



The Global Financial Centres Index 12

SEPTEMBER 2012





The Qatar Financial Centre Authority sponsors Long Finance's 'Financial Centre Futures' programme.

Qatar Financial Centre (QFC) is a financial and business centre established by the government of Qatar in 2005 to attract international financial services and multinational corporations to grow and develop the market for financial services in the region.

QFC consists of a commercial arm, the QFC Authority; and an independent financial regulator, the QFC Regulatory Authority. It also has an independent judiciary which comprises a civil and commercial court and a regulatory tribunal.

QFC aims to help all QFC licensed firms generate new and sustainable revenue streams. It provides access to local and regional investment opportunities. Business can be transacted inside or outside Qatar, in local or foreign currency.

Uniquely, this allows businesses to operate both locally and internationally. Furthermore, QFC allows 100% ownership by foreign companies, and all profits can be remitted outside of Qatar.

The **QFC Authority** is responsible for the organisation's commercial strategy and for developing relationships with the global financial community and other key institutions both within and outside Qatar. One of the most important roles of QFCA is to approve and issue licences to individuals, businesses and other entities that wish to incorporate or establish themselves in Qatar with the Centre.

The **QFC Regulatory Authority** is an independent statutory body and authorises and supervises businesses that conduct financial services activities in, or from, the QFC. It has powers to authorise, supervise and, where necessary, discipline regulated firms and individuals.

Z/Yen Group thanks the City of London Corporation for its cooperation in the development of the GFCI and for the use of the related data still used in the GFCI.

The author of this report, Mark Yeandle, would like to thank Nick Danev for his contribution with research, modelling and ideas, along with other members of the GFCI team – in particular Stephanie Rochford, Chiara von Gunten and Michael Mainelli.

Foreword

The Global Financial Centres Index (GFCI) is a barometer which has been tracking movements in the competitiveness of financial centres around the world since 2007. Today the GFCI follows 77 centres, of which about one-third are in emerging economies. Within that group, two of the fastest rising centres are Doha, Qatar and Dubai, United Arab Emirates.

The Gulf Cooperation Council (GCC) region, which includes Qatar and the UAE, enjoys outstanding competitive advantages as a source of, and destination for, capital. The GCC's huge natural resources wealth – some 39% of the world's proven oil reserves and 23% of the world's proven gas reserves – has been the main force behind its strong economic growth over the last decade. The GCC's combined GDP now ranks among the 20 largest economies in the world. The region's natural resources wealth has been reinvested into broad-based economic diversification which has placed considerable emphasis on expanding the financial services sector and attracting international financial sector firms to set up branches there. This has given rise to the increasing prominence of the GCC financial centres.

The GFCI has tracked this rise. In GFCI 1, published in March 2007, Dubai was the only Middle Eastern centre the index covered. The index now follows four centres in the Middle East. In this latest GFCI, Qatar and Dubai are the highest ranking financial centres in the GCC and have both gained points. This is no accident. They have successfully established growing financial services centres which have become the most significant contributors to

national GDP after hydrocarbons. Qatar and Dubai are rivals but they are also mutually supportive and the GCC region is reaping the benefits of having both centres.

The Qatar Financial Centre (QFC) has been a major influence on the development of Qatar as a financial centre, offering international and local firms an onshore trading environment with a robust legal structure based on English common law, a world class regulatory structure and one of the friendliest tax regimes in the world. The QFC Authority's hub strategy is to create a uniquely sustainable platform for regional growth in reinsurance, captive insurance and asset management.

As the balance of the global economy shifts more towards emerging economies, I believe we can expect to see financial centres in these countries grow in terms of influence. Qatar, with its strong economic principles and long-term commitment to building its financial sector, is well placed to benefit from this fundamental trend set to redefine our investment landscape.



Dr. Abdulaziz A Al-Ghorairi
Senior Vice-President and Chief Economist
Commercialbank Capital

GFCI 12 – Summary and Headlines

The GFCI provides profiles, ratings and rankings for 77 financial centres, drawing on two separate sources of data – instrumental factors (external indices) and responses to an online survey. The GFCI was first published by Z/Yen Group in March 2007 and has subsequently been updated every six months. Successive growth in the number of respondents and data has enabled us to highlight the changing priorities and concerns of financial professionals over this time, particularly since financial crises began to unfold in 2007 and 2008. This is the twelfth edition of GFCI (GFCI 12).

Instrumental factors: previous research indicates that many factors combine to make a financial centre competitive. These factors can be grouped into five overarching ‘areas of competitiveness’: People, Business Environment, Infrastructure, Market Access and General Competitiveness. Evidence of a centre’s performance in these areas is drawn from a range of external measures. For example, evidence about a fair and just business environment is drawn from a corruption perception index and an opacity index. 86 factors have been used in GFCI 12, of which 37 have been updated since GFCI 11 and 13 are new to the GFCI (see page 44 for details on all external measures used in the GFCI 12 model).

Financial centre assessments: GFCI uses responses to an ongoing online questionnaire 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. Overall, 26,180 financial centre assessments from 1,890 financial services professionals were used to compute GFCI 12, with older assessments discounted according to age.

Full details of the methodology behind GFCI 12 can be found on page 39. The ratings and rankings are calculated using a ‘factor assessment model’, which combines the instrumental factors and questionnaire assessments.

The main headlines of GFCI 12 are:

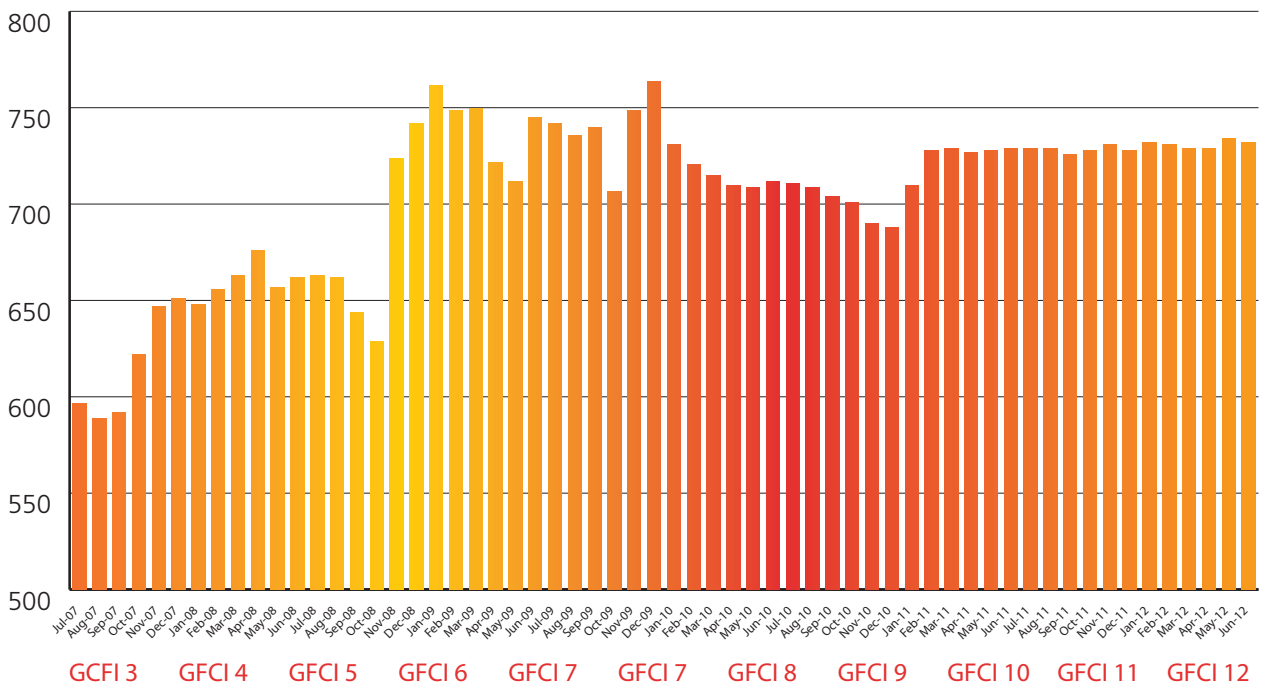
- The past trend of large rises in the ratings of Asia/Pacific centres appears to have stalled. Hong Kong, Singapore, Tokyo, Shanghai, Beijing, Taipei and Shenzhen all decline in GFCI 12. Centres on the mainland of China have seen significant declines with Shanghai the largest faller in the index, down 31 points (following a decline of 37 points in GFCI 11). Beijing is down 18 points. Hong Kong sees a 21 point drop (following a decline of 16 points in GFCI 11).
- GFCI respondents believe that the Asian centres will continue to become more significant in the medium to long term. Some respondents question whether financial centres on mainland China will be able to continue their growth without relaxations in currency controls.
- The offshore centres, having suffered significant reputational damage in the past four years, regained ground in GFCI 10 and GFCI 11. GFCI 12 shows a mixed picture with no significant moves (apart from the Bahamas which gained 22 points). Jersey and Guernsey remain the leading offshore centres.
- Progress is being shown in the Middle East with Qatar, Dubai, Abu Dhabi and Riyadh all seeing rises in both ratings and ranks in GFCI 12.



- The Euro crisis continues to be reflected in the GFCI ratings of the financial centres within the weaker Euro economies. Madrid, Lisbon, Dublin and Athens were all down in GFCI 10 and GFCI 11. These declines have continued in GFCI 12. Frankfurt and Paris both rose slightly in GFCI 11 but GFCI 12 sees a reversal of these gains. There have been some improvements in Europe. Geneva has now re-entered the GFCI top ten.
- Policy makers in Istanbul have been putting some resources into developing Istanbul as a regional financial hub and this is beginning to be reflected in the GFCI with the city moving up five places in GFCI 12.
- The picture in the Americas is mixed. The main centres in the USA are down in GFCI 12 with New York, Chicago, Boston, San Francisco and Washington DC all seeing falls in the ratings. In Canada, Toronto sees a very small decline whilst Montreal, Calgary and Vancouver have all risen. In South America, Sao Paulo shows the largest rise of the three Latin American centres.

Confidence amongst financial services professionals, measured by average assessments of the leading centres was relatively stable during 2011 and the first half of 2012. This is demonstrated by a stability in the 'spread' (measured by standard deviation) of assessments. Chart 1 below shows the stability of overall ratings since 2007.

Chart 1 | Three month rolling average assessments of the top 25 centres



In GFCI 12, 38 financial centres saw improvements in their ratings from GFCI 11, 35 centres saw their ratings decline and four centres saw no change. The full set of GFCI 12 ranks and ratings are shown in Table 1 below:

Table 1 | GFCI 12 ranks and ratings

Centre	GFCI 12		GFCI 11		CHANGES	
	Rank	Rating	Rank	Rating	Rank	Rating
London	1	785	1	781	–	▲ 4
New York	2	765	2	772	–	▼ 7
Hong Kong	3	733	3	754	–	▼ 21
Singapore	4	725	4	729	–	▼ 4
Zurich	5	691	6	689	▲ 1	▲ 2
Seoul	6	685	9	686	▲ 3	▼ 1
Tokyo	7	684	5	693	▼ 2	▼ 9
Chicago	8	683	7	688	▼ 1	▼ 5
Geneva	9	682	14	679	▲ 5	▲ 3
Toronto	10	681	10	685	–	▼ 4
Boston	11	680	11	684	–	▼ 4
San Francisco	12	678	12	683	–	▼ 5
Frankfurt	13	677	13	681	–	▼ 4
Washington D.C.	14	672	15	677	▲ 1	▼ 5
Sydney	15	670	16	674	▲ 1	▼ 4
Vancouver	16	668	17	667	▲ 1	▲ 1
Montreal	17	667	18	658	▲ 1	▲ 9
Melbourne	18	657	20	653	▲ 2	▲ 4
Shanghai	19	656	8	687	▼ 11	▼ 31
Jersey	20	654	21	652	▲ 1	▲ 2
Osaka	21	650	24	647	▲ 3	▲ 3
Dubai	22	648	29	641	▲ 7	▲ 7
Calgary	23	647	28	642	▲ 5	▲ 5
Luxembourg	24	646	23	648	▼ 1	▼ 2
Munich	25	645	19	656	▼ 6	▼ 11
Kuala Lumpur	26	644	35	635	▲ 9	▲ 9
Stockholm	27	642	25	645	▼ 2	▼ 3
Guernsey	28	641	31	639	▲ 3	▲ 2
Paris	29	640	22	650	▼ 7	▼ 10
Wellington	30	639	30	640	–	▼ 1
Amsterdam	31	638	33	637	▲ 2	▲ 1
Shenzhen	32	637	32	638	–	▼ 1
Oslo	33	636	39	629	▲ 6	▲ 7
Copenhagen	34	635	36	634	▲ 2	▲ 1
Qatar	35	634	38	630	▲ 3	▲ 4
Vienna	36	633	34	636	▼ 2	▼ 3

Centre	GFCI 12		GFCI 11		CHANGES	
	Rank	Rating	Rank	Rating	Rank	Rating
Edinburgh	37	632	37	632	–	–
Abu Dhabi	38	631	48	618	▲ 10	▲ 13
Glasgow	39	630	41	627	▲ 2	▲ 3
Isle of Man	40	629	44	624	▲ 4	▲ 5
Taipei	41	628	27	643	▼ 14	▼ 15
Helsinki	42	627	42	626	–	▲ 1
Beijing	43	626	26	644	▼ 17	▼ 18
Cayman Islands	44	625	40	628	4	▼ 3
British Virgin Islands	45	624	45	623	–	▲ 1
Hamilton	46	621	43	625	▼ 3	▼ 4
Brussels	47	620	47	620	–	–
Sao Paulo	48	619	50	612	▲ 2	▲ 7
Dublin	49	618	46	621	▼ 3	▼ 3
Madrid	50	614	49	617	▼ 1	▼ 3
Milan	51	612	52	609	▲ 1	▲ 3
Rio de Janeiro	52	608	53	608	▲ 1	–
Prague	53	604	56	602	▲ 3	▲ 2
Johannesburg	54	603	55	603	▲ 1	–
Mexico City	55	602	51	610	▼ 4	▼ 8
Istanbul	56	601	61	590	▲ 5	▲ 11
Bangkok	57	600	59	594	▲ 2	▲ 6
Gibraltar	58	599	63	587	▲ 5	▲ 12
Warsaw	59	598	54	606	▼ 5	▼ 8
Monaco	60	597	60	593	–	▲ 4
Bahrain	61	596	57	600	▼ 4	▲ 4
Rome	62	590	58	596	▼ 4	▼ 6
Mumbai	63	586	64	584	▲ 1	▲ 2
Moscow	64	585	65	583	▲ 1	▲ 2
Riyadh	65	584	70	572	▲ 5	▲ 12
Tallinn	66	583	71	570	▲ 5	▲ 13
Mauritius	67	579	66	578	▼ 1	▲ 1
Buenos Aires	68	578	67	577	▼ 1	▲ 1
Malta	69	575	72	568	▲ 3	▲ 7
St. Petersburg	70	574	73	567	▲ 3	▲ 7
Jakarta	71	573	62	588	▼ 9	▼ 15
Bahamas	72	572	75	550	▲ 3	▲ 22
Manila	73	570	69	573	▼ 4	▼ 3
Lisbon	74	554	68	575	▼ 6	▼ 21
Budapest	75	544	74	552	▼ 1	▼ 8
Reykjavik	76	539	76	517	–	▲ 22
Athens	77	463	77	468	–	▼ 5

Panama, Cyprus and Tel Aviv have been added to the GFCI questionnaire recently but have yet to acquire enough assessments to be rated in the index.

Notable features of GFCI 12 include:

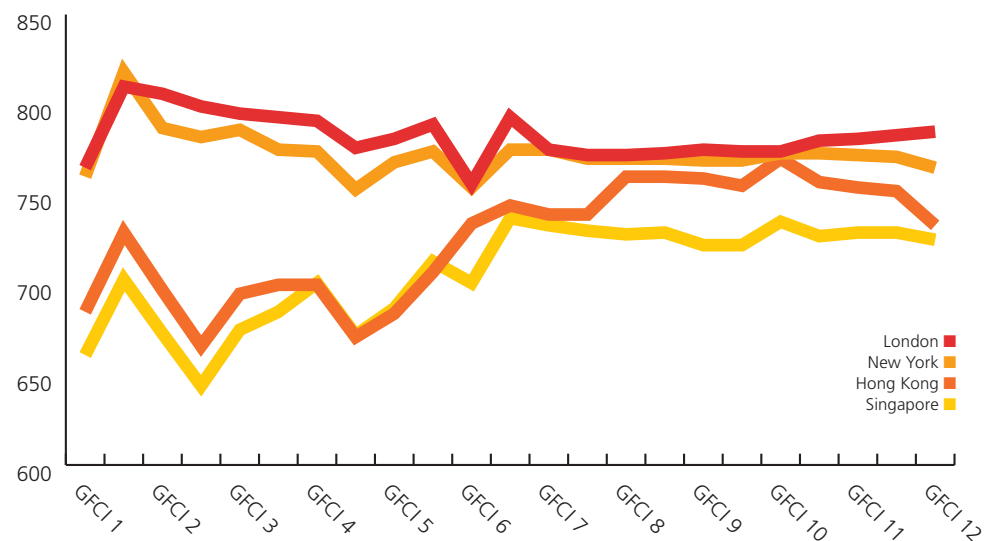
- Shanghai is the biggest faller down 31 points and 11 places, Beijing is also down 18 points;
- Geneva is back in the top ten – up five places to ninth;
- Other top 50 centres that have done well include Montreal, Abu Dhabi and Kuala Lumpur;
- Athens is now 76 points adrift at the bottom of the rankings, it was only 14 points below the next centre in GFCI 10;
- Assessments used in GFCI 12 were made up to the end of June 2012. The LIBOR crisis really came to the fore in the media at the beginning of July. Any effect that the LIBOR crisis has on the reputation of London is not yet apparent.

Chart 2 shows the relative stability of London and New York.

Hong Kong has fallen back by 21 points and is now 52 points below London having been only four points behind it this time last year. Hong Kong maintains its position as the third global financial centre still ahead of Singapore in fourth. The top three centres control a large proportion of financial transactions and are likely to remain powerful financial centres for the foreseeable future.

We continue to believe that the relationships between London, New York and Hong Kong are mutually supportive. Whilst some industry professionals still see a great deal of competition, others from the industry appear to recognise that working together on certain elements of regulatory reform is likely to enhance the competitiveness of these centres.

Chart 2 | Top four centres GFCI ratings over time



London and New York must not believe that they are 'untouchable'. Whilst Hong Kong and other Asian centres have declined a little in GFCI 12, the longer term trend of the leading Asian centres is upward. London still has to negotiate some challenging times. We asked respondents to the online questionnaire about changes to the competitiveness of the centre in which they are based. Of the respondents based in London, 49% felt that London would become more competitive over the next three years. This compares with 63% of respondents based elsewhere in Europe, 73% of respondents based in Asia and 77% of respondents based in offshore centres.

A number of questionnaire respondents feel that finance is such a global industry that it is now more essential than ever to have a globally linked trading hub in each main time zone. The opinion is that within the European time zone, London is currently the only realistic option as Frankfurt and Paris are not sufficiently competitive.

“Hong Kong and Singapore still lead the way in Asia, mainland China has a long way to go to catch up.”

Investment Banker based in Hong Kong



Areas of Competitiveness

The GFCI questionnaire asks about the most important factors for competitiveness. The number of times that each area is mentioned is summarised in Table 2:

Table 2 | Main areas of competitiveness

Area of competitiveness	Number of mentions	Main concerns
Business environment	148	Getting more important and tougher
Taxation	138	Perceived Fairness
Reputation	127	Become more important
People	106	Availability in emerging markets
Infrastructure	97	Taken for granted until it goes wrong
Market Access	87	Becoming less of a competitive issue

The GFCI questionnaire asks which centres are likely to become more significant in the next few years. Asia continues to feature very strongly and is where respondents expect to observe the most significant improvements in performance:

Table 3 | The ten centres likely to become more significant

Centres likely to become more significant	Number of mentions
Singapore	42
Shanghai	35
Hong Kong	33
Toronto	20
Sao Paulo	15
Luxembourg	14
Beijing	11
Moscow	11
Mumbai	11
London	7

The GFCI questionnaire also asks in which centres the respondents' organisations are most likely to open offices over the next few years:

Table 4 | The ten centres where new offices will be opened

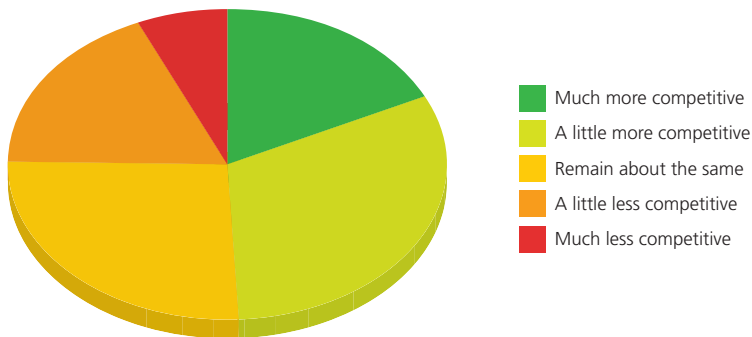
Centres where new offices will be opened	Number of mentions
Singapore	17
Hong Kong	14
London	11
Shanghai	8
Dubai	6
Beijing	5
Mumbai	5
New York	5
Calgary	4
Luxembourg	4

“The indirect impact of the Euro-zone crisis on the UK economy is currently the largest worry I have about London.”

Director of Commercial Bank based in London

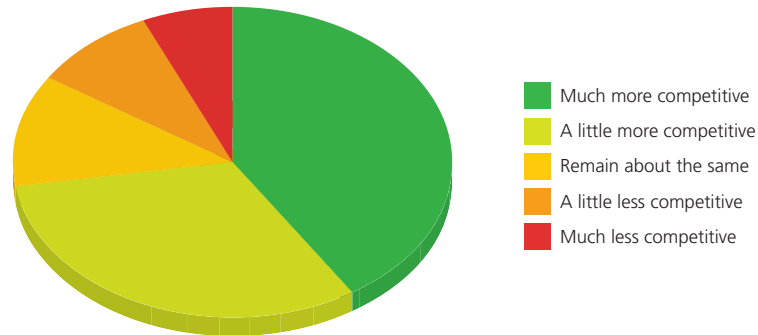
The GFCI questionnaire asked respondents about the future competitiveness of the financial centre in which they are based. Of the respondents based in London, 49% felt that London would become more competitive over the next three years and 25% felt that London would become less competitive.

Chart 3 | Change in competitiveness over the next three years – London



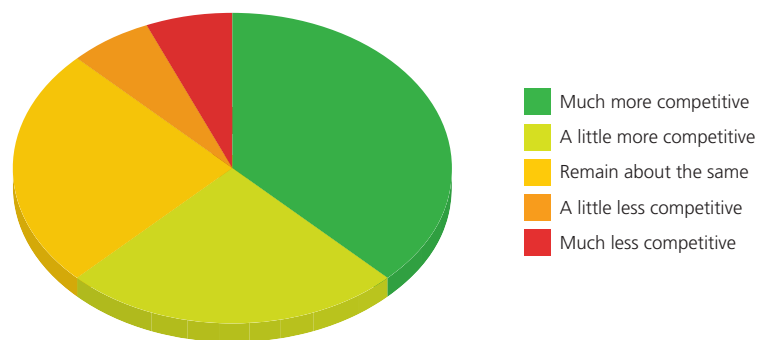
These percentages are in contrast with respondents from the rest of Europe where 73% felt their centre would become more competitive over the next three years and 16% felt that their centre would become less competitive.

Chart 4 | Change in competitiveness over the next three years – Europe excluding London



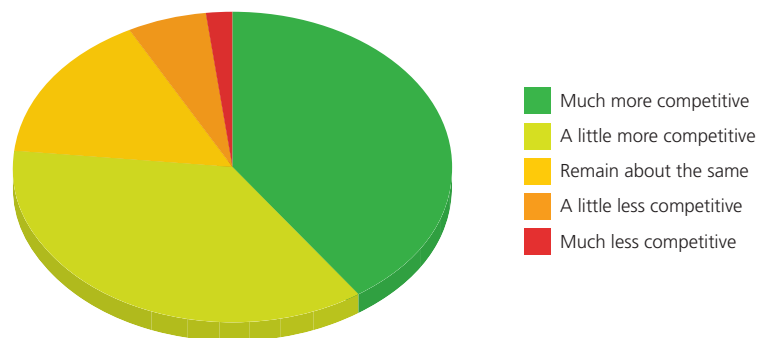
63% of respondents based in Asia felt their centre would become more competitive over the next three years and only 12% felt that their centre would become less competitive.

Chart 5 | Change in competitiveness over the next three years – Asia



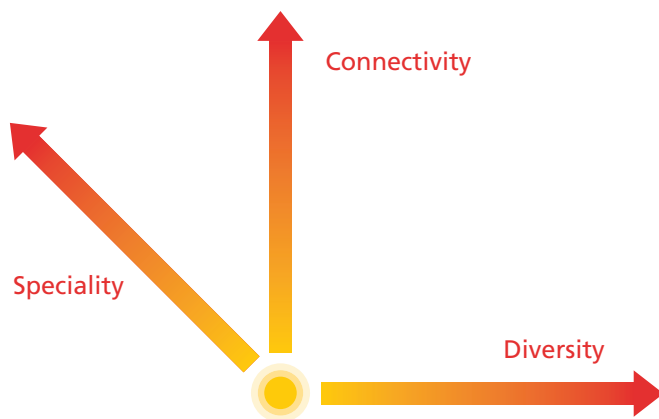
The equivalent figures from North America are very similar to those of Asia. However, 77% of respondents based in the offshore centres felt their centre would become more competitive over the next three years and only 8% felt that their centre would become less competitive.

Chart 6 | Change in competitiveness over the next three years – Offshore



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 65% of other centres, this centre is deemed to be 'Global'. If the ratings are provided by over 45% of other centres, this centre is deemed to be 'Transnational'.

'Diversity' – the breadth of industry sectors that flourish in a financial centre. We consider this 'richness' of the business environment 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: asset management, investment banking, insurance, professional services and wealth management. A centre's 'speciality' performance is calculated from the difference between the GFCI rating and the industry sector ratings.

In Table 5 on page 12, 'Diversity' (Breadth) and 'Speciality' (Depth) are combined on one axis to create a two dimensional table of financial centre profiles. The 77 centres 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.



Table 5 | GFCI 12 financial centre profiles

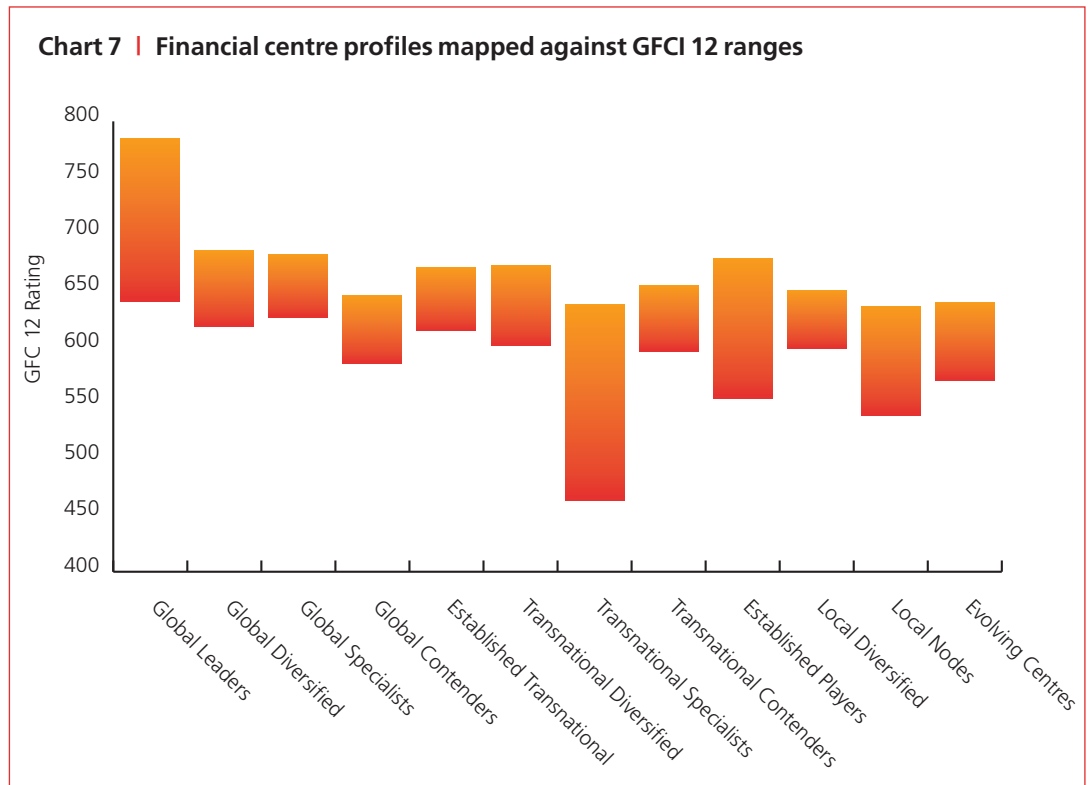
	Broad & deep	Relatively broad	Relatively deep	Emerging
Global	Global leaders	Global diversified	Global specialists	Global contenders
	Chicago	Amsterdam	Beijing	Luxembourg
	Frankfurt	Dublin	Dubai	Moscow
	Hong Kong	Seoul	Geneva	
	London	Shanghai		
	New York			
	Paris			
	Singapore			
	Tokyo			
	Toronto			
	Zurich			
Transnational	Established Transnational	Transnational Diversified	Transnational Specialists	Transnational Contenders
	Brussels	Boston	Athens	Bahrain
	Copenhagen	Istanbul	Edinburgh	British Virgin Islands
	Madrid	Kuala Lumpur	Glasgow	Cayman Islands
	Montreal	Washington DC	Mumbai	Gibraltar
	Munich		Qatar	Guernsey
	Sydney		Shenzhen	Isle of Man
	Vancouver			Jersey
Local	Established Players	Local Diversified	Local Specialists	Evolving Centres
	Calgary	Bangkok	Abu Dhabi	Buenos Aires
	Helsinki	Johannesburg	Bahamas	Jakarta
	Lisbon	Osaka	Budapest	Manila
	Melbourne	Warsaw	Hamilton	Mauritius
	Mexico City		Malta	Taipei
	Milan		Monaco	Wellington
	Prague		Oslo	
	Rome		Reykjavik	
	San Francisco		Rio de Janeiro	
	Sao Paulo		Riyadh	
	Stockholm		St Petersburg	
	Vienna		Tallinn	

The ten 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. There are six centres that have moved profile since GFCI 11:

- Singapore is now a Global Leader (previously a Global Diversified centre)
- Dubai and Geneva are now Global Specialists (previously Transnational centres)

- Brussels is now an Established Transnational Centre (previously an Established Player)
- Johannesburg and Osaka are now Local Diversified Centres (previously Evolving Centres).

Chart 7 below shows the profiles mapped against the GFCI 12 ranges:



“Singapore is a really global trading centre now. It is a genuine global leader.”

Investment Banker based in Hong Kong

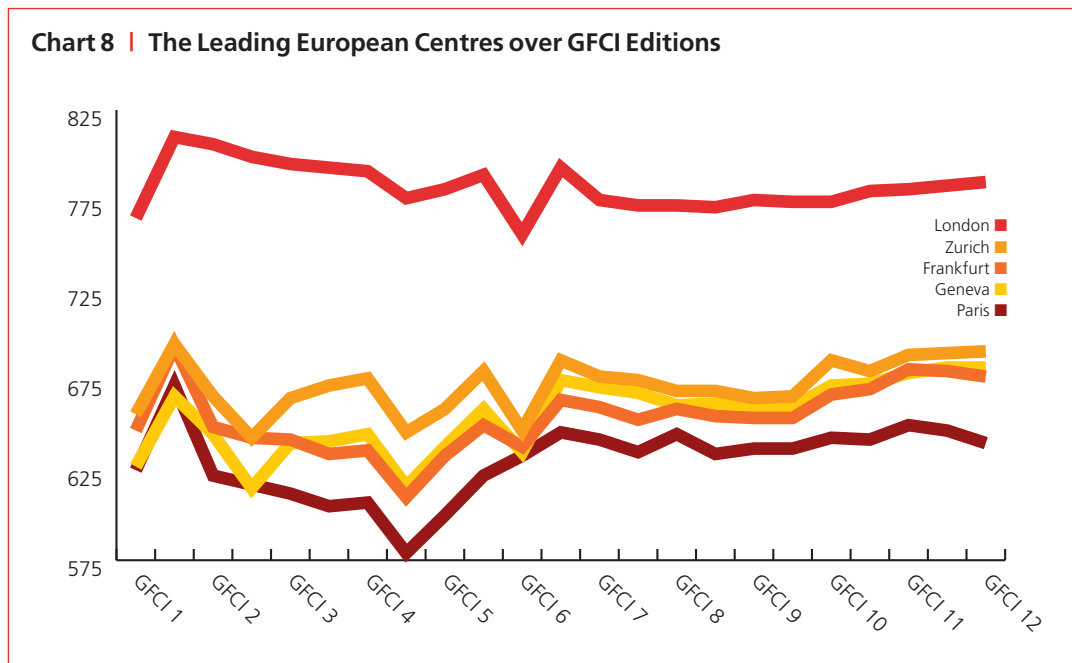
Europe

Table 6 shows the European financial centres in the GFCI. The leading centres in Europe are London, Zurich and Geneva and they all see modest rises in their ratings. The competitiveness of many centres affected by the Euro-crisis has declined.

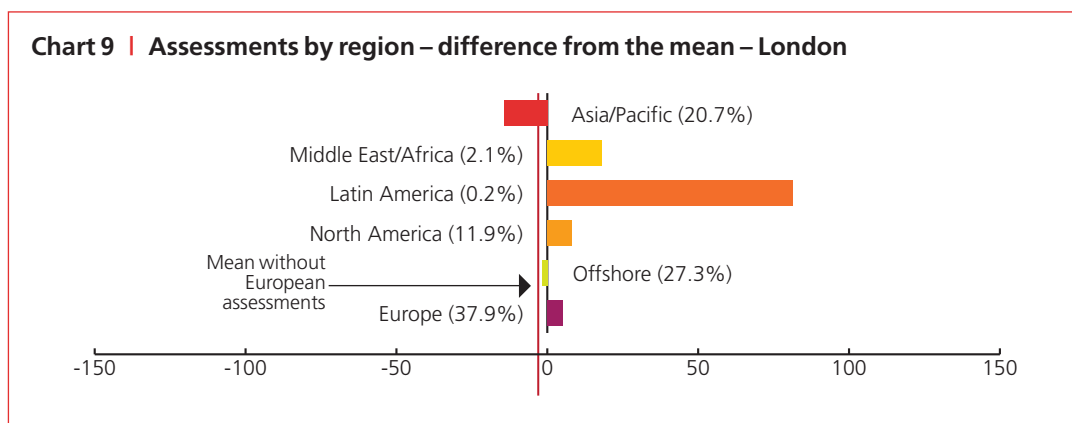
Table 6 | European centres in GFCI 12

	GFCI 12 rank	GFCI 12 rating	GFCI 11 rank	GFCI 11 rating	Change in rank	Change in rating
London	1	785	1	781	–	▲ 4
Zurich	5	691	6	689	▲ 1	▲ 2
Geneva	9	682	14	679	▲ 5	▲ 3
Frankfurt	13	677	13	681	–	▼ 4
Luxembourg	24	646	23	648	▼ 1	▼ 2
Munich	25	645	19	656	▼ 6	▼ 11
Stockholm	27	642	25	645	▼ 2	▼ 3
Paris	29	640	22	650	▼ 7	▼ 10
Amsterdam	31	638	33	637	▲ 2	▲ 1
Oslo	33	636	39	629	▲ 6	▲ 7
Copenhagen	34	635	36	634	▲ 2	▲ 1
Vienna	36	633	34	636	▼ 2	▼ 3
Edinburgh	37	632	37	632	–	–
Glasgow	39	630	41	627	▲ 2	▲ 3
Helsinki	42	627	42	626	–	▲ 1
Brussels	47	620	47	620	–	–
Dublin	49	618	46	621	▼ 3	▼ 3
Madrid	50	614	49	617	▼ 1	▼ 3
Milan	51	612	52	609	▲ 1	▲ 3
Prague	53	604	56	602	▲ 3	▲ 2
Warsaw	59	598	54	606	▼ 5	▼ 8
Rome	62	590	58	596	▼ 4	▼ 6
Moscow	64	585	65	583	▲ 1	▲ 2
Tallinn	66	583	71	570	▲ 5	▲ 13
St. Petersburg	70	574	73	567	▲ 3	▲ 7
Lisbon	74	554	68	575	▼ 6	▼ 21
Budapest	75	544	74	552	▼ 1	▼ 8
Reykjavik	76	539	76	517	–	▲ 22
Athens	77	463	77	468	–	▼ 5

Chart 8 below shows the three European leads consolidating their positions whilst Frankfurt and Paris have fallen back slightly. Several respondents based in Paris feel that the new government is likely to be less sympathetic to financial services than the previous administration.

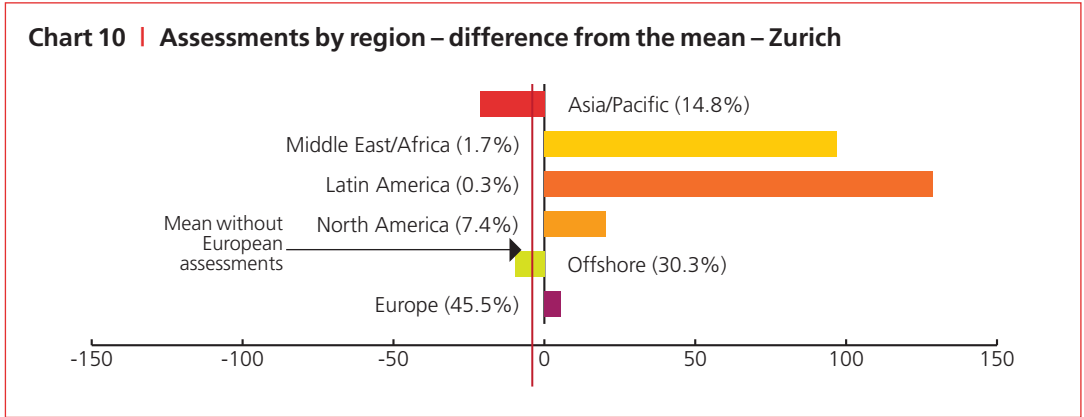


Examining the assessments given to each major centre is a useful means of assessing the relative strength and weakness of their reputation in different regions. It is important to note that assessments given to a centre by people based there are excluded from the GFCI model to eliminate 'home preference'.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

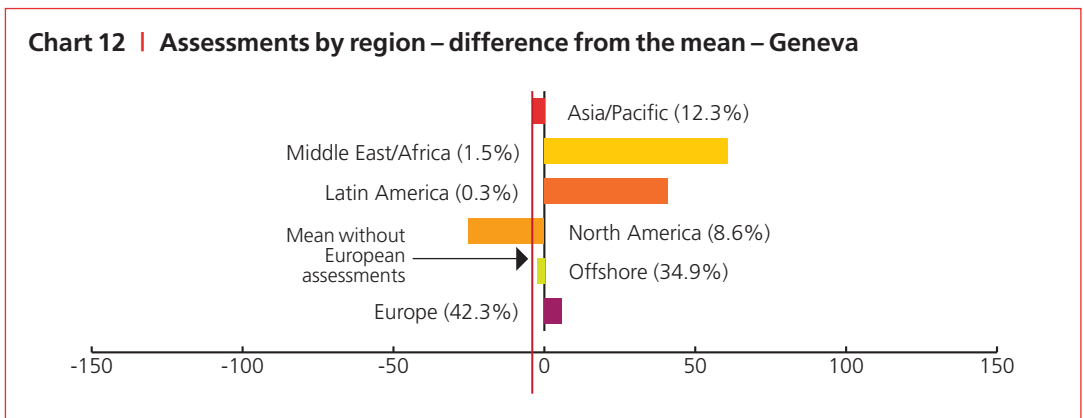
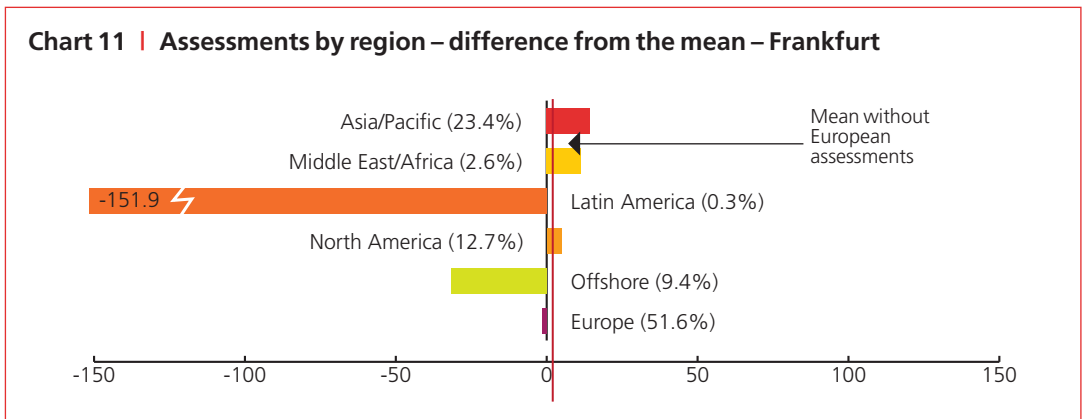


London's overall average assessment is 819 (up significantly from 780 in GFCI 11). The chart indicates that London is well regarded in North America (and by the few respondents in Latin America and the Middle East) but less well rated by respondents from offshore centres and Asia & Pacific.

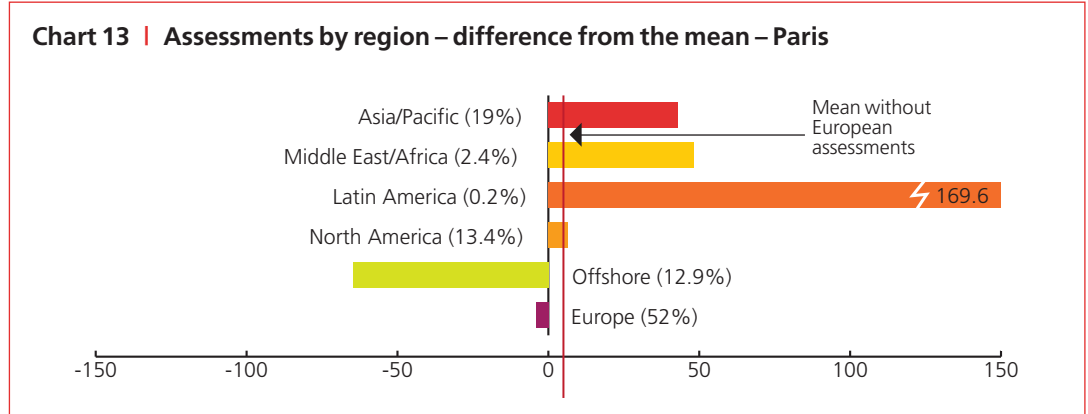
Zurich's overall average assessment is 721 up from 717 in GFCI 11. North American assessments of Zurich together with those from the Middle East & Africa are strong. Offshore and European respondents are much closer to the mean. Asia/Pacific respondents are less favourable.



Frankfurt's overall average assessment is 702 down slightly from 705 in GFCI 10. Frankfurt is given lower assessments by people based in offshore locations and Latin America.

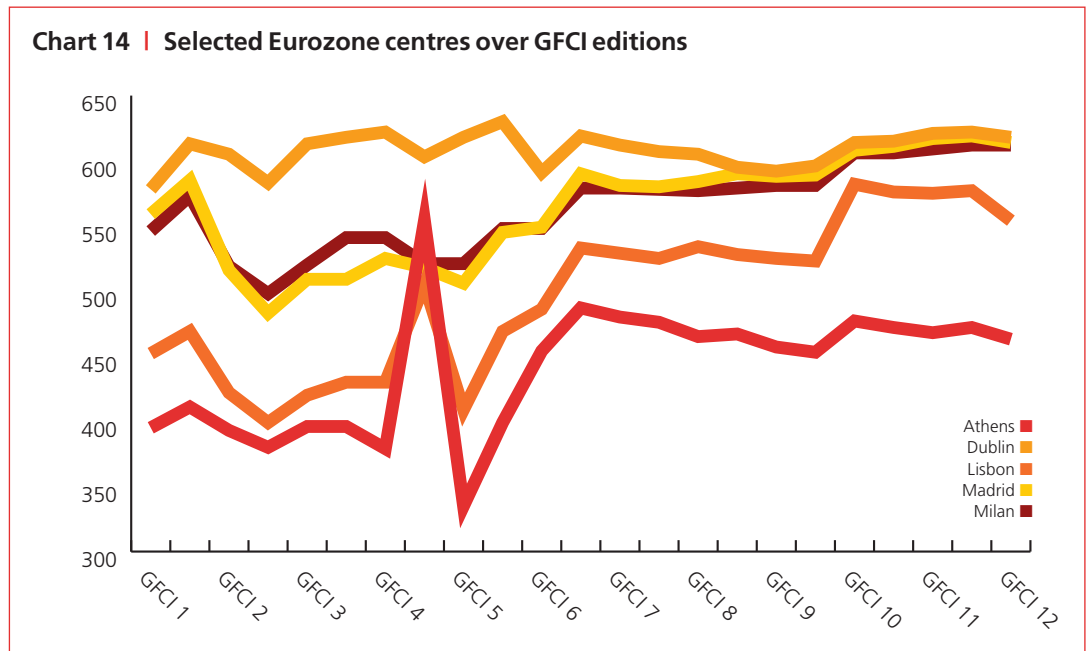


Geneva’s overall average assessment is 709 up from 703 in GFCI 11. Geneva is given lower assessments by people based in offshore locations and Asia/Pacific.



The overall average assessment for Paris is 630 down sharply from 664 in GFCI 11. Paris is given lower assessments by other European respondents and the offshore centres but gets more favourable responses from the Asia/Pacific region.

Chart 14 below shows that the continuing Eurozone crisis has clearly influenced the perceived competitiveness of the centres affected. As the crisis continues, existing confidence in centres such as Athens and Lisbon continues to decline. Dublin, Madrid and Milan have also shown small declines in GFCI 12.



“London has suffered damage to its reputation over the past four years but it is still the leading centre in Europe. Is this because Frankfurt has also suffered – perhaps from the Euro-crisis?”

Asset Manager based in Paris

Asia/Pacific

The ratings of some of the leading Asia/Pacific centres have shown marked decreases. Hong Kong, Shanghai and Beijing in particular are down significantly. All the Chinese centres have seen a decline in the ratings in GFCI 12:

Table 7 | The Asia/Pacific centres in GFCI 12

	GFCI 12 rank	GFCI 12 rating	GFCI 11 rank	GFCI 11 rating	Change in rank	Change in rating
Hong Kong	3	733	3	754	–	▼ 21
Singapore	4	725	4	729	–	▼ 4
Seoul	6	685	9	686	▲ 3	▼ 1
Tokyo	7	684	5	693	▼ 2	▼ 9
Sydney	15	670	16	674	▲ 1	▼ 4
Melbourne	18	657	20	653	▲ 2	▲ 4
Shanghai	19	656	8	687	▼ 11	▼ 31
Osaka	21	650	24	647	▲ 3	▲ 3
Kuala Lumpur	26	644	35	635	▲ 9	▲ 9
Wellington	30	639	30	640	–	▼ 1
Shenzhen	32	637	32	638	–	▼ 1
Taipei	41	628	27	643	▼ 14	▼ 15
Beijing	43	626	26	644	▼ 17	▼ 18
Bangkok	57	600	59	594	▲ 2	▲ 6
Mumbai	63	586	64	584	▲ 1	▲ 2
Jakarta	71	573	62	588	▼ 9	▼ 15
Manila	73	570	69	573	▼ 4	▼ 3

Shenzhen fell outside the top 30 for the first time in GFCI 11. It remains in 32nd place in GFCI 12. Chart 15 below shows the continuing decline in the competitiveness of the leading Asian centres since GFCI 10:

Chart 15 | The Leading Asia/Pacific centres over GFCI Editions

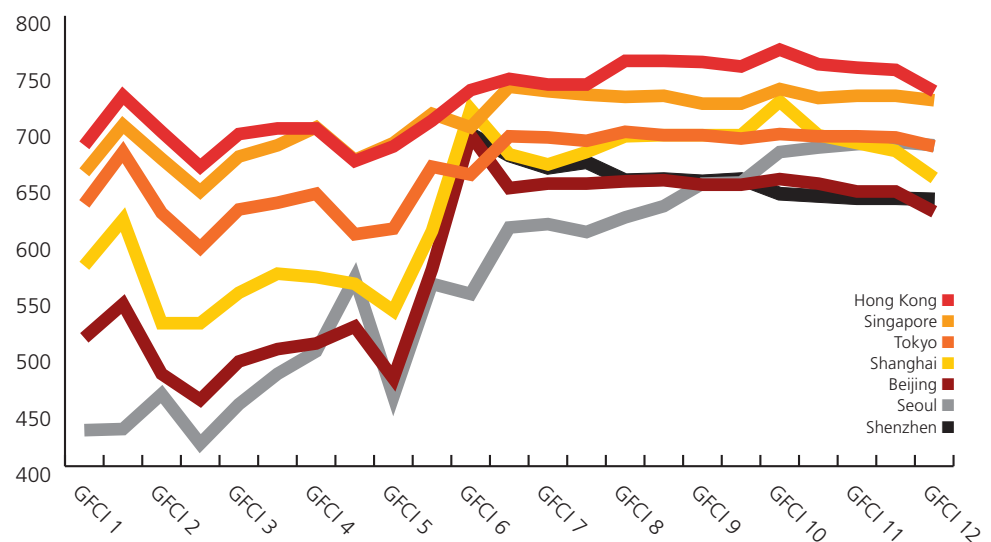
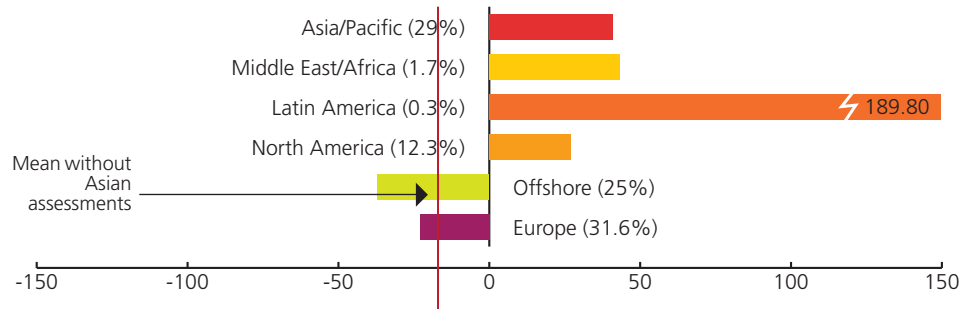


Chart 16 | Assessments by region – difference from the mean – Hong Kong



Hong Kong has an average assessment of 777 up from 759 in GFCI 11. It continues to attract higher than average assessments from Asia/Pacific and North America (as well as from the few respondents in Latin America and the Middle East and Africa). The pattern for Singapore (average assessment 770) is very similar:

Chart 17 | Assessments by region – difference from the mean – Singapore

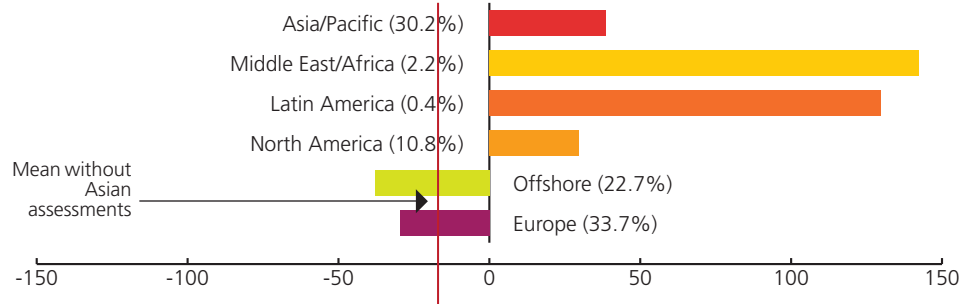
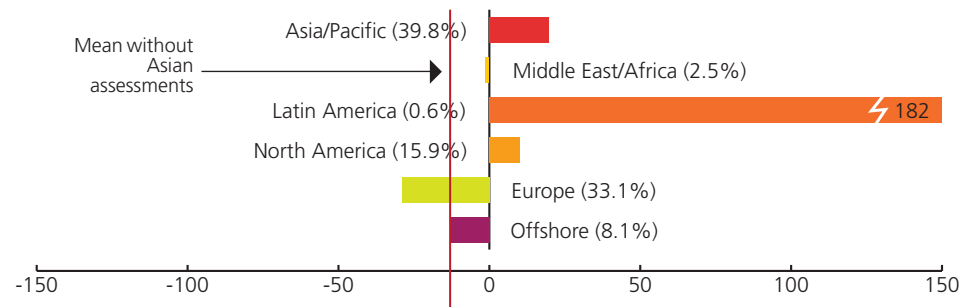
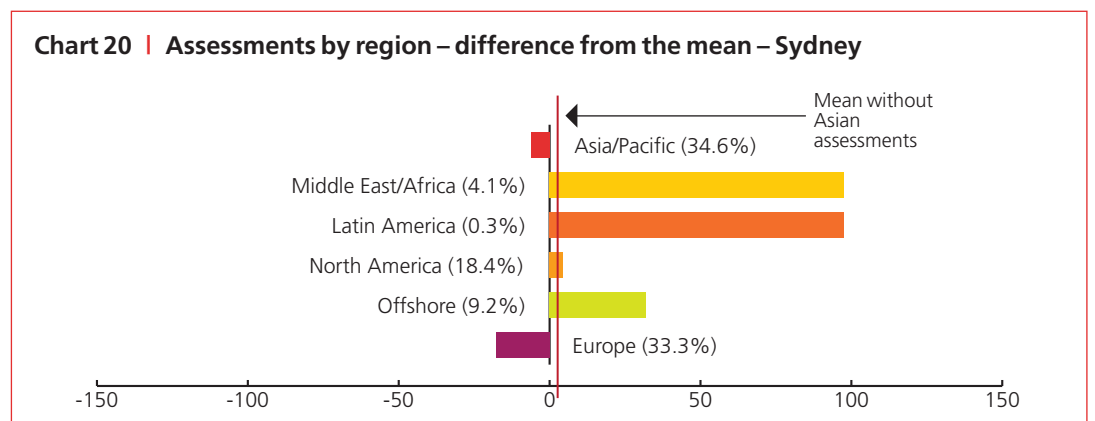
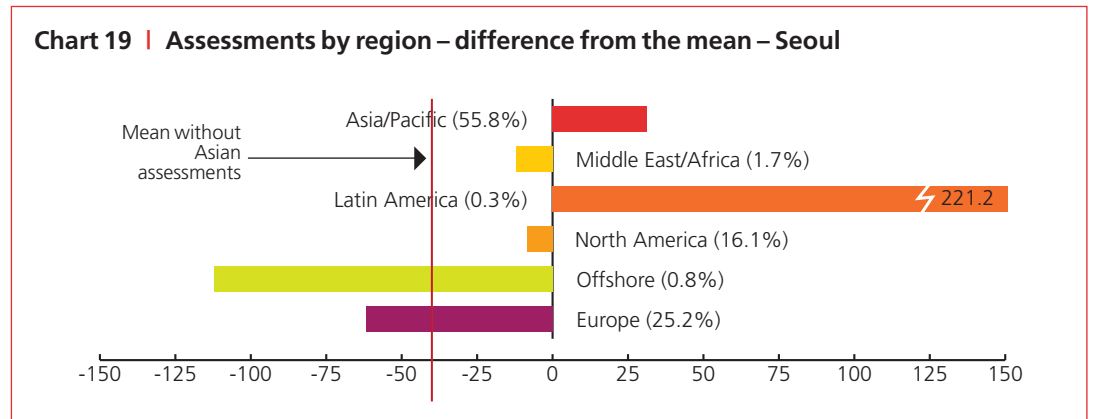


Chart 18 | Assessments by region – difference from the mean – Tokyo

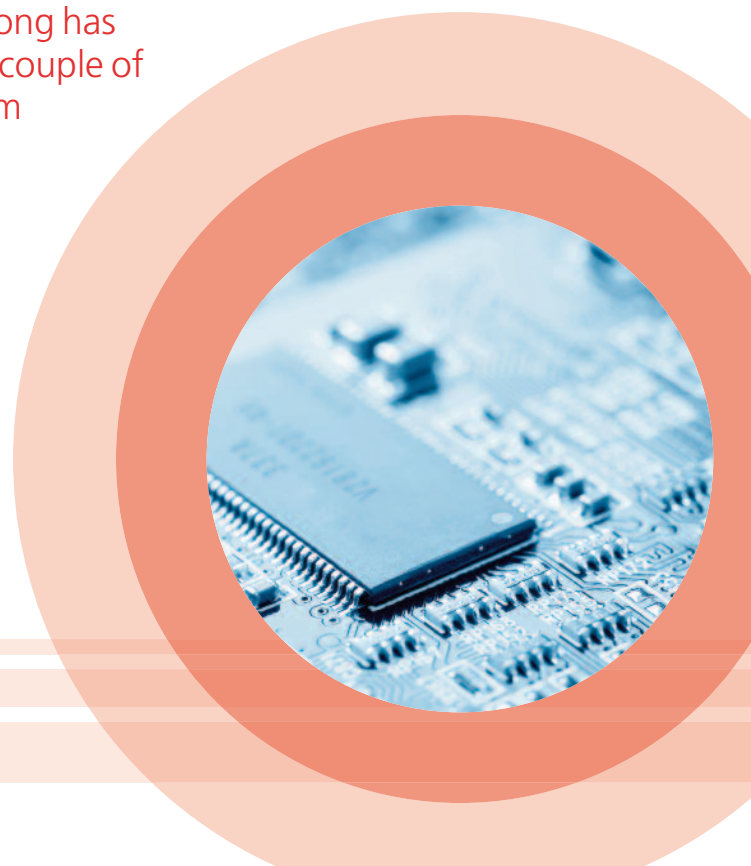


The average assessment for Tokyo is 718 (down from 751 in GFCI 11). Responses from North America and Asia/Pacific are more positive than average. Responses from Europe and the offshore centres are less positive than average about all Asian centres. This pattern of regional variation is broadly similar for Seoul and Sydney as shown below:



“I am surprised that Hong Kong has dropped slightly in the last couple of GFCI editions – as far as I am concerned it goes from strength to strength.”

Investment Banker based in Hong Kong



The Americas

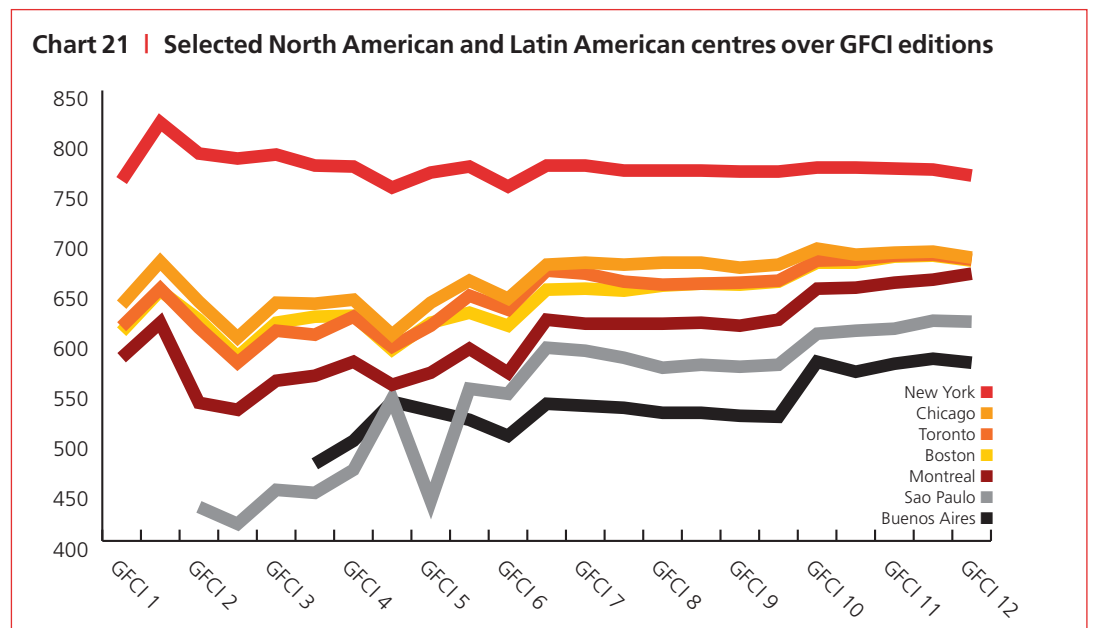
USA centres are down since GFCI 11. Non-USA centres are generally up:

Table 8 | North American and Latin American Centres in GFCI 12

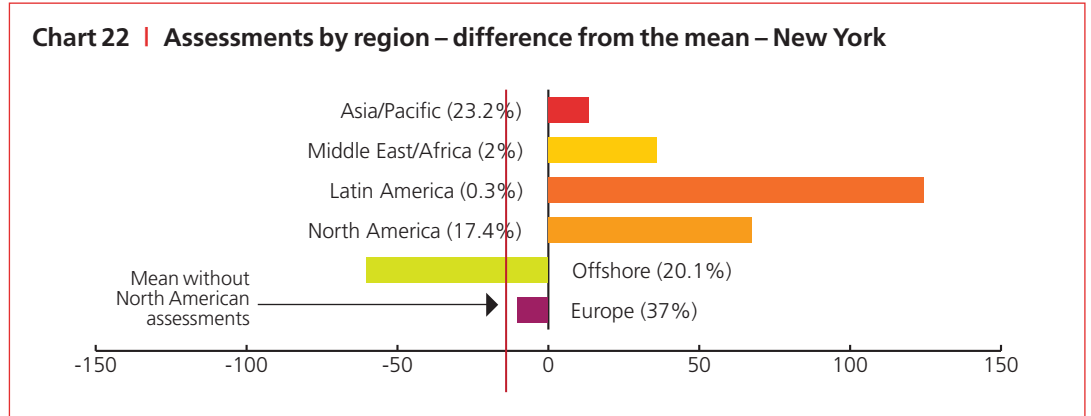
	GFCI 12 rank	GFCI 12 rating	GFCI 11 rank	GFCI 11 rating	Change in rank	Change in rating
New York	2	765	2	772	–	▼ 7
Chicago	8	683	7	688	▼ 1	▼ 5
Toronto	10	681	10	685	–	▼ 4
Boston	11	680	11	684	–	▼ 4
San Francisco	12	678	12	683	–	▼ 5
Washington D.C.	14	672	15	677	▼ 1	▼ 5
Vancouver	16	668	17	667	▼ 1	▲ 1
Montreal	17	667	18	658	▼ 1	▲ 9
Calgary	23	647	28	642	▲ 5	▲ 5
Sao Paulo	48	619	50	612	▲ 2	▲ 7
Rio de Janeiro	52	608	53	608	▲ 1	–
Mexico City	55	602	51	610	▼ 4	▼ 8
Buenos Aires	68	578	67	577	▼ 1	▼ 1

New York, Chicago and Toronto retain their positions in the GFCI top ten and North America has eight centres in the top 17. Montreal shows the largest rise in the ratings of all the American centres. Calgary was a new entrant in GFCI 11 and has climbed to 23rd place in GFCI 12. Canada has four centres in the GFCI, all within the top 25. Chart 21 below shows New York maintaining its leadership in North America despite a small decline in GFCI 12:

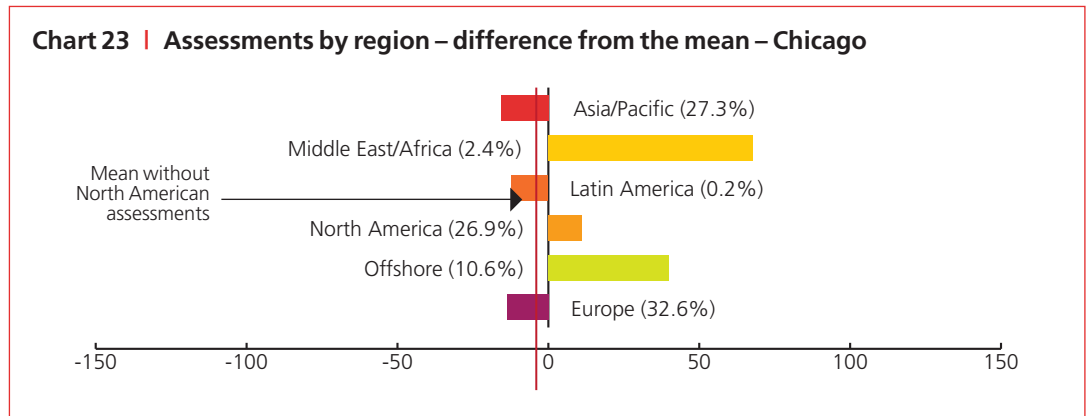
Chart 21 | Selected North American and Latin American centres over GFCI editions



The difference between regional assessments for some of the major North American centres is shown below.

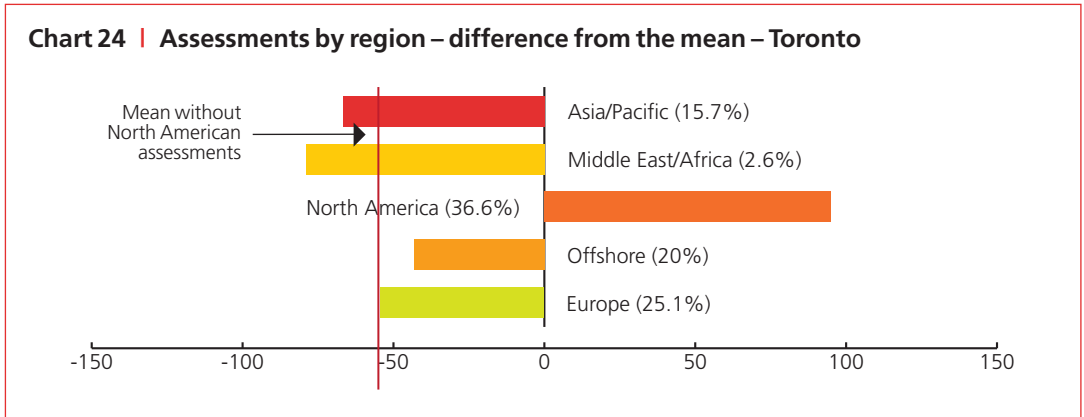


The overall average assessment for New York is 809 up from 764 in GFCI 11. New York benefits from strong North American support. Offshore centres assess New York less positively, possibly due to US clampdowns on offshore activities.

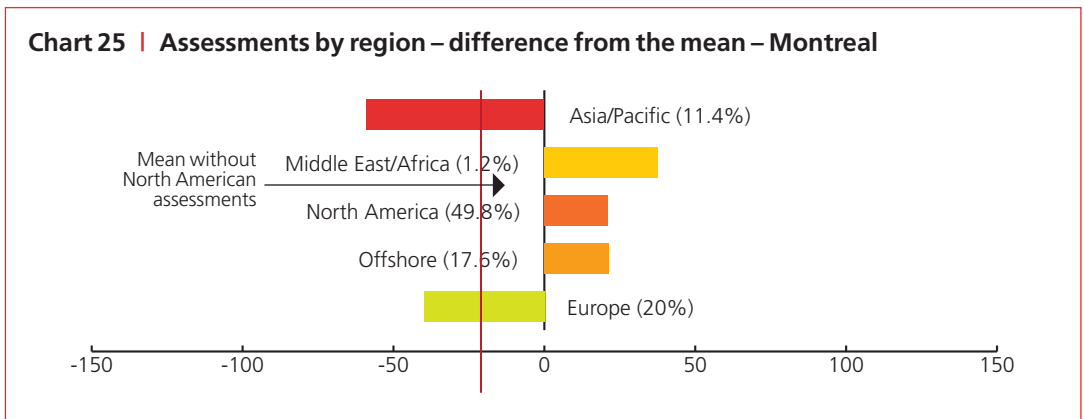


Chicago has an overall average assessment of 712 down from 726 in GFCI 11. Assessments of Chicago show that respondents from the Asia/Pacific region and Europe gave the city a less favourable score than average.





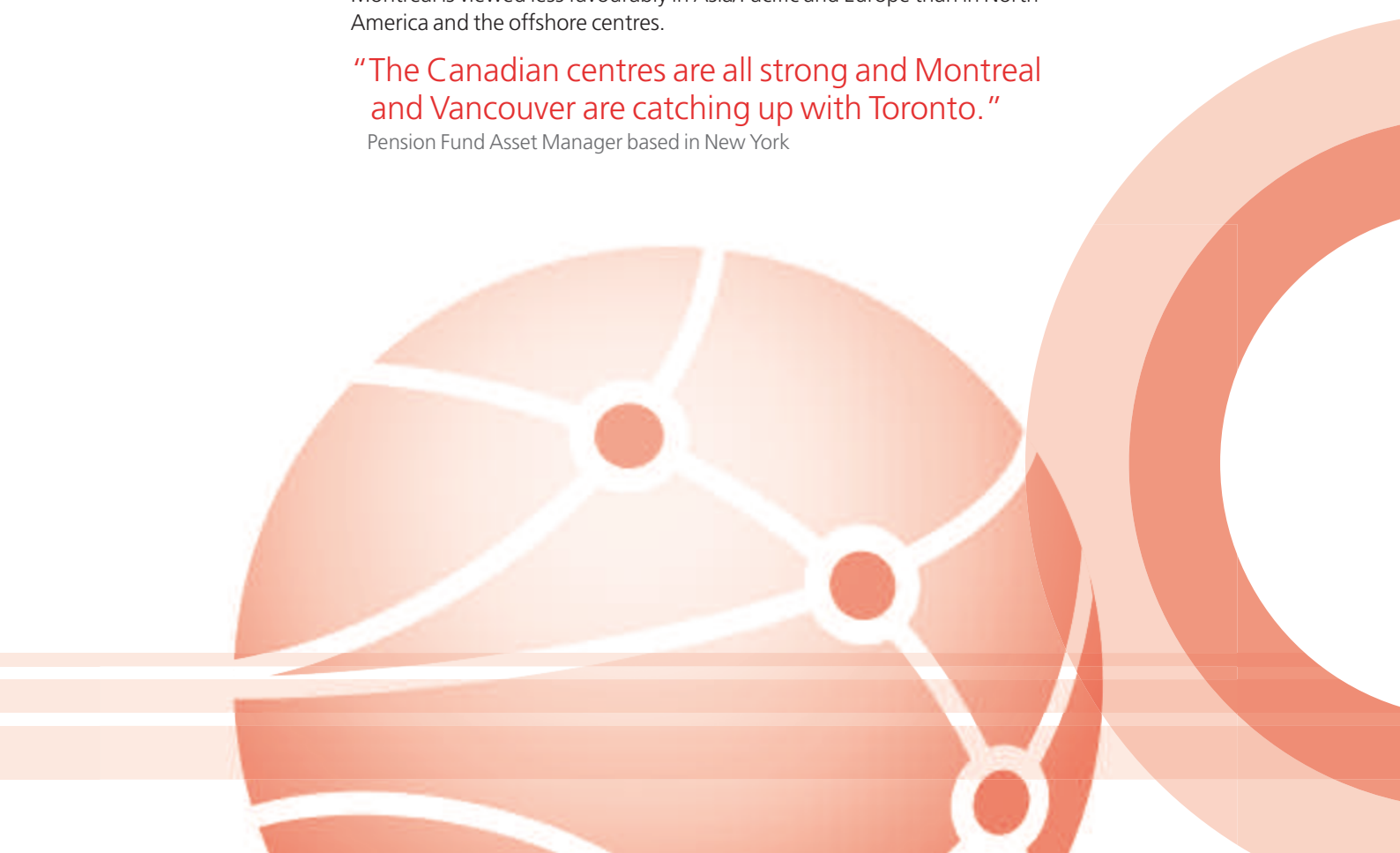
Toronto has favourable ratings from the USA and other Canadian centres but is assessed less favourably everywhere else.



Montreal is viewed less favourably in Asia/Pacific and Europe than in North America and the offshore centres.

“The Canadian centres are all strong and Montreal and Vancouver are catching up with Toronto.”

Pension Fund Asset Manager based in New York



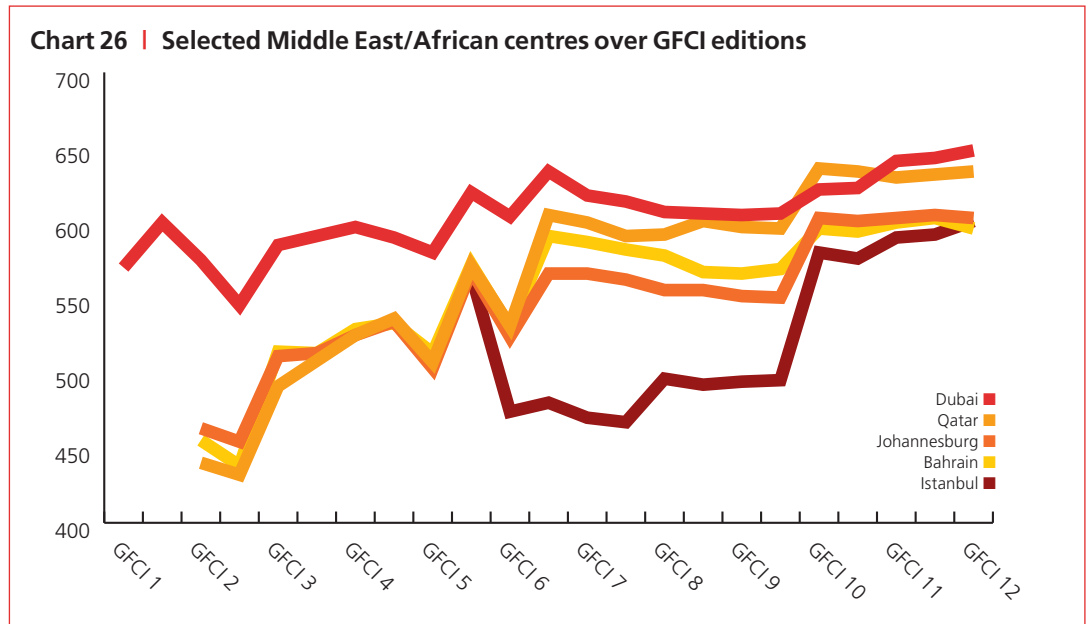
The Middle East and Africa

Of the four Middle Eastern centres in the GFCI, Dubai leads from Qatar as the top Middle Eastern centre in GFCI 12. This lead has declined significantly in the last two years. Abu Dhabi was a new entrant in the GFCI 11 and has made significant progress in GFCI 12.

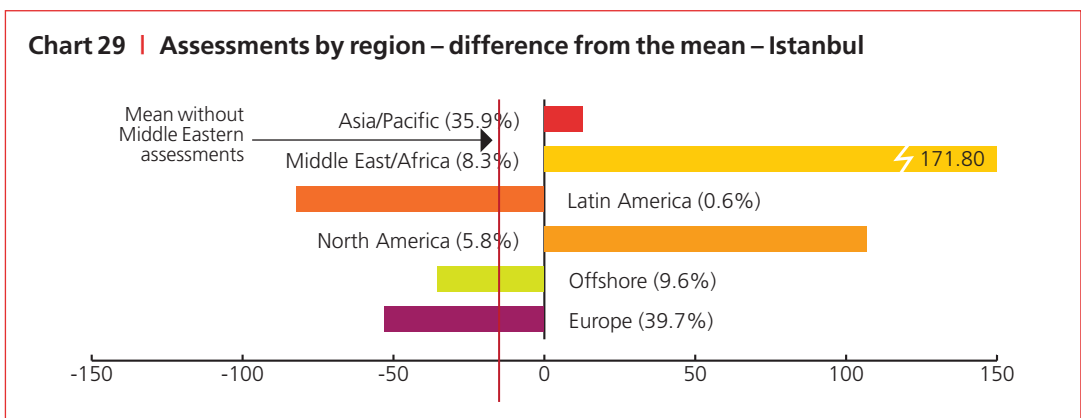
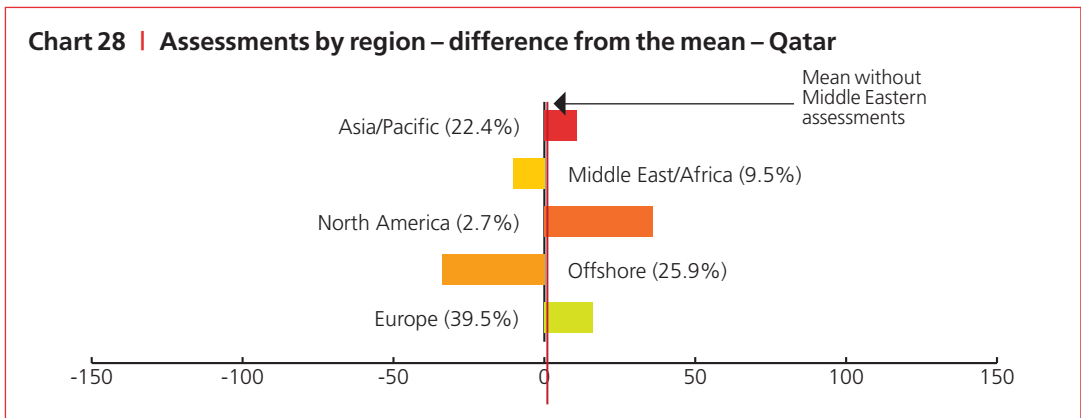
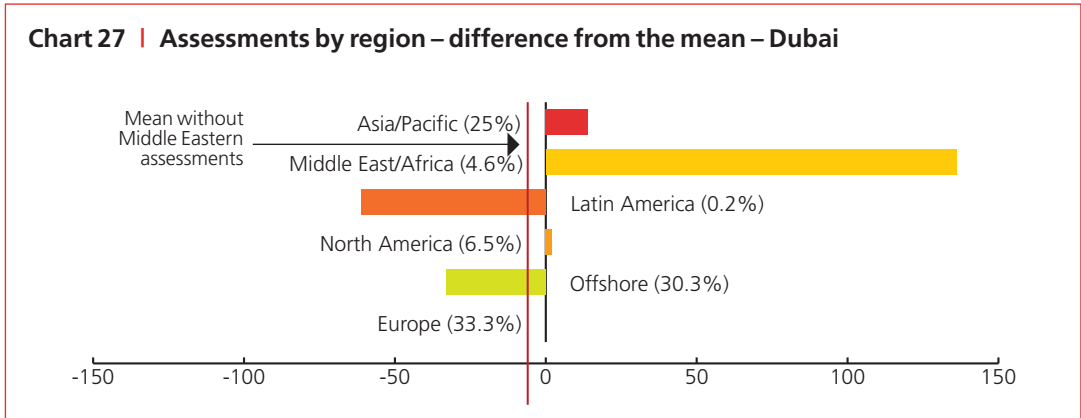
Istanbul has also made significant progress but has still to fulfil its potential as a regional hub between Europe and Asia. We expect Istanbul to become more significant in the medium term.

Table 9 | The Middle Eastern and African centres in GFCI 12

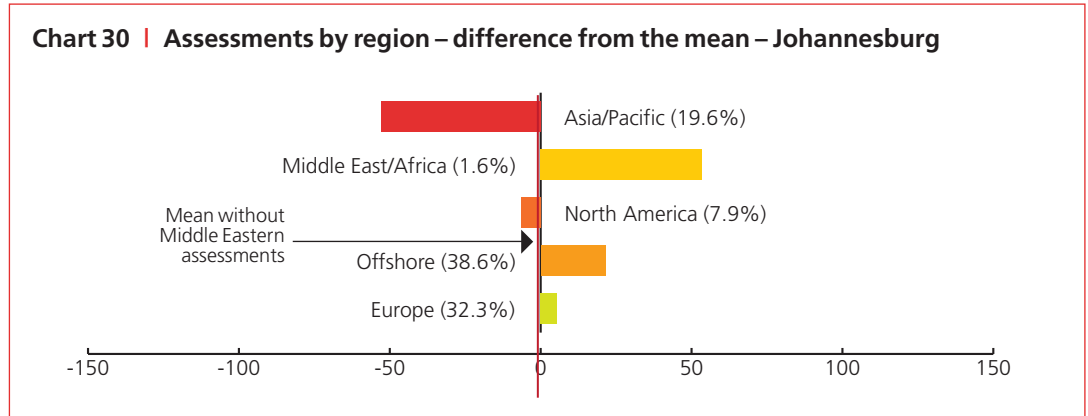
	GFCI 12 rank	GFCI 12 rating	GFCI 11 rank	GFCI 11 rating	Change in rank	Change in rating
Dubai	22	648	29	641	▲ 7	▲ 7
Qatar	35	634	38	630	▲ 3	▲ 4
Abu Dhabi	38	631	48	618	▲ 10	▲ 13
Johannesburg	54	603	55	603	▲ 1	–
Istanbul	56	601	61	590	▲ 5	▲ 11
Bahrain	61	596	57	600	▼ 4	▼ 4
Riyadh	65	584	70	572	▲ 5	▲ 12



The charts below show Dubai and Qatar get strong support from Asia/Pacific respondents and less strong support from the offshore centres. Istanbul is well supported by the Middle East and Asia/Pacific but has a lower reputation amongst European and offshore respondents:

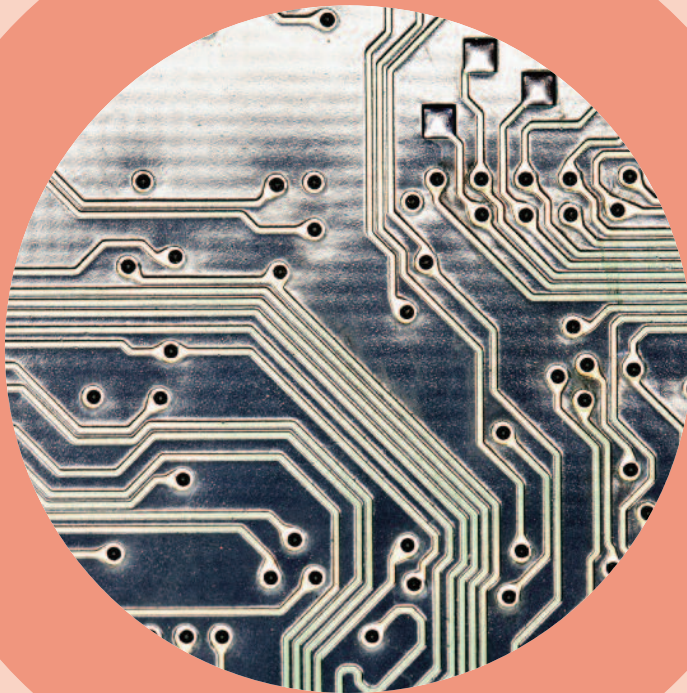


Johannesburg is well regarded by respondents from the offshore centres and slightly above average from Europe but not from elsewhere.



“Dubai and Qatar continue to lead the way in the Middle East – but Istanbul is gaining ground.”

Investment Manager based in London



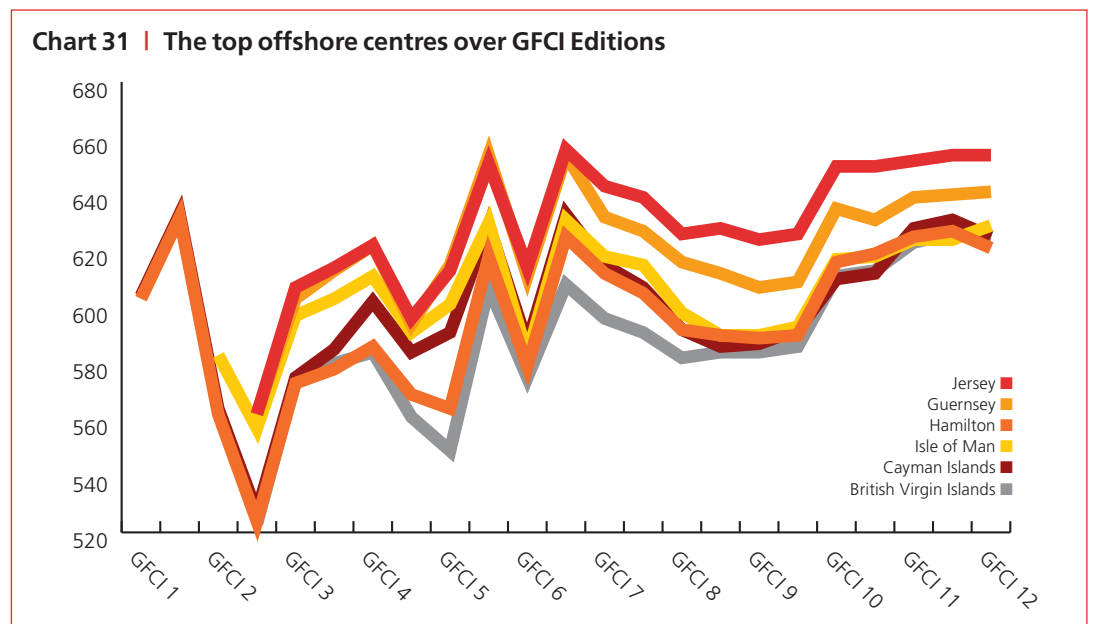
Offshore Centres

Offshore centres have suffered significant reputational damage in the past four years. GFCI 10 and 11 showed that many of these centres' reputations were recovering lost ground. GFCI 12 shows a fairly static picture with no large movements (apart from the Bahamas and Gibraltar that both show good increases). Jersey and Guernsey remain the leading offshore centres:

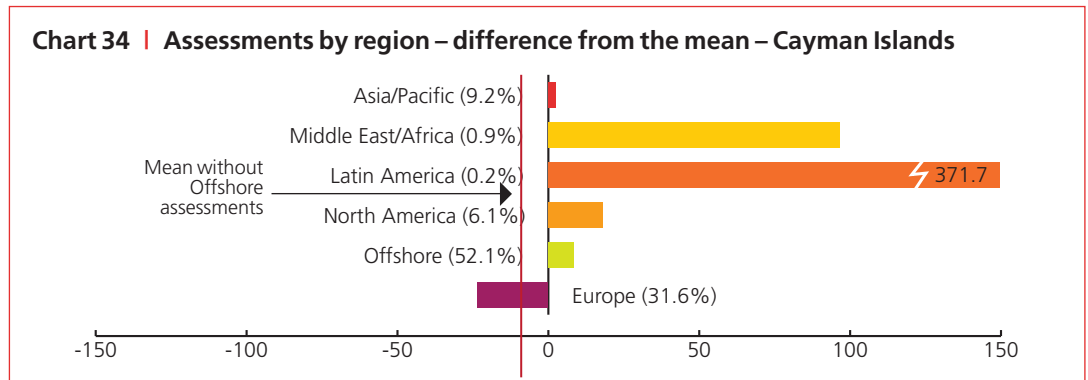
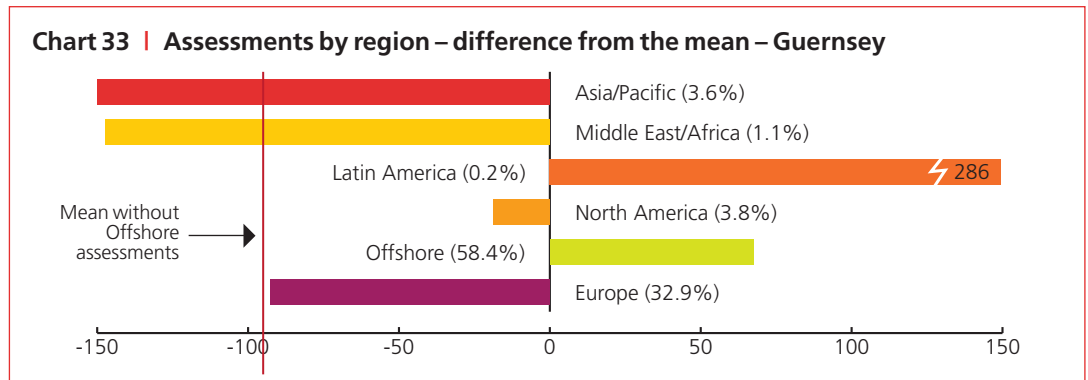
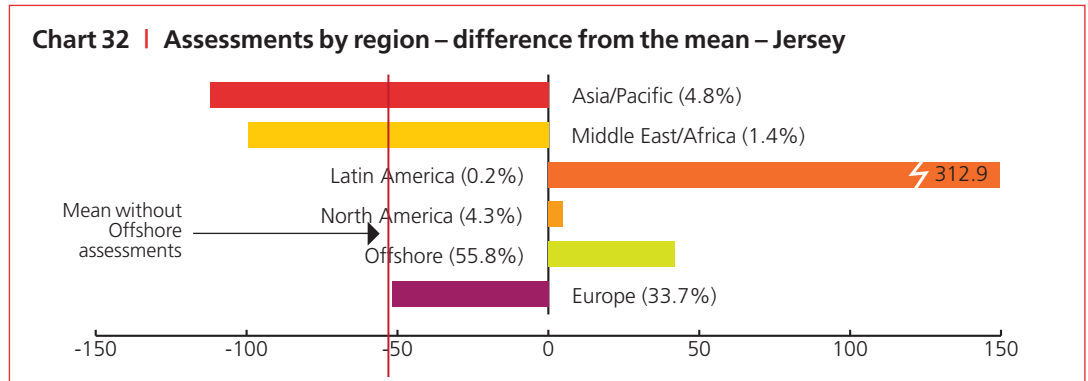
Table 10 | Top offshore centres in GFCI 12

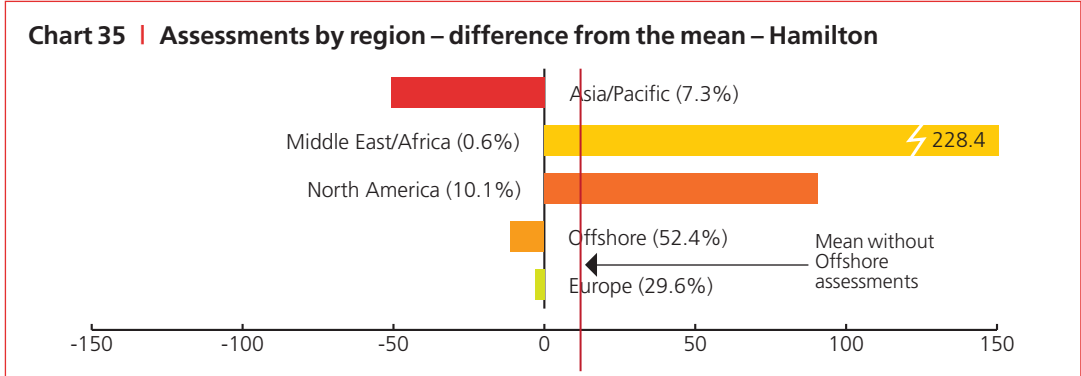
	GFCI 12 rank	GFCI 12 rating	GFCI 11 rank	GFCI 11 rating	Change in rank	Change in rating
Jersey	20	654	21	652	▲ 1	▲ 2
Guernsey	28	641	31	639	▲ 3	▲ 2
Isle of Man	40	629	44	624	▲ 4	▲ 5
Cayman Islands	44	625	40	628	▼ 4	▼ 3
British Virgin Islands	45	624	45	623	–	▲ 1
Hamilton	46	621	43	625	▼ 3	▼ 4
Gibraltar	58	599	63	587	▲ 5	▲ 12
Monaco	60	597	60	593	–	▲ 4
Mauritius	67	579	66	578	▼ 1	▲ 1
Malta	69	575	72	568	▲ 3	▲ 7
Bahamas	72	572	75	550	▲ 3	▲ 22

Chart 31 | The top offshore centres over GFCI Editions



A significant proportion of the assessments of offshore centres are coming from other offshore centres. Jersey and Guernsey get good assessments from the other offshore centres but below average assessments from European respondents. The Cayman Islands shows a slightly more balanced picture with slightly above average assessments from other offshore centres and slightly below average assessments from Europe.





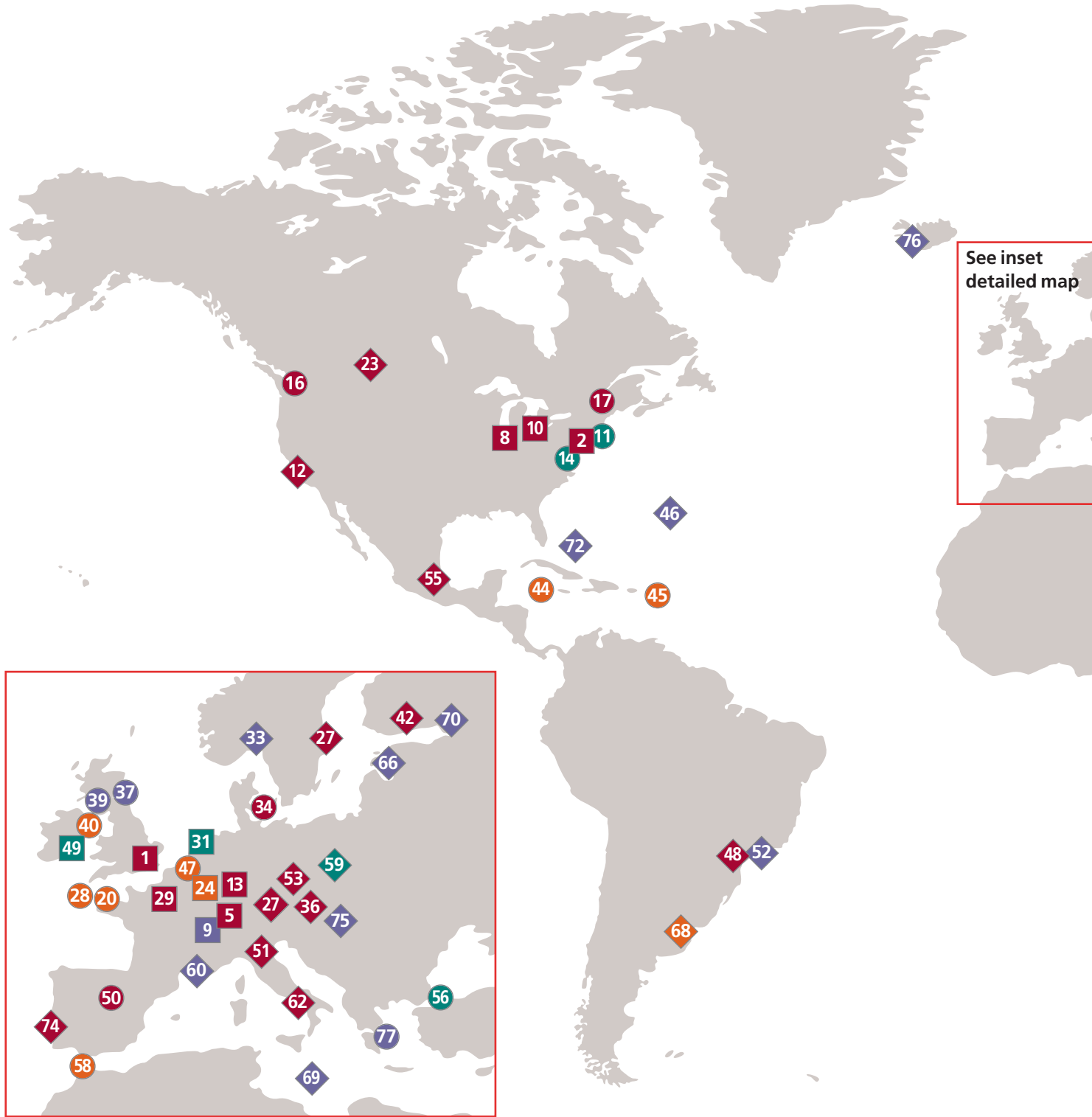
Hamilton has a different business mix than the other offshore centres with its speciality being re-insurance. It might therefore be expected to have a different profile amongst respondents. It is well regarded by North American respondents but less well regarded by other offshore respondents.

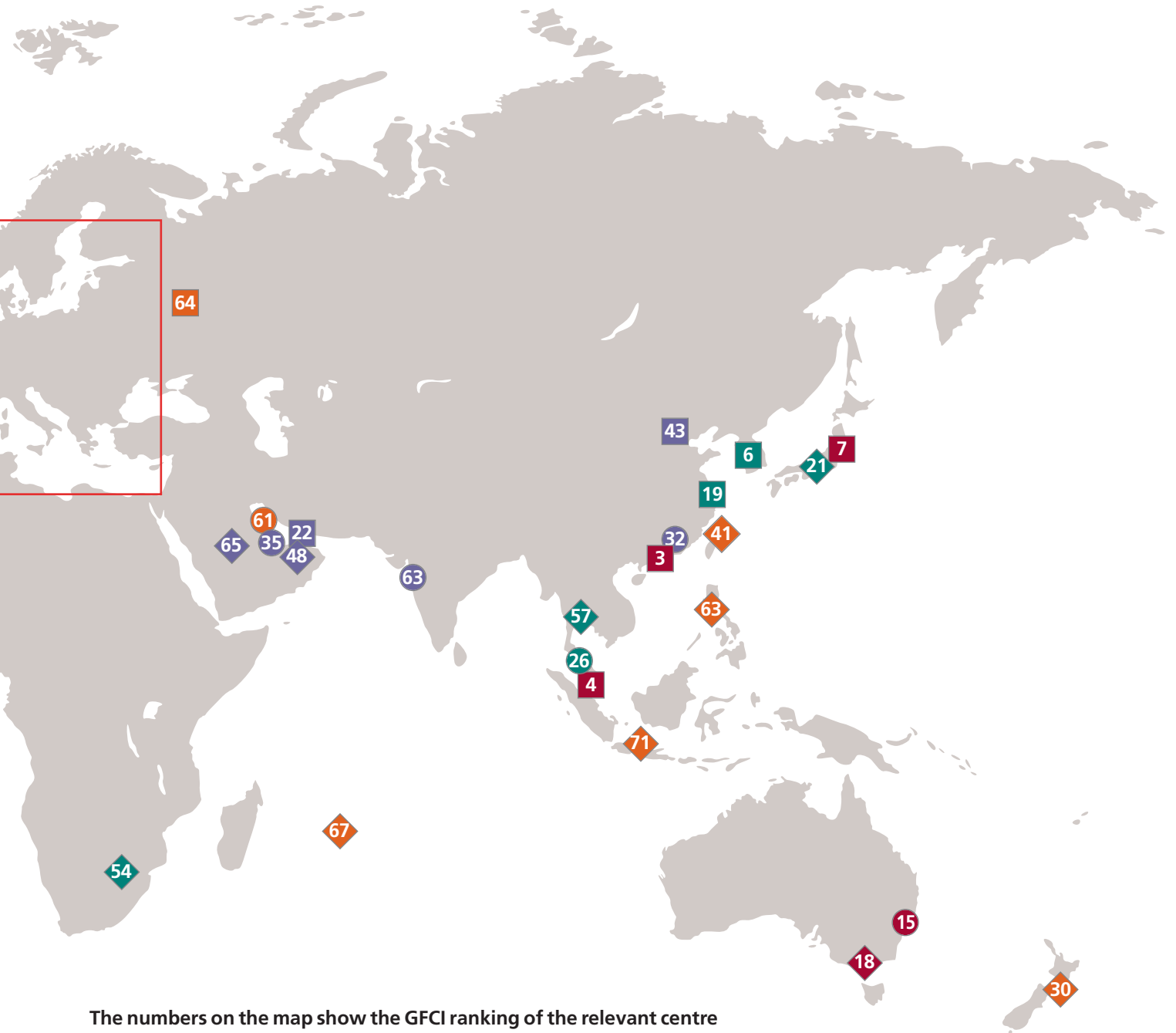
“The Channel Islands retain the perception of offering greater security than some of the Caribbean centres.”

Asset Manager based in London



The GFCI World





Broad and deep

- Global leaders
- Established transnational
- ◆ Established players

Relatively broad

- Global diversified
- Transnational diversified
- ◆ Local diversified

Relatively deep

- Global specialists
- Transnational specialists
- ◆ Local nodes

Emerging

- Global contenders
- Transnational contenders
- ◆ Evolving centres

Industry Sectors

Industry sector sub-indices are created by building the GFCI 12 statistical model using only the questionnaire responses from respondents working in the relevant industry sectors. The GFCI 12 dataset has been used to produce separate sub-indices for the Banking, Asset Management, Insurance, Professional Services, Government & Regulatory and Wealth Management & Private Banking sectors.

London appears at the top of five of the six sub-indices. New York tops the Banking sub-index. Table 11 below shows the top ten ranked financial centres in the industry sector sub-indices:

The top four centres in the GFCI 12 overall index are top of the Asset Management, Government & Regulatory, Insurance and Professional Services sub-indices.

The wealth management sub-index shows that the specialist wealth management centres can compete with the multi-sector global centres.

Table 11 | GFCI 12 industry sector sub-indices Top 10

Rank	Asset management	Banking	Government & regulatory	Insurance	Professional services	Wealth management
1	London (-)	New York (-)	London (-)	London (+2)	London (-)	London (-)
2	New York (-)	London (-)	New York (-)	New York (-)	New York (-)	Zurich (+4)
3	Singapore (+1)	Seoul (-)	Hong Kong (-)	Singapore (+2)	Hong Kong (-)	Hong Kong (-)
4	Hong Kong (-1)	Hong Kong (-)	Singapore (-)	Hong Kong (-3)	Singapore (-)	New York (-2)
5	Tokyo (+4)	Singapore (-)	Paris (+1)	Zurich (+3)	Zurich (-)	Singapore (+1)
5	Boston (-1)	Tokyo (-)	Frankfurt (-1)	Tokyo (-)	Geneva (+1)	Geneva (-)
7	Chicago (+1)	Frankfurt (+2)	Tokyo (-)	Geneva (+14)	Chicago (-)	Toronto (-)
8	Toronto (-1)	Zurich (-1)	Geneva (+3)	Chicago (-1)	Toronto (-1)	Vancouver (+1)
9	Zurich (+1)	Toronto (-)	Zurich (+3)	Seoul (+10)	Sydney (+4)	Frankfurt (+3)
10	San Francisco (-4)	Chicago (-3)	Toronto (-)	Sydney (+3)	Montreal (+6)	Jersey (-2)

“Zurich maintains its strong reputation for private banking and wealth management – despite international pressure for more disclosure.”

Private Wealth Manager based in Zurich

Five Areas of Competitiveness

The instrumental factors used in the GFCI 12 model are grouped into five key areas of competitiveness (People, Business Environment, Market Access, Infrastructure and General Competitiveness). The GFCI 12 factor assessment model is run with one set of instrumental factors at a time. Table 12 shows the top ten ranked centres in each sub-index:

“It is good to see Geneva’s score now reflects its strengths in so many areas.”

Private Banker based in Geneva

Table 12 | GFCI 12 Area of competitiveness sub-indices – Top 10

Rank	People	Business environment	Market access	Infrastructure	General competitiveness
1	London (-)	London (-)	London (-)	London (-)	London (-)
2	New York (-)	New York (-)	New York (-)	New York (-)	New York (-)
3	Hong Kong (-)	Hong Kong (-)	Hong Kong (-)	Hong Kong (-)	Hong Kong (-)
4	Singapore (-)	Singapore (-)	Singapore (-)	Singapore (-)	Singapore (-)
5	Zurich (+5)	Zurich (+3)	Zurich (+1)	Zurich (+2)	Zurich (+3)
5	Tokyo (-1)	Geneva (+4)	Geneva (+7)	Seoul (-)	Seoul (-1)
7	Seoul (-)	Seoul (-2)	Tokyo (-2)	Geneva (+2)	Tokyo (-1)
8	Chicago (-1)	Tokyo (-1)	Chicago (+1)	Tokyo (-3)	Geneva (+7)
9	Toronto (+5)	Chicago (-3)	Boston (+2)	Chicago (-1)	Chicago (-2)
10	Geneva (+5)	Frankfurt (+2)	Frankfurt (+3)	Frankfurt (-)	Toronto (-2)

The top four financial centres in GFCI 12 – London, New York, Hong Kong and Singapore – also share the top four places in each of these sub indices (as they have in the past four editions of GFCI). This confirms their strength in all five areas of competitiveness. It also confirms our belief that a genuinely top global centre is competitive in all areas – successful people like to live and work in successful centres. Geneva now appears in the top ten in all five sub-indices, Seoul is now in four of the five sub-indices and Frankfurt is in the top ten in three of the five sub-indices.

Size of Organisation

It is useful to look at how the leading centres are viewed by respondents working for different sizes of organisation.

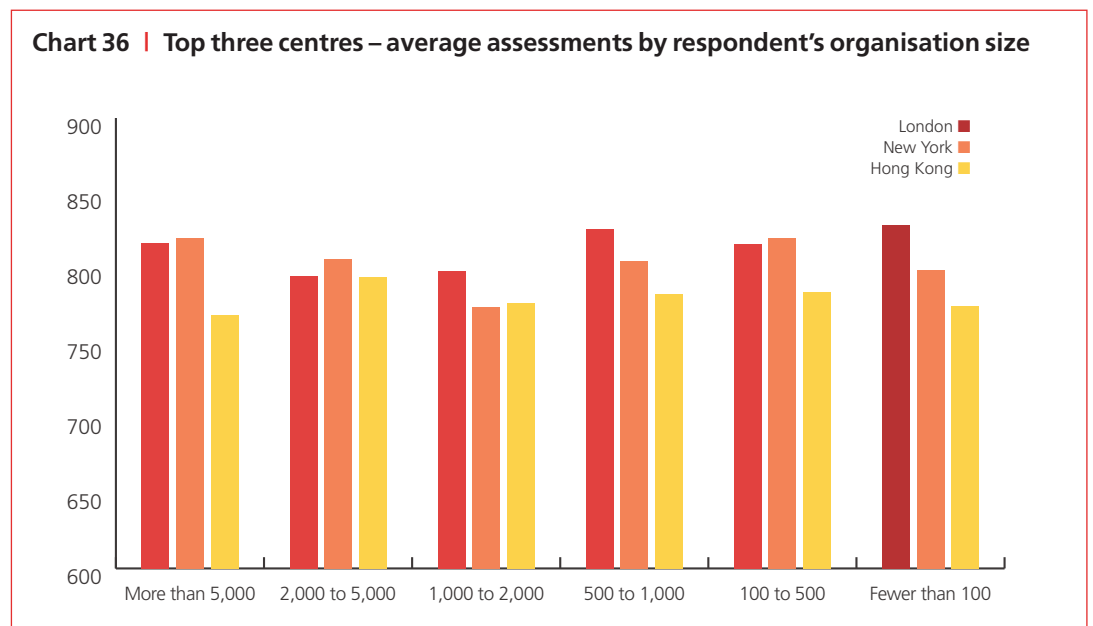


Chart 36 above shows that London is still assessed more highly than both New York and Hong Kong by respondents from small organisations (with fewer than 100 employees). At the other end of the scale New York is assessed slightly higher than London by respondents from organisations with over 5,000 employees. In the mid-sized organisations (500 to 2,000 employees) London is a clear leader from New York and Hong Kong.

“To my mind London is the best base for our asset management business.”

Director of mid-sized Asset Manager based in London

Reputation

In the GFCI model, one way to look at reputation is to examine the difference between the average assessment given to a centre and its overall rating (the average assessment adjusted to reflect the instrumental factors). If a centre has a higher average assessment than the GFCI 12 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 13 below shows the 20 centres with the greatest positive difference between average assessment and the GFCI rating:

Table 13 | GFCI 12 Top 20 centres assessments & ratings – reputational advantage

Centre	Average assessment	GFCI 12 rating	Reputational advantage
Seoul	752	685	67
Singapore	769	725	44
Toronto	722	681	41
New York	805	765	40
Hong Kong	773	733	40
Shanghai	693	656	37
San Francisco	710	678	32
Zurich	722	691	31
Chicago	714	683	31
Vancouver	699	668	31
Tokyo	714	684	30
Boston	708	680	28
Sydney	697	670	27
Kuala Lumpur	670	644	26
Geneva	707	682	25
London	809	785	24
Frankfurt	700	677	23
Jersey	672	654	18
Dubai	666	648	18
Washington DC	683	672	11

Overall reputational advantage has remained fairly stable since GFCI 11. It is notable that four of the top six financial centres by reputational advantage are Asian. It should be stressed that for these centres a large proportion of favourable assessments came from other Asian centres rather than from non-Asian centres.

Table 14 below shows the ten centres with the lowest reputational disadvantage – an indication that respondents' perceptions of a centre are less favourable than the quantitative measures alone would suggest:

Table 14 | GFCI 12 Bottom 10 centres assessments and ratings – reputational advantage

Centre	Average assessment	GFCI 12 rating	Reputational advantage
Athens	321	463	-142
Tallinn	450	583	-133
Reykjavik	408	539	-131
Budapest	434	544	-110
Riyadh	493	584	-91
Manila	481	570	-89
Lisbon	466	554	-88
St Petersburg	498	574	-76
Warsaw	525	598	-73
Gibraltar	527	599	-72

“It is no surprise to me see that Athens and Reykjavik have such a low reputational score by the GFCI measure. I am worried that Madrid and Milan will join them soon.”

Investment Banker based in Frankfurt

Stability

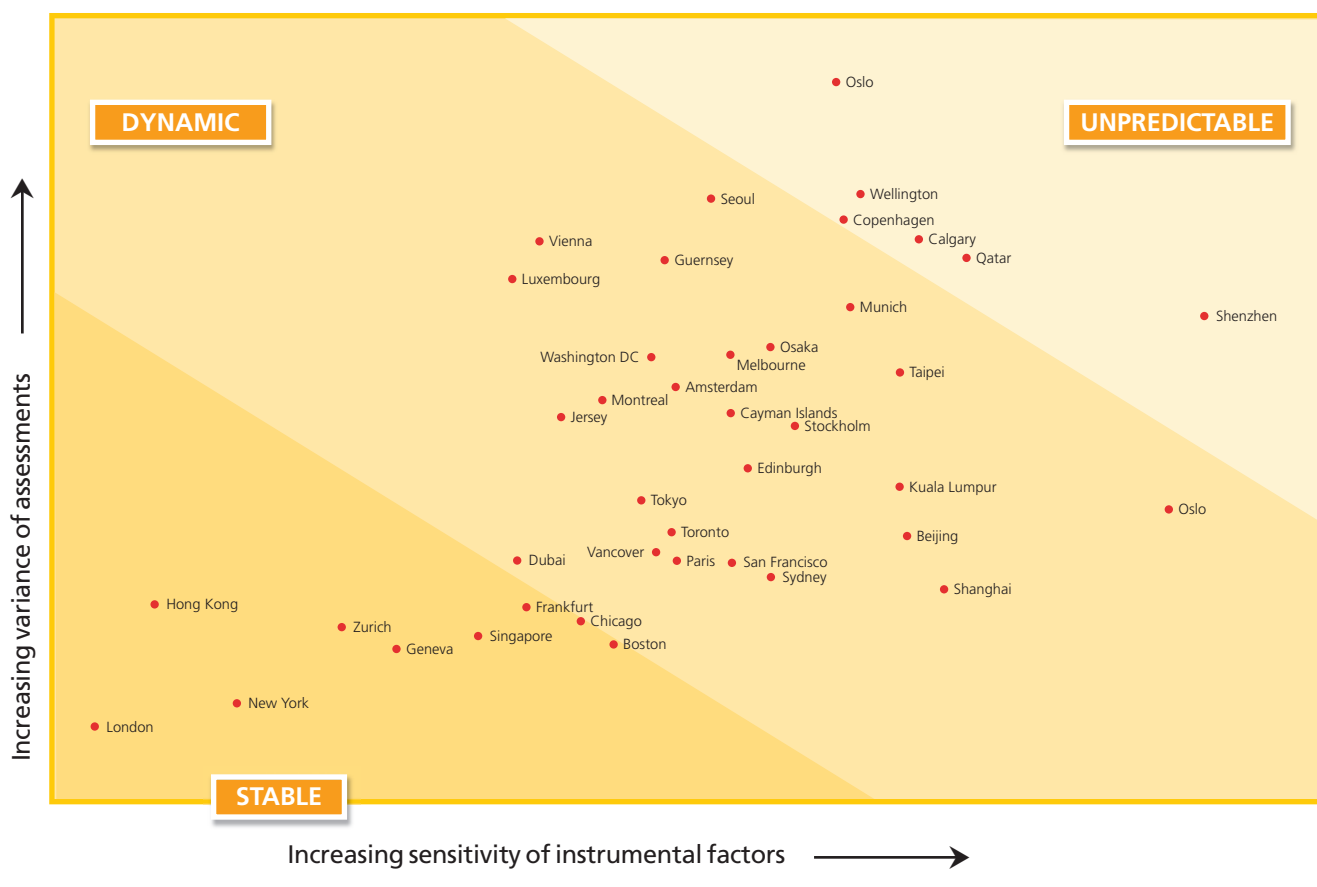
The GFCI 12 model allows for analysis of the financial centres with the most volatile competitiveness. Chart 37 below contrasts the 'spread' or variance of the individual assessments given to each of the top 40 centres with the sensitivity to changes in the instrumental factors:

The chart shows three bands of financial centres. The 'unpredictable' centres in the top right of the chart, Shenzhen, Copenhagen, Calgary, Wellington, Oslo and Qatar, have a high sensitivity to changes in the instrumental factors and a high variance of assessments. These centres have high potential volatility of the top GFCI centres. It is interesting to note that the

centres classed as unpredictable in previous editions of the GFCI have shown the greatest movements in ratings over the past year.

The 'stable' centres in the bottom left of the chart, London, Hong Kong, New York, Singapore, Zurich and Geneva 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 37 | Variance of assessments versus sensitivity to instrumental factors



Appendix 1: Assessment Details

Table 15 | Assessment details

Centre	GFCI 12	Number of assessments	Average assessment	Standard deviation of assessments
London	785	1,291	819	1.72
New York	765	1,024	809	1.75
Hong Kong	733	876	777	1.84
Singapore	725	724	770	1.83
Zurich	691	650	721	1.82
Seoul	685	353	779	2.30
Tokyo	684	472	718	1.99
Chicago	683	417	712	1.85
Geneva	682	650	709	1.82
Toronto	681	426	761	1.95
Boston	680	422	709	1.82
San Francisco	678	279	713	1.92
Frankfurt	677	577	702	1.87
Washington DC	672	315	681	2.14
Sydney	670	315	703	1.91
Vancouver	668	256	704	1.93
Montreal	667	245	662	2.10
Melbourne	657	140	655	2.14
Shanghai	656	396	696	1.89
Jersey	654	588	687	2.08
Osaka	650	108	626	2.15
Dubai	648	567	660	1.92
Calgary	647	152	666	2.26
Luxembourg	646	695	688	2.22
Munich	645	219	639	2.19
Kuala Lumpur	644	190	663	2.00
Stockholm	642	163	644	2.08
Guernsey	641	550	714	2.24
Paris	640	588	630	1.92
Wellington	639	60	630	2.30
Amsterdam	638	474	639	2.11
Shenzhen	637	159	645	2.18
Oslo	636	119	597	2.41
Copenhagen	635	195	592	2.28
Qatar	634	147	589	2.24
Vienna	633	141	614	2.23
Edinburgh	632	371	615	2.02
Abu Dhabi	631	352	613	1.91
Glasgow	630	203	570	2.36

Centre	GFCI 12	Number of assessments	Average assessment	Standard deviation of assessments
Isle of Man	629	495	658	2.14
Taipei	628	146	618	2.12
Helsinki	627	124	577	2.43
Beijing	626	389	607	1.95
Cayman Islands	625	459	628	2.08
British Virgin Islands	624	443	655	2.27
Hamilton	621	328	622	1.96
Brussels	620	431	592	2.10
Sao Paulo	619	132	623	2.06
Dublin	618	669	641	2.11
Madrid	614	227	565	2.03
Milan	612	194	585	2.10
Rio de Janeiro	608	89	576	2.04
Prague	604	110	558	2.28
Johannesburg	603	189	580	1.79
Mexico City	602	97	540	2.01
Istanbul	601	156	582	2.35
Bangkok	600	196	562	1.74
Gibraltar	599	357	576	2.38
Warsaw	598	99	534	2.27
Monaco	597	257	568	2.22
Bahrain	596	233	567	1.93
Rome	590	163	529	2.25
Mumbai	586	233	539	2.07
Moscow	585	350	518	2.21
Riyadh	584	74	495	2.05
Tallinn	583	54	489	2.87
Mauritius	579	232	530	2.21
Buenos Aires	578	100	507	2.20
Malta	575	299	529	2.08
St Petersburg	574	109	500	2.49
Jakarta	573	123	546	1.99
Bahamas	572	254	518	2.19
Manila	570	98	477	2.00
Lisbon	554	117	469	2.30
Budapest	544	151	438	2.05
Reykjavik	539	64	422	2.65
Athens	463	180	326	1.88

Appendix 2: Respondents' Details

Table 16 | Respondents by industry sector

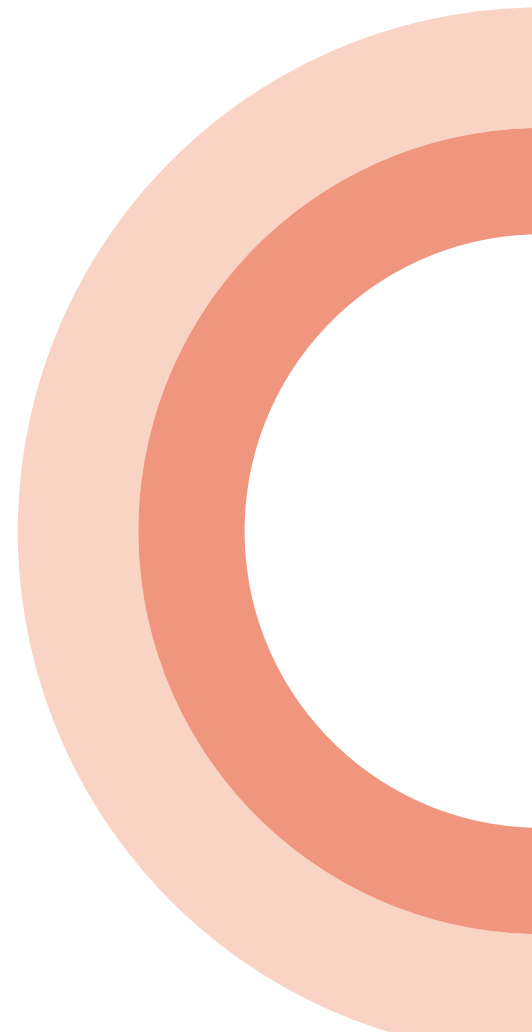
Sector	Total	%
Asset Management	150	9.5%
Banking	403	25.5%
Government & Regulatory	89	5.6%
Insurance	95	6.0%
Other	390	24.7%
Professional Services	289	18.3%
Wealth Management	125	7.9%
Investment	32	2.0%
Trading	7	0.4%
Industry	1	0.1%

Table 17 | Respondents by size of organisation

Number of employees worldwide	Total	%
Fewer than 100	466	29.5%
100 to 500	263	16.6%
500 to 1,000	175	11.1%
1,000 to 2,000	87	5.5%
2,000 to 5,000	127	8.0%
More than 5,000	455	28.8%
Unspecified	8	0.5%

Table 18 | Respondents by location

Location	Total	%
Europe	559	35.4%
Middle East/Africa	35	2.2%
North America	201	12.7%
Offshore	393	24.9%
Asia/Pacific	389	24.6%
Latin America	4	0.3%



Appendix 3: Methodology

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

- Instrumental factors: objective evidence of competitiveness was sought from a wide variety of comparable sources. For example, evidence about the infrastructure competitiveness of a financial centre is drawn from a survey of property and an index of occupancy costs. Evidence about a fair and just business environment is drawn from a corruption perception index and an opacity index. A total of 86 instrumental factors are used in GFCI 12. 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 26,180 financial centre assessments drawn from 1,890 respondents in GFCI 12. 5,397 assessments from 335 respondents have been gathered since GFCI 11.

The 86 instrumental factors were selected because the features they measure contribute in various ways to the fourteen competitiveness factors identified in previous research¹. These are shown in Table 19.

Financial centres are added to the GFCI model 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 in the online survey.

Table 19 | Competitiveness factors and their relative importance

Competitiveness factors	Rank
The availability of skilled personnel	1
The regulatory environment	2
Access to international financial markets	3
The availability of business infrastructure	4
Access to customers	5
A fair and just business environment	6
Government responsiveness	7
The corporate tax regime	8
Operational costs	9
Access to suppliers of professional services	10
Quality of life	11
Culture & language	12
Quality / availability of commercial property	13
The personal tax regime	14

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;

¹ 'The Competitive Position of London as a Global Financial Centre', Z/Yen Limited, The Corporation of London, 2005

- 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). Only indices which have values for at least one third of the financial centres (currently 26) will be included.

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

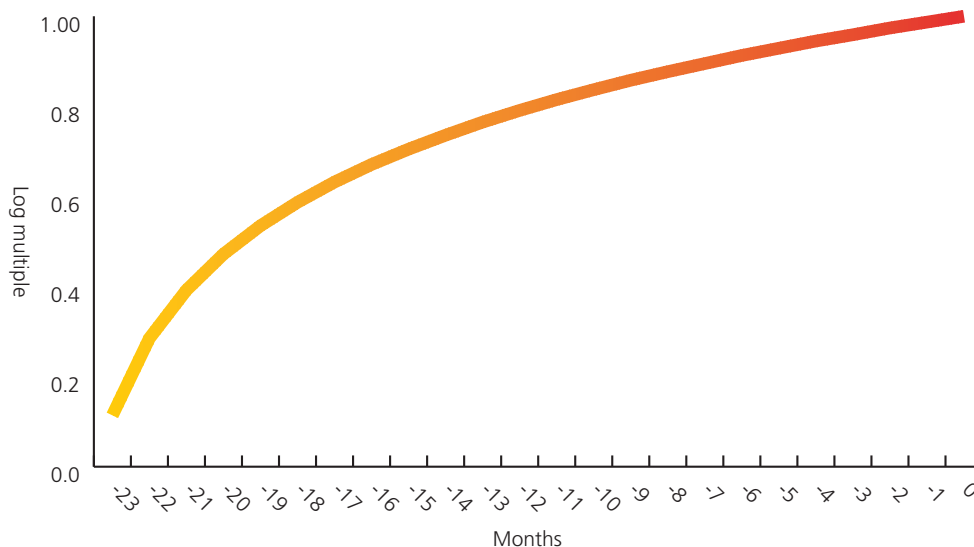
- indices are published in a variety of different forms: an average or base point of 100 with scores above and below this; a simple ranking; actual values (e.g. \$ per square foot of occupancy costs); a composite 'score';

- 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 the log scale shown in Chart 38.

Chart 38 | 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). The SVM used for the GFCI is PropheZy – Z/Yen’s proprietary system. 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’

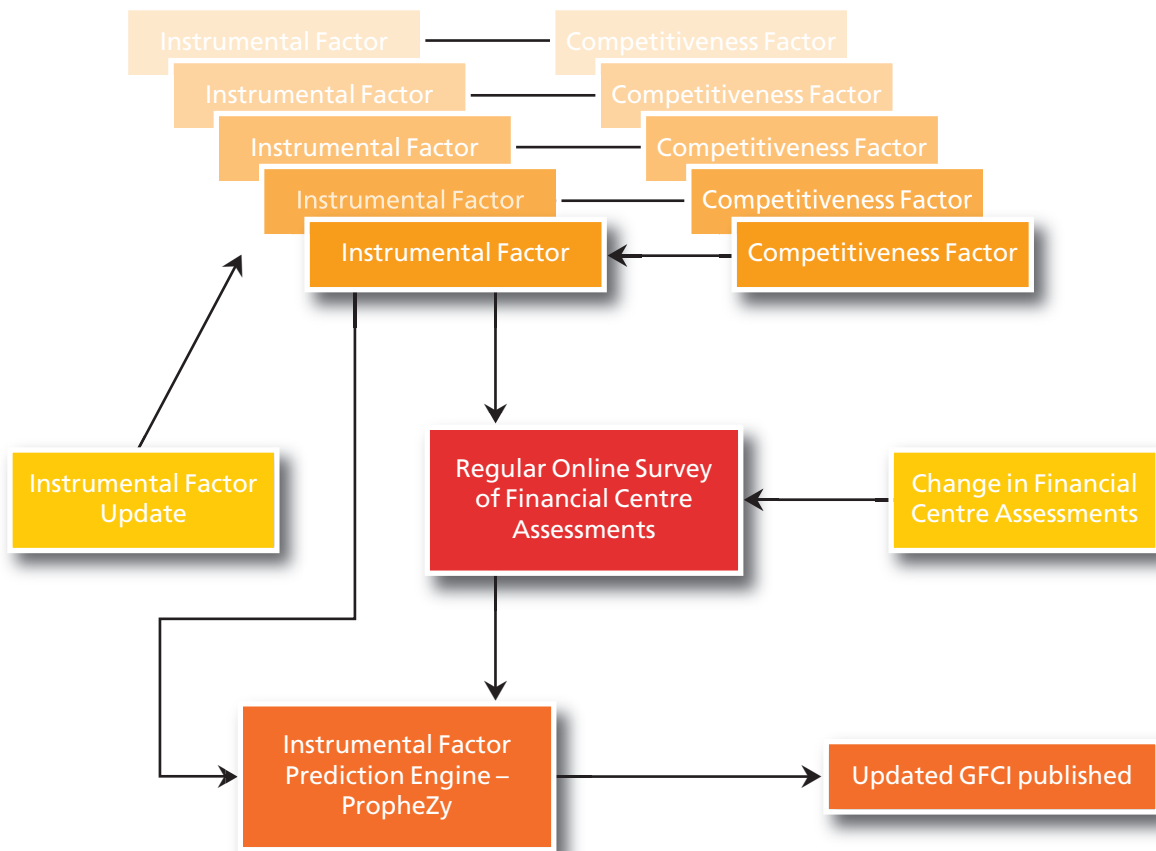
home centres are excluded from the factor assessment model to remove home bias. The model then predicts how respondents would have assessed centres they are not familiar with, by answering questions such as:

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?

The process of creating the GFCI is outlined in Chart 39 below.

Financial centre predictions from the SVM are re-combined with actual financial centre assessments (except those from the respondents’ home centres) to produce the

Chart 39 | The GFCI process



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.

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 shows how closely instrumental factor rankings correlate with the GFCI 12 rankings for the top 20 instrumental factors:

It is interesting (but perhaps unsurprising) to see that the broader measures of competitiveness seem to act as good indicators for financial centre competitiveness. The top four of the most highly correlated instrumental factors are all broad measures of competitiveness rather than being specific to financial services. This indicates that cities that are successful at most things are likely to be very competitive financial centres. A full list of instrumental factors is shown below.

Table 20 | Top 20 instrumental factors by correlation with GFCI 12

Instrumental factor	Correlation measured by R ²
Global City Competitiveness	0.5950
World Competitiveness Scoreboard	0.5528
Global Competitiveness Index	0.5103
Global Power City Index	0.5074
Banking Industry Country Risk Assessments	0.4686
Commodity Futures Notional Turnover	0.4544
Global Cities Index	0.4305
Capital Access Index	0.4124
IT Industry Competitiveness	0.3868
Office Occupancy Costs	0.3840
Global Innovation Index	0.3622
Connectivity	0.3574
Physical Capital	0.3455
Global Air Travel Connectivity	0.3447
Political Risk	0.3187
Institutional Effectiveness	0.3084
Business Environment	0.3068
GDP per Person Employed	0.2903
City Global Appeal	0.2877
Capitalisation of Stock Exchanges	0.2811

Table 21 | People related instrumental factors

Instrumental factor	Source	Website	Updated since GFCI 11
Graduates in Social Science Business and Law	World Bank	www.worldbank.org/education	✓
Gross Tertiary Education Ratio	World Bank	www.worldbank.org/education	✓
Visa Restrictions Index	Henley & Partners	http://www.henleyglobal.com/citizenship/visa-restrictions/	✓
Human Development Index	UN Development Programme	http://hdr.undp.org	
Citizens Purchasing Power	UBS	http://www.ubs.com/1/e/ubs_ch/wealth_mgmt_ch/research.html	
Quality of Living Survey	Mercer HR	www.mercerhr.com	
Happy Planet Index	New Economics Foundation (NEF)	http://www.happyplanetindex.org/explore/global/index.html	✓
Number of High Net Worth Individuals	City Bank & Knight Frank	http://www.knightfrank.com/wealthreport/	
Personal Safety Index	Mercer HR	www.mercerhr.com	
Homicide Rates	UN Office of Drugs and Crime	http://www.unodc.org/unodc/en/data-and-analysis/	
World's Top Tourism Destinations	Euromonitor Archive	www.euromonitor.org	
Average Days with Precipitation per Year	Sperling's Best Places	www.bestplaces.net	
Spatial Adjusted Liveability Index	EIU	http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf	New
Human Capital	EIU	http://www.managementthinking.eiu.com/	New

Table 22 | Business environment related instrumental factors

Instrumental factor	Source	Website	Updated since GFCI 11
Business Environment	EIU	www.economist.com/markets/rankings	
Ease of Doing Business Index	The World Bank	www.doingbusiness.org/economyrankings	
Operational Risk Rating	EIU		✓
Real Interest Rate	World Bank	http://data.worldbank.org/indicator/FR.INR.RINR	✓
Projected City Economic Growth	Price Waterhouse Cooper	https://www.ukmediacentre.pwc.com/content/detail.aspx?releaseid=3421&newsareaid=2	
Global Services Location Index	AT Kearney	www.atkearney.com	
Corruption Perceptions Index	Transparency International	www.transparency.org/publications	
Wage Comparison Index	UBS	www.ubs.com	
Corporate Tax Rates	Price Waterhouse Coopers	n/a	
Employee Effective Tax Rates	Price Waterhouse Coopers	n/a	✓
Personal Tax Rates	OECD	www.oecd.org	
Total Tax Receipts (as % of GDP)	OECD	http://oberon.sourceoecd.org	✓
Bilateral Tax Information Exchange Agreements	OECD	http://www.oecd.org	✓
Economic Freedom of the World	Fraser Institute	www.freetheworld.com/release.html	
Banking Industry Country Risk Assessments	Standard & Poor	http://www2.standardandpoors.com	✓
Government Debt as Percentage of GDP	CIA World Fact Book	https://www.cia.gov/library/publications/the-world-factbook/rankorder/2186rank.html	✓
Political Risk Index	Exclusive Analysis Ltd	http://www.exclusive-analysis.com/	✓
Global Peace Index	Institute for Economics and Peace	http://www.visionofhumanity.org/info-center/global-peace-index-2011/	✓
Financial Secrecy Index	Tax Justice Network	http://www.financialsecrecyindex.com/	
Institutional Effectiveness	EIU	http://www.managementthinking.eiu.com/	New
City GDP Figures	Brookings Institute	http://www.brookings.edu/~media/research/	New

Table 23 | Market access related instrumental factors

Instrumental factor	Source	Website	Updated since GFCI 11
Capital Access Index	Milken Institute	www.milkeninstitute.org/research	
Securitisation	International Financial Services London	www.ifsl.org.uk	✓
Capitalisation of Stock Exchanges	World Federation of Stock Exchanges	www.world-exchanges.org	✓
Value of Share Trading	World Federation of Stock Exchanges	www.world-exchanges.org	✓
Volume of Share Trading	World Federation of Stock Exchanges	www.world-exchanges.org	✓
Broad Stock Index Levels	World Federation of Stock Exchanges	www.world-exchanges.org	✓
Value of Bond Trading	World Federation of Stock Exchanges	www.world-exchanges.org	✓
Volume of Stock Options Trading	World Federation of Stock Exchanges	www.world-exchanges.org	✓
Volume of Stock Futures Trading	World Federation of Stock Exchanges	www.world-exchanges.org	✓
Domestic Credit Provided by Banks (% GDP)	World Bank	http://data.worldbank.org/indicator/FS.AST.DOMS.GD.ZS	✓
Percentage of Firms Using Bank Credit to Finance Investment	World Bank	http://data.worldbank.org/indicator/IC.FRM.BNKS.ZS	✓
Total Net Assets of Mutual Funds	Investment Company Institute	http://www.icifactbook.org/	✓
Islamic Finance	International Financial Services London (IFSL)	http://www.thecityuk.com/what-we-do/the-research-centre/reports.aspx	✓
Net External Position of Banks	Bank for International Settlements	http://www.bis.org/statistics/bankstats.htm	✓
External Position of Central Banks (as % GDP)	Bank for International Settlements	http://www.bis.org/statistics/bankstats.htm	✓
Liner Shipping Connectivity	The World Bank	http://data.worldbank.org/indicator/IS.SHP.GCNW.XQ	New
Commodity Options Notional Turnover	World Federation of Stock Exchanges	www.world-exchanges.org	New
Commodity Futures Notional Turnover	World Federation of Stock Exchanges	www.world-exchanges.org	New

Table 24 | Infrastructure related instrumental factors

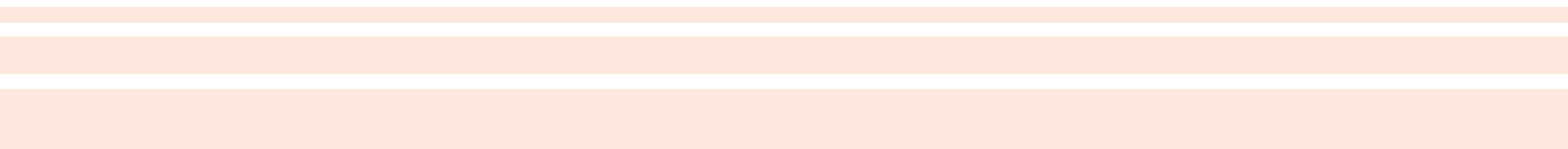
Instrumental factor	Source	Website	Updated since GFCI 11
Office Occupancy Costs	DTZ	http://www.dtz.com/Global/Research/	
Office Space Across the World	Cushman & Wakefield	www.cushwake.com/cwglobal	✓
Global Property Index	Investment Property Databank	http://www.ipd.com/	
Real Estate Transparency Index	Jones Lang LaSalle	www.joneslanglasalle.co.uk	
Digital Economy Ranking	EIU	www.economist.com/markets/rankings	
Telecommunication Infrastructure Index	United Nations	http://www.unpan.org/egovkb/global_reports/08report.htm	✓
Quality of Ground Transport Network	World Economic Forum	http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport	
Quality of Roads	World Economic Forum	http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport	
Roadways per Land Area	CIA World Fact Book	https://www.cia.gov/library/publications/the-world-factbook/rankorder/2085rank.html	✓
Railways per Land Area	CIA World Fact Book	https://www.cia.gov/library/publications/the-world-factbook/rankorder/2121rank.html	✓
Global Air Travel Connectivity	City Rank	http://www.cityrank.ch/indicators/14	
Physical Capital	EIU	http://www.managementthinking.eiu.com/	New
Connectivity	EIU	http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf	New
IT Industry Competitiveness	BSA/EIU	http://globalindex11.bsa.org/country-table/	New

Table 25 | General competitiveness related instrumental factors

Instrumental factor	Source	Website	Updated since GFCI 11
World Competitiveness Scoreboard	IMD	www.imd.ch/research	✓
Global Competitiveness Index	World Economic Forum	www.weforum.org	
Global Business Confidence	Grant Thornton	www.grantthorntonibos.com	
Foreign Direct Investment Inflows	UNCTAD	http://www.unctad.org	
FDI Confidence	AT Kearney	http://www.atkearney.com/images/global/pdf/Investing_in_a_Rebound-FDICI_2010.pdf	✓
City to Country GDP Ratio	World Bank Price Waterhouse Cooper	https://www.ukmediacentre.pwc.com/content/detail.aspx?releaseid=3421&newsareaid=2	
GDP per Person Employed	World Bank	http://data.worldbank.org/indicator/SL.GDP.PCAP.EM.KD	✓
Global Innovation Index	INSEAD	http://www.globalinnovationindex.org/gii/	✓
Global Intellectual Property Index	Taylor Wessing	http://www.taylorwessing.com/ipindex/	
Retail Price Index	Economist	www.economist.com/markets/indicators	✓
Price Levels	UBS	http://www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html	
Global Power City Index	Institute for Urban Strategies & Mori Memorial Foundation	http://www.mori-m-foundation.or.jp/english/index.shtml	
Global Cities Index	AT Kearney	http://www.foreignpolicy.com/story/cms.php?story_id=4509	✓
Number of International Fairs & Exhibitions	World Economic Forum	http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport	
City Population Density	City Mayors Statistics	http://www.citymayors.com/statistics/largest-cities-density-125.html	
Innovation Cities Global Index	2thinknow Innovation Cities™ Project	http://www.innovation-cities.com/innovation-cities-global-index-2010-city-rankings/	
City Global Appeal	EIU	http://www.managementthinking.eiu.com/	New
Global City Competitiveness	EIU	http://www.managementthinking.eiu.com/	New
The Big Mac Index	The Economist	http://www.economist.com/blogs/graphicdetail/2012/01/daily-chart-3	New



Notes





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