.com/quality-of-life/rankings.jsp</a>	
HC20 Crime Index	Numbeo	<a href="http://www.numbeo.com/crime/rankings.jsp">www.numbeo.com/crime/rankings.jsp</a>	Yes

Table 25 | Reputation and General Factors

Instrumental factor	Source	Website	Updated since GFCI 19
RF01 World Competitiveness Scoreboard	IMD	<a href="http://www.imd.ch/research/publications/wcy/competitiveness_scoreboard.cfmue">www.imd.ch/research/publications/wcy/competitiveness_scoreboard.cfmue</a>	Yes
RF02 Global Competitiveness Index	World Economic Forum	<a href="http://www.weforum.org/en/initiatives/gcp/Global%20Competitiveness%20Report/index.htm">www.weforum.org/en/initiatives/gcp/Global%20Competitiveness%20Report/index.htm</a>	
RF03 Foreign Direct Investment Inflows	UNCTAD	<a href="http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sRF_ActivePath=P,5,27&amp;sRF_Expanded=P,5,27">unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sRF_ActivePath=P,5,27&amp;sRF_Expanded=P,5,27</a>	
RF04 FDI Confidence Index	AT Kearney	<a href="http://www.atkearney.com/research-studies/foreign-direct-investment-confidence-index">www.atkearney.com/research-studies/foreign-direct-investment-confidence-index</a>	Yes
RF05 City to Country GDP Ratio	The Brookings Institution	<a href="http://www.brookings.edu/research/interactives/global-metro-monitor-3">www.brookings.edu/research/interactives/global-metro-monitor-3</a>	
RF06 GDP per Person Employed	The World Bank	<a href="http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators">databank.worldbank.org/data/reports.aspx?source=world-development-indicators</a>	Yes
RF07 Global Innovation Index	INSEAD	<a href="http://www.globalinnovationindex.org/content.aspx?page=GII-Home">www.globalinnovationindex.org/content.aspx?page=GII-Home</a>	
RF08 Global Intellectual Property Index	Taylor Wessing	<a href="http://www.taylorwessing.com/ipindex">www.taylorwessing.com/ipindex</a>	Yes
RF09 RPI (% change on year ago)	The Economist	<a href="http://www.economist.com/markets/indicators">www.economist.com/markets/indicators</a>	Yes
RF10 Price Levels	UBS	<a href="http://www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html">www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html</a>	
RF11 Number of International Association Meetings	World Economic Forum	<a href="http://reports.weforum.org/travel-and-tourism-competitiveness-report-2015">reports.weforum.org/travel-and-tourism-competitiveness-report-2015</a>	
RF12 Innovation Cities Global Index	2ThinkNow Innovation Cities	<a href="http://www.innovation-cities.com">www.innovation-cities.com</a>	
RF13 Big Mac Index	The Economist	<a href="http://www.economist.com/content/big-mac-index">www.economist.com/content/big-mac-index</a>	Yes
RF14 Sustainable Economic Development	Boston Consulting Group	<a href="http://www.bcgperspectives.com/content/interactive/public_sector_globalization_interactive_map_sustainable_economic_development">www.bcgperspectives.com/content/interactive/public_sector_globalization_interactive_map_sustainable_economic_development</a>	Yes
RF15 Global Enabling Trade Report	World Economic Forum	<a href="http://www.weforum.org/issues/international-trade">www.weforum.org/issues/international-trade</a>	
RF16 Good Country Index	Good Country Party	<a href="http://www.goodcountry.org/overall">www.goodcountry.org/overall</a>	
RF17 Legatum Prosperity Index	Legatum Institute	<a href="http://www.prosperity.com/#!/ranking">www.prosperity.com/#!/ranking</a>	
RF18 IESE cities in motion index	IESE	<a href="http://citiesinmotion.iese.edu/indicecim/?lang=en">citiesinmotion.iese.edu/indicecim/?lang=en</a>	
RF19 FDI Inflows to GDP	UNCTAD	<a href="http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx">unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx</a>	Yes





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