



The Global Financial Centres Index 9

MARCH 2011





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, is very grateful to other members of the GFCI team – in particular, Nick Danev, Jeremy Horne and Michael Mainelli.

Foreword

Now is an incredibly important time for the future growth and the competitiveness of the UK as a global financial leader. This is a role that the UK has held for many years, however, with the effects of the recession and some public loss of confidence in financial services, this position is now being challenged by fast developing nations in Asia and the Middle East.

In order to restore confidence and promote growth, it is vital that we focus on a few specific areas that are currently hindering the UK. Whilst GFCI 9 shows London remaining at the top of the index, the research clearly indicates that uncertainty over tax and regulation is a major concern to financial institutions based in London or indeed those contemplating being here.

We must have effective and proportionate regulation, but without discouraging international businesses from basing or expanding their operations in the UK.

There has been much more 'heat' than 'light' on the need for 'more regulation' in the wake of the economic crisis, but I believe it is more important to have regulations and supervisors that focus on macro systemic integrity rather than excessive 'conduct of trade' detail that reduces competitiveness and actually hinders transparent and effective regulation.

It is also crucial that we have clarity and certainty on taxation, as well as reducing the top income tax rate, otherwise businesses will not want to operate in the UK and will opt to set up or expand in cities such as Hong Kong, Singapore and Dubai.

In summary, in order to maintain our future competitiveness as the world's leading international financial centre, I believe it is vital that we take action now in order to keep our lead whilst working closely in partnership with other international financial centres as well as having easy access to the world's talent pool.

We need to actively look for the opportunities that this crisis has given us to create an even more competitive and innovative environment for our financial and professional and business services for the future.

This means that the Government, regulators, professional, financial and trade bodies should be bold and innovative in the measures that are needed to keep the City internationally competitive.

Sir Michael Snyder

Chairman of the UK Government's Professional and Business Services Group
And Senior Partner, Kingston Smith LLP

Headlines for GFCI 9

The GFCI provides profiles, ratings and rankings for 75 financial centres, drawing on two separate sources of data – instrumental factors (external indices) and responses to an online survey. The GFCI was first produced 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 ninth edition of GFCI (GFCI 9).

Instrumental factors: previous research indicates that many factors combine to make a financial centre competitive. These factors can be grouped into five over-arching '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. 76 factors have been used in GFCI 9, of which 37 have been updated since GFCI 8 (see page 37 for full details of external measures used for the purpose of GFCI 9).

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, 33,751 financial centre assessments from 1,970 financial services professionals were used to compute GFCI 9, with older assessments discounted according to age.

Full details of the methodology behind GFCI 9 can be found on page 32. The ratings and rankings are calculated using a 'factor

assessment model', which combines the instrumental factors and questionnaire assessments. The full list of the 75 financial centres rated and profiled in GFCI 9 is shown on pages 4 and 5.

The main headlines of GFCI 9 are:

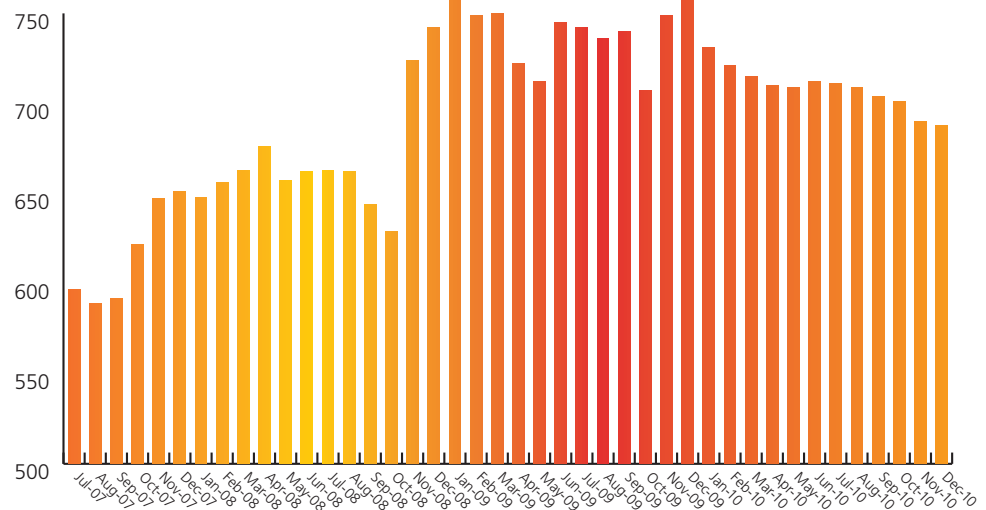
- there remains no significant difference between London, New York and Hong Kong in the GFCI 9 ratings; respondents continue to believe that these centres work together for mutual benefit;
- confidence amongst financial services professionals has fallen since GFCI 8, as shown by lower overall ratings – 47 centres have lower ratings in GFCI 9 with only 25 centres rated higher (three centres have the same ratings as in GFCI 8). Chart 1 shows the decline in overall ratings.
- Asia continues to exhibit enhanced competitiveness with eight centres in the top twenty (against six North American centres and five European ones). In GFCI 1 (March 2007) there were just three Asian centres in the top twenty. Seoul was the largest riser moving into 16th place, up 25 points in the ratings;
- when questioned about which financial centres are likely to become more significant in the next few years, the top five centres mentioned are all Asian – Shanghai, Singapore, Seoul, Hong Kong and Beijing. Asian cities also fill the top six places when respondents indicate where their organisations are most likely to open new offices;



- despite Dubai’s widely publicised economic problems it still holds top position in the Middle East (and 28th overall), followed by Qatar which has moved up four places. The rating gap between these two centres has halved since GFCI 8 and is now only eight points. Bahrain continue to slip, down seven places to 49th (the largest decline this time);
- offshore centres (with the exception of the British Virgin Islands) fell further than the average, continuing a trend since the financial crises began. Jersey and Guernsey remain the leading offshore centres.
- Dublin continues its decline in GFCI. Dublin’s International Financial Services Centre is separate from the domestic banks and represents a distinct regulatory agenda for the EU and Irish regulators¹. The trouble that the domestic banks find themselves in has, however, continued to damage Dublin’s reputation.

The full set of GFCI 9 ranks and ratings are shown in Table 1 overleaf

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



¹ 9th Interim Staff Report, IMF, February 2011

Table 1 | GFCI 9 Ranks and Ratings 1–44

	GFCI 9 Rank	GFCI 9 Rating	GFCI 8 Rank	GFCI 8 Rating	Change in Rank	Change in Rating
London	1	775	1	772	-	-
New York	2	769	2	770	-	▲ 1
Hong Kong	3	759	3	760	-	▼ 1
Singapore	4	722	4	728	-	▼ 6
Shanghai	=5	694	6	693	▲ 1	▲ 1
Tokyo	=5	694	5	697	-	▼ 3
Chicago	7	673	7	678	-	▼ 5
Zurich	8	665	8	669	-	▼ 4
Geneva	9	659	9	661	-	▼ 2
Sydney	=10	658	10	660	-	▼ 2
Toronto	=10	658	12	656	▲ 2	▲ 2
Boston	12	656	13	655	▲ 1	▲ 1
San Francisco	13	655	=14	654	▲ 1	▲ 1
Frankfurt	14	654	11	659	▼ 3	▼ 5
Shenzhen	15	653	=14	654	▼ 1	▼ 1
Seoul	16	651	24	626	▲ 8	▲ 25
Beijing	=17	650	16	653	▼ 1	▼ 3
Washington D.C.	=17	650	17	649	-	▲ 1
Taipei	19	639	19	639	-	0
Paris	20	637	18	645	▼ 2	▼ 8
Luxembourg	21	630	20	634	▼ 1	▼ 4
Vancouver	22	626	21	627	▼ 1	▼ 1
Jersey	23	624	22	626	▼ 1	▼ 2
Melbourne	24	621	23	622	▼ 1	▼ 1
Munich	25	617	27	610	▲ 2	▲ 7
Montreal	26	615	25	617	▼ 1	▼ 2
Guernsey	27	607	26	616	▼ 1	▼ 9
Dubai	28	605	28	607	-	▼ 2
Edinburgh	29	600	31	600	▲ 2	0
Qatar	30	597	=34	592	▲ 4	▲ 5
Osaka	31	594	30	601	▼ 1	▼ 7
Amsterdam	32	593	33	595	▲ 1	▼ 2
Dublin	=33	592	29	605	▼ 4	▼ 13
Stockholm	=33	592	37	587	▲ 4	▲ 5
Isle of Man	35	590	32	598	▼ 3	▼ 8
Hamilton	36	589	=34	592	▼ 2	▼ 3
Madrid	37	588	39	584	▲ 2	▲ 4
Cayman Islands	=38	587	=34	592	▼ 4	▼ 5
Wellington	=38	587	38	585	-	▲ 2
British Virgin Islands	40	584	=40	582	-	▲ 2
Brussels	=41	581	=40	582	▼ 1	▼ 1
Milan	=41	581	43	577	▲ 2	▲ 4
Vienna	43	576	47	571	▲ 4	▲ 5
Sao Paulo	44	574	=44	573	-	▲ 1
Kuala Lumpur	45	573	48	569	▲ 3	▲ 4

	GFCI 9 Rank	GFCI 9 Rating	GFCI 8 Rank	GFCI 8 Rating	Change in Rank	Change in Rating
Copenhagen	=46	571	=44	573	▼ 2	▼ 2
Glasgow	=46	571	46	572	-	▼ 1
Rome	48	568	=50	563	▲ 2	▲ 5
Bahrain	49	566	42	578	▼ 7	▼ 12
Rio de Janeiro	50	563	52	561	▲ 2	▲ 2
Monaco	51	562	49	567	▼ 2	▼ 5
Mexico City	52	561	=50	563	▼ 2	▼ 2
Oslo	53	560	53	557	-	▲ 3
Johannesburg	54	551	54	555	-	▼ 4
Prague	55	547	59	543	▲ 4	▲ 4
Gibraltar	=56	546	=55	554	▼ 1	▼ 8
Helsinki	=56	546	58	549	▲ 2	▼ 3
Mumbai	58	541	57	550	▼ 1	▼ 9
Warsaw	=59	538	67	517	▲ 8	▲ 21
Malta	=59	538	=55	554	▼ 4	▼ 16
Bangkok	61	536	60	537	▼ 1	▼ 1
Mauritius	62	533	61	535	▼ 1	▼ 2
Jakarta	63	532	=62	534	▼ 1	▼ 2
Buenos Aires	=64	525	65	528	▲ 1	▼ 3
Lisbon	=64	525	=62	534	▼ 2	▼ 9
Manila	66	519	66	523	-	▼ 4
Bahamas	67	517	64	529	▼ 3	▼ 12
Moscow	68	506	68	506	-	-
St. Petersburg	69	504	71	491	▲ 2	▲ 13
Riyadh	70	500	69	503	▼ 1	▼ 3
Istanbul	71	494	70	496	▼ 1	▼ 2
Budapest	72	468	72	467	-	▲ 1
Athens	73	457	73	465	-	▼ 8
Tallinn	74	456	74	451	-	▲ 5
Reykjavik	75	436	75	441	-	▼ 5



Four centres (Abu Dhabi, Calgary, Panama and Cyprus) have been added to the GFCI questionnaire recently but have yet to acquire enough assessments to be rated in the main index. As a result of responses to the GFCI 9 questionnaire, Tel Aviv will also be added to the questionnaire for GFCI 10.

Whilst GFCI 9 shows a general decline in ratings, this decline is variable, with changes in ratings varying from minus 16 points (Malta) to plus 25 (Seoul). Other notable changes include a decline of 13 points for Dublin and 12 points for Bahrain.

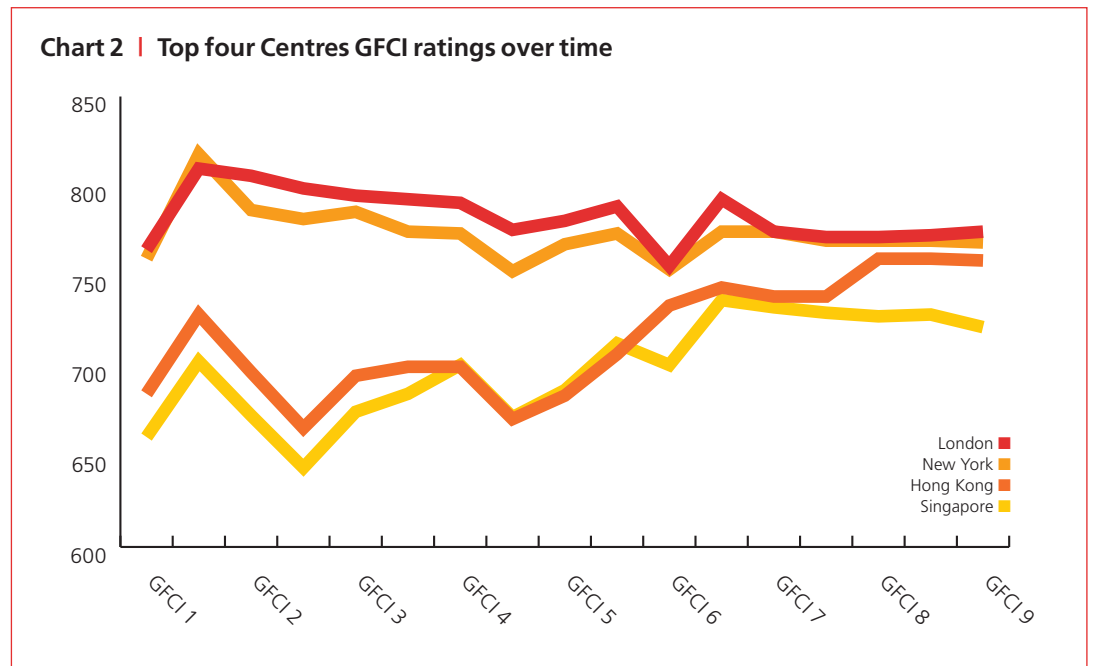


Chart 2 shows the stability of the three leading centres.

Hong Kong is ten points behind New York and 16 points behind London. These three centres control a large proportion of financial transactions (approximately 70% of equity trading) 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 many industry professionals still see a great deal of competition, policymakers appear to recognise that working together on certain elements of regulatory reform is likely to enhance the competitiveness of these centres.

However, London must not rest on its laurels. A recent report² says that of the financial professionals polled:

- 43% have considered or are considering leaving London;
- 11% are definitely departing or are likely to do so soon;
- of these, 86% of individuals are blaming the cost of living and 69% the quality of life for their decision;
- 25% of senior managers polled thought it likely that their organisation would move operational teams out of the UK over the next few years;
- 75% of the institutions polled blamed the overall tax burden as a reason for their possible departure.

² *Not with a Bang but a Whimper*, YouGov, December 2010

“Many Chinese seem to resent the success of Hong Kong and think that Shanghai should be the main Asian hub. I can’t see Hong Kong being overtaken by a Chinese city for many years – but perhaps I’m biased – I’ve worked here for over twenty years now.”

Wealth Manager based in Hong Kong

Asian financial centres continue to perform well. Tokyo and Shanghai are both in the top ten centres with Shenzhen, Seoul, Beijing and Taipei also in the top 20.

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 2 | The ten Centres likely to become more significant

Financial Centre	Number of Mentions
Shanghai	62
Singapore	38
Seoul	37
Hong Kong	33
Beijing	17
Dublin	15
Amsterdam	12
Channel Islands	11
Dubai / Qatar	11
Tel Aviv	10

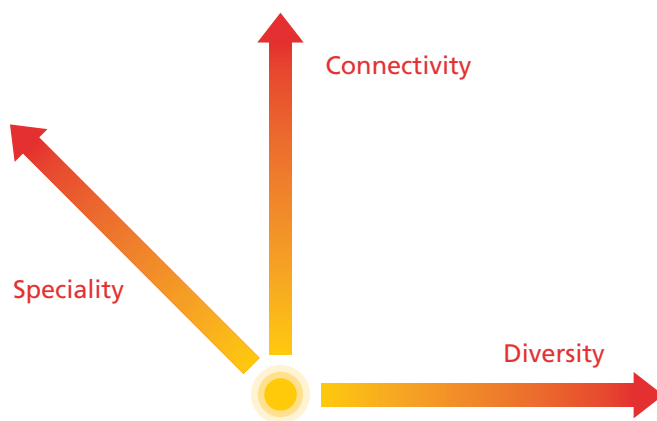
The GFCI questionnaire also asks in which centres the respondents’ organisations are most likely to open offices over the next few years:

Table 3 | The ten Centres where new offices are likely to be opened

Financial Centre	Number of Mentions
Hong Kong	23
Shanghai	22
Singapore	21
Seoul	13
Beijing	12
Shenzhen	12
Tel Aviv	9
Channel Islands	9
Dubai / Qatar	9
London	9

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 70% of other centres, this centre is deemed to be 'Global'. If the ratings are provided by over 50% 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.

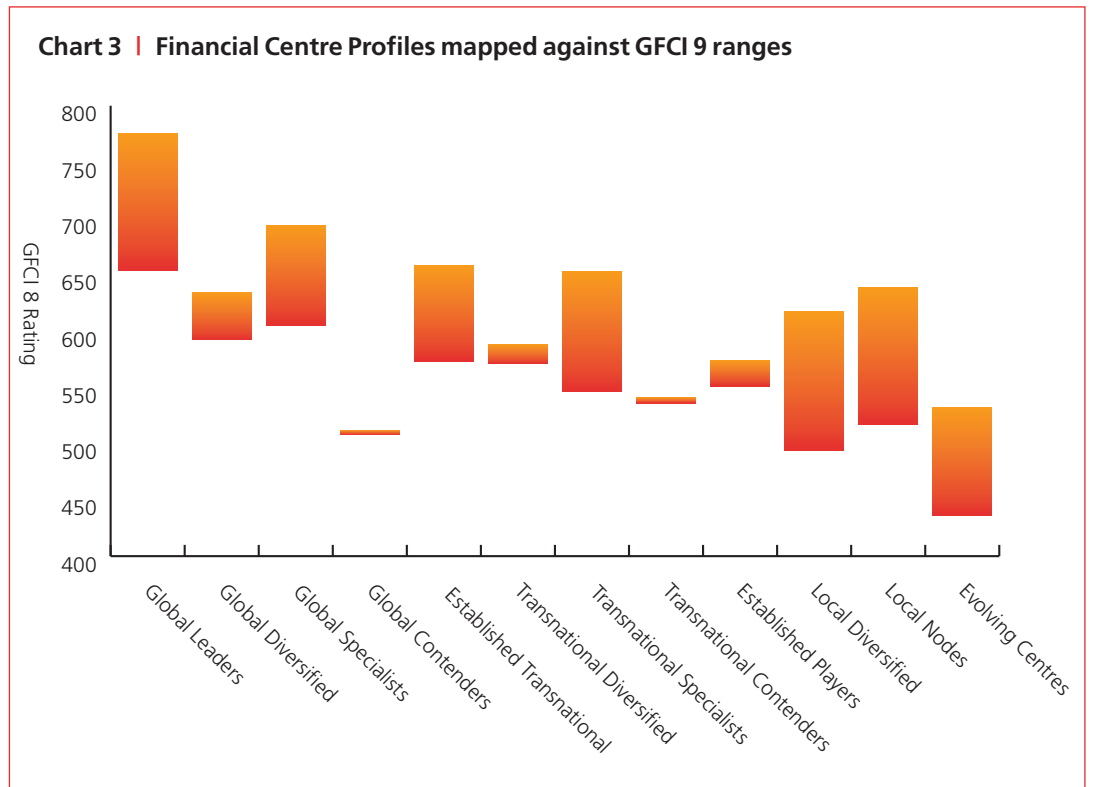
'Speciality' – the depth within a financial centre of the following industry sectors: asset management, investment banking, insurance, professional services and wealth management. A centre's 'speciality' performance is calculated from the difference between the GFCI rating and the industry sector ratings.

In Table 4, 'Diversity' (Breadth) and 'Speciality' (Depth) are combined on one axis to create a two dimensional table of financial centre profiles. The 75 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. The rating for each centre and the range for each profile category are given in brackets for reference.

This profile 'map' shows the nine Global Leaders (in the top left of the table) which have both broad and deep financial services activities and are connected with many other financial centres. This list includes London, New York and Hong Kong, the leading global financial centres. Tokyo has climbed into this category having been an Established Transnational centre in GFCI 8. Paris, Dublin and Amsterdam are Global Diversified centres as they are equally well connected but do not exhibit the same depth in different activities to be considered Global Leaders. Similarly, Geneva, Shanghai, Beijing and Dubai are Global Specialists (specialising primarily in Asset Management) but do not have a sufficiently broad range of financial services activities to be Global Leaders. The only Global Contender is Moscow which is assigned a global profile because there is widespread awareness of its activities, but its financial services are not currently sufficiently broad and deep for it to be considered a leader. Chart 3 shows the profiles mapped against the GFCI 9 ranges:

Table 4 | GFCI 9 Financial Centre Profiles

	Broad & Deep	Relatively Broad	Relatively Deep	Emerging
Global	Global Leaders <i>GFCI 9 Range 654 – 775</i>	Global Diversified <i>GFCI 9 Range 592–637</i>	Global Specialists <i>GFCI 9 Range 605–694</i>	Global Contenders <i>GFCI 9 Range 506</i>
	Chicago (673)	Amsterdam (593)	Beijing (650)	Moscow (506)
	Frankfurt (654)	Dublin (592)	Dubai (605)	
	Hong Kong (759)	Paris (637)	Geneva (659)	
	London (775)		Shanghai (694)	
	New York (769)			
	Singapore (722)			
	Tokyo (694)			
	Toronto (658)			
	Zurich (665)			
Transnational	Established Transnational <i>GFCI 9 Range 573 – 658</i>	Transnational Diversified <i>GFCI 9 Range 571 – 588</i>	Transnational Specialists <i>GFCI 9 Range 546 – 653</i>	Transnational Contenders <i>GFCI 9 Range 536 – 541</i>
	Boston (656)	Copenhagen (571)	British Virgin Islands (584)	Bangkok (536)
	Edinburgh (600)	Madrid (588)	Cayman Islands (587)	Mumbai (541)
	Kuala Lumpur (573)		Gibraltar (546)	
	Melbourne (621)		Guernsey (607)	
	San Francisco (655)		Isle of Man (590)	
	Seoul (651)		Jersey (624)	
	Sydney (658)		Luxembourg (630)	
	Vancouver (626)		Shenzhen (653)	
	Washington D.C. (650)			
Local	Established Players <i>GFCI 9 Range 551 – 574</i>	Local Diversified <i>GFCI 9 Range 494 – 617</i>	Local Specialists <i>GFCI 9 Range 517 – 639</i>	Evolving Centres <i>GFCI 9 Range 436 – 532</i>
	Johannesburg (551)	Brussels (581)	Bahamas (517)	Athens (457)
	Mexico City (561)	Glasgow (571)	Buenos Aires (525)	Budapest (468)
	Sao Paulo (574)	Helsinki (546)	Hamilton (589)	Jakarta (532)
		Istanbul (494)	Malta (538)	Reykjavik (436)
		Lisbon (525)	Manila (519)	Riyadh (500)
		Milan (581)	Mauritius (533)	St. Petersburg (504)
		Montreal (615)	Monaco (562)	Tallinn (456)
		Munich (617)	Qatar (597)	
		Osaka (594)	Rio de Janeiro (563)	
		Oslo (560)	Rome (568)	
		Prague (547)	Taipei (639)	
		Stockholm (592)	Wellington (587)	
		Vienna (576)		
	Warsaw (538)			



“I think if anything, the global leaders of New York, London, Hong Kong and even Singapore are moving further ahead of the chasing pack.”

Asset Manager based in New York



Main 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 5:

Table 5 | Main areas of competitiveness

Area of Competitiveness	Number of mentions by respondents	Main concerns raised
Business Environment	71	Stability and clarity of regulation
People	44	Quality of staff
Taxation	37	Levels of personal taxation
Infrastructure	27	IT and transport infrastructure
Cost Competitiveness	25	Property costs (including staff costs)
Market Access	19	Dispersion of trading

The GFCI questionnaire asks respondents to name the single regulatory change that would improve a financial centre's competitiveness. Although a large number of possible changes were named, the four mentioned most often are shown in Table 6 below:

Table 6 | Top four single regulatory changes

Area of Competitiveness	Number of mentions by respondents	Particular issues
Taxation	37	Personal taxes
Transparency and predictability of regulation	35	Predictability
Economic and business freedom	34	A 'level playing field'
Regulatory simplification	29	"It's getting too complicated"

The GFCI questionnaire also asks respondents how financial centres can best signal their long-term commitment to financial services. Again there were a large number of 'signals' mentioned but the four most common are shown in Table 7 below:

Table 7 | Best signals of commitment to financial services

Area of Competitiveness	Number of mentions by respondents
Long term stability in regulation	49
Investment in infrastructure	28
Tax rates	27
Improving the quality of life for expatriates	24

“The UK must fight the EU – stable regulation is a must for us and we will not be bullied – we will move if we have to.”

Investment Banker based in London



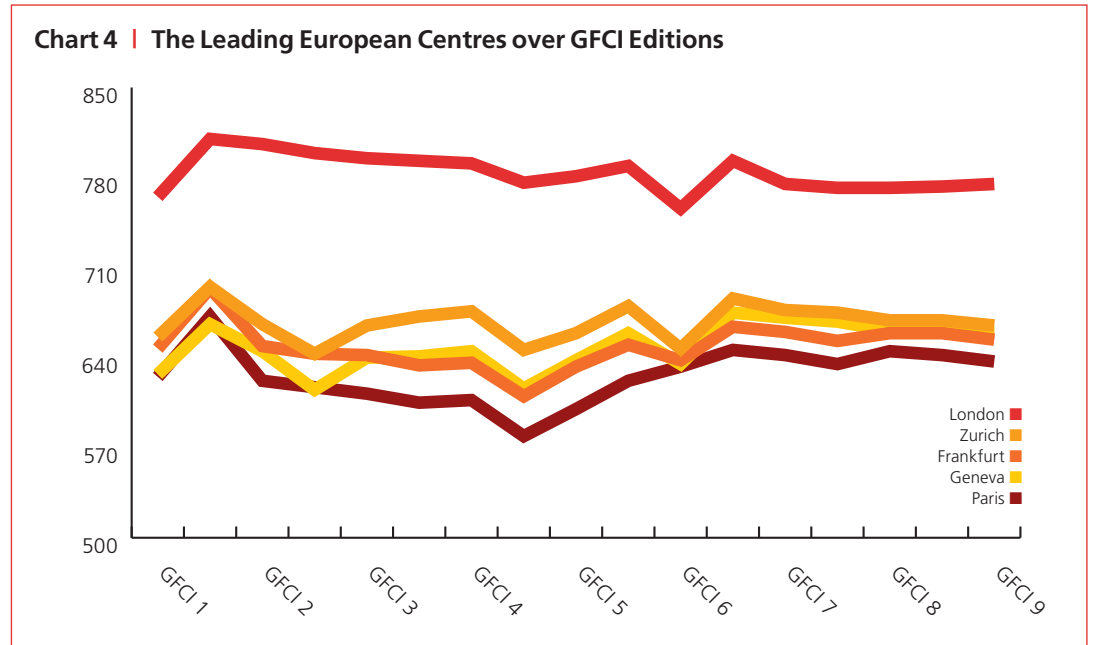
European Centres

Table 8 shows the top 20 European financial centres. Ten of the top 20 centres have risen and eight have declined. Edinburgh and Moscow remain on the same ratings as in GFCI 8. The two notable improvements are in Eastern Europe with Warsaw up 21 points and St Petersburg up 13 points:

Table 8 | The Leading 20 European Centres in GFCI 9

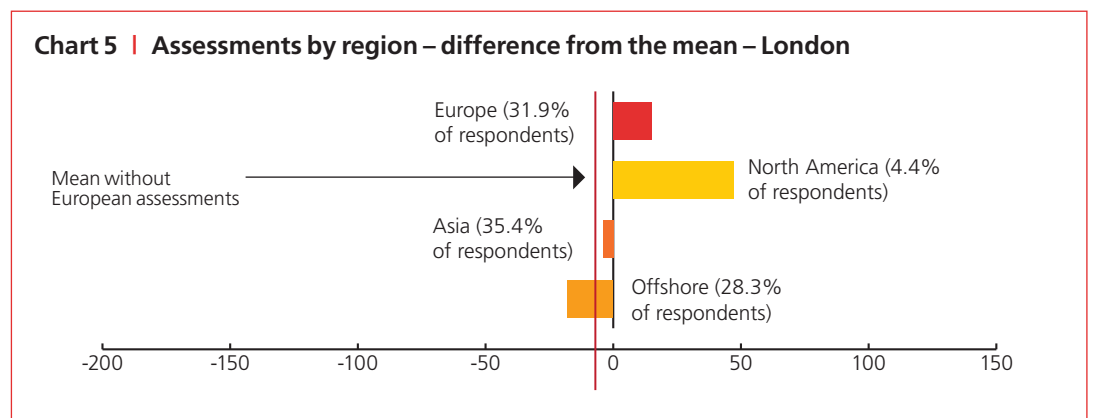
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London	1	775	1	772	–	▲ 3
Zurich	8	665	8	669	–	▼ 4
Geneva	9	659	9	661	–	▼ 2
Frankfurt	14	654	11	659	▼ 3	▼ 5
Paris	20	637	18	645	▼ 2	▼ 8
Luxembourg	21	630	20	634	▼ 1	▼ 4
Munich	25	617	27	610	▲ 2	▲ 7
Edinburgh	29	600	31	600	▲ 2	-
Amsterdam	32	593	33	595	▲ 1	▼ 2
Dublin	=33	592	29	605	▼ 4	▼ 13
Stockholm	=33	592	37	587	▲ 4	▲ 5
Madrid	37	588	39	584	▲ 2	▲ 4
Brussels	=41	581	=40	582	▼ 1	▼ 1
Milan	=41	581	43	577	▲ 2	▲ 4
Vienna	43	576	47	571	▲ 4	▲ 5
Copenhagen	=46	571	=44	573	▼ 2	▼ 2
Glasgow	=46	571	46	572	–	▼ 1
Rome	48	568	=50	563	▲ 2	▲ 5
Oslo	53	560	53	557	–	▲ 3
Prague	55	547	59	543	▲ 4	▲ 4
Helsinki	=56	546	58	549	▲ 2	▼ 3
Warsaw	=59	538	67	517	▲ 8	▲ 21
Malta	=59	538	=55	554	▼ 4	▼ 16
Lisbon	=64	525	=62	534	▼ 2	▼ 9
Moscow	68	506	68	506	–	-
St. Petersburg	69	504	71	491	▲ 2	▲ 13
Budapest	72	468	72	467	–	▲ 1
Athens	73	457	73	465	–	▼ 8
Tallinn	74	456	74	451	–	▲ 5
Reykjavik	75	436	75	441	–	▼ 5

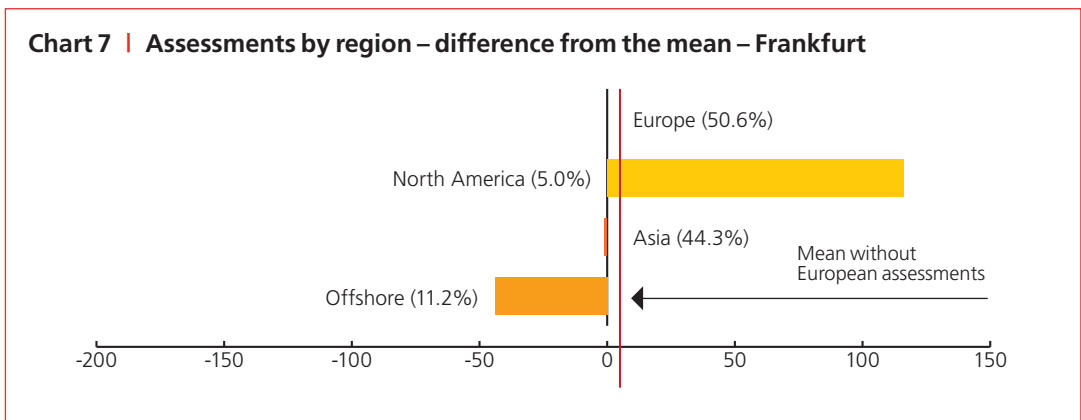
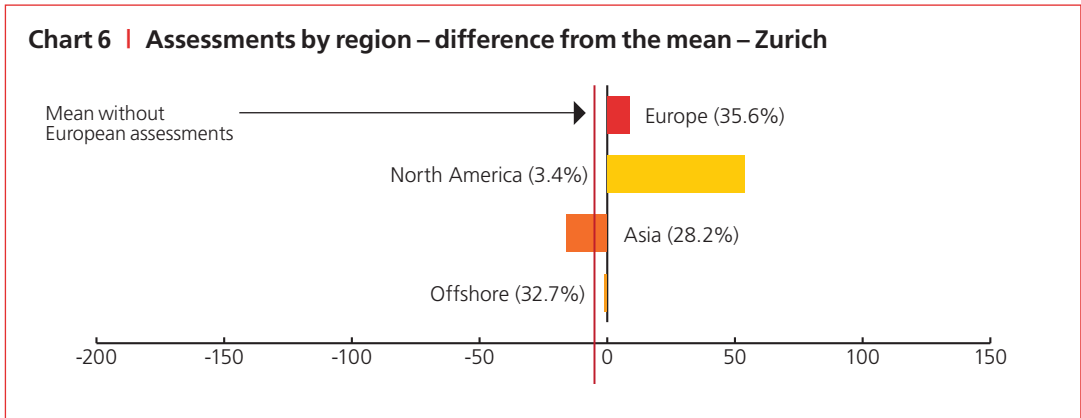
Despite the concerns over London's competitiveness, it maintains its predominance over other leading European centres. Chart 4 illustrates this clearly:



London is, however, facing several threats to its position. Recent government attempts to curb bonuses for financial professionals and the imposition of profit taxes on banks are making the UK less cost competitive. London is also becoming a more expensive city from which to operate as office rents increased by almost 20% last year. The lack of certainty about future regulatory conditions still worries many professionals in London.

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 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. The chart indicates that London is well regarded in North America but less well rated by offshore centres. Assessments from Europe and Asia are fairly close to the mean.

Frankfurt’s overall average assessment is 693. Like London, Frankfurt is given lower assessments by people based in offshore locations than elsewhere.

Zurich’s overall average assessment is 695, slightly down from GFCI 8. Assessments of Zurich show a more ‘balanced’ pattern than assessments of London with regional responses closer to the mean.

“I’m glad to be based here right now – business is booming and we are picking up more clients all the time. They are coming here because of reputation for stable and sensible regulations.”

Pension Fund Manager based in Zurich

Asian Centres

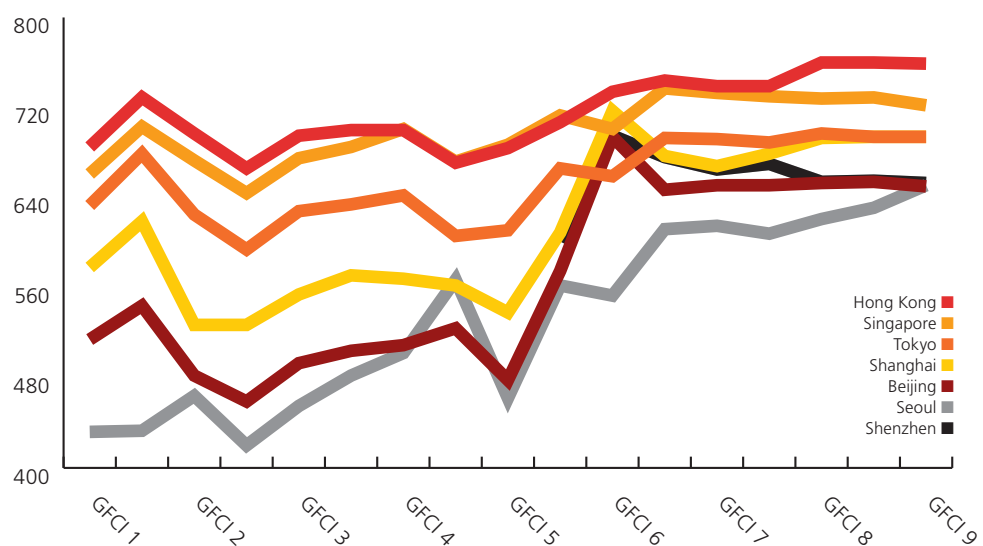
GFCI 9 ratings have, on average, declined slightly since GFCI 8. Ratings in Asia have also shown a small decline. As can be seen in Table 9 below, of the top ten Asian centres, three have shown rating improvements, particularly Seoul:

Singapore was 32 points behind Hong Kong in GFCI 8 and there is now a 37 point gap. Seoul has risen in the ratings more than any other centre in GFCI 9. The rise is attributed to higher average assessments than in the past. It would appear that the promotion of the city as a financial centre is starting to pay off. This rise in the ratings is shown clearly in Chart 8:

Table 9 | The Leading ten Asian Centres in GFCI 9

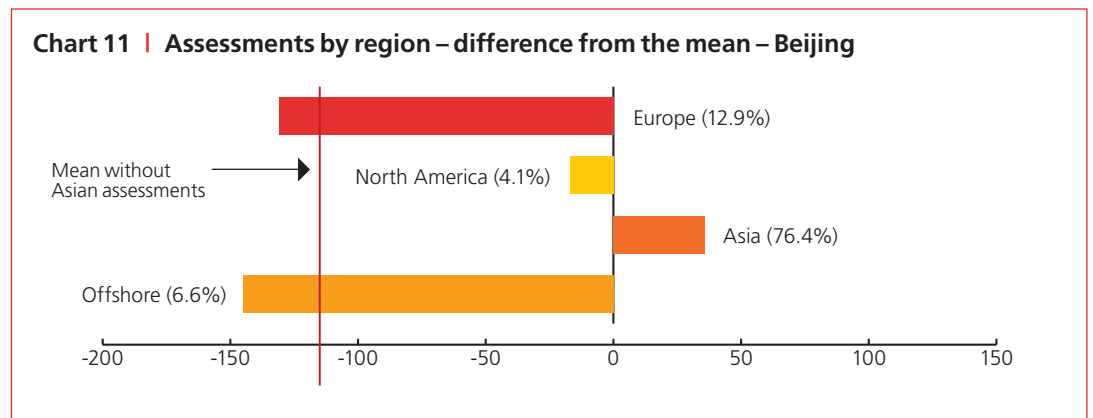
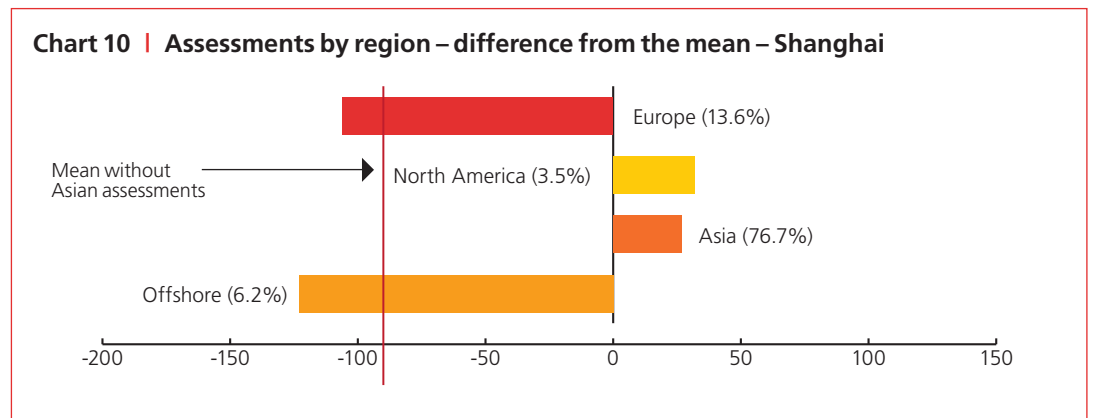
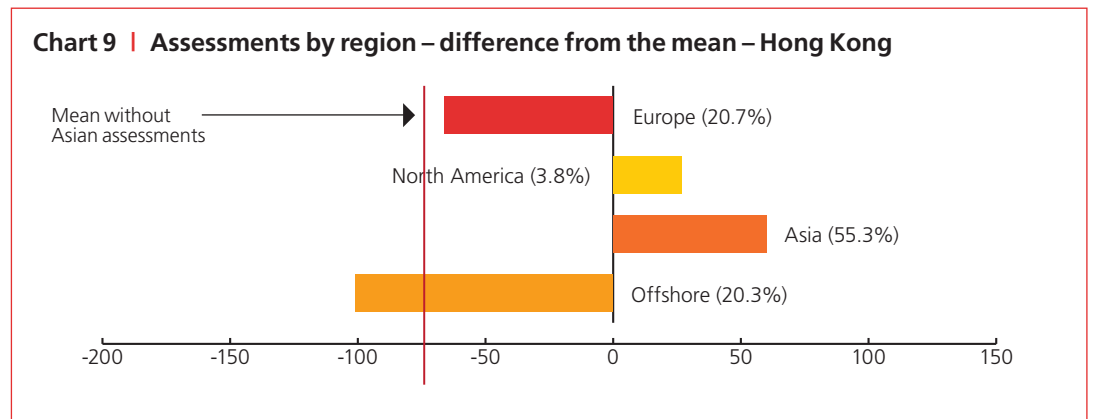
	GFCI 9 Rank	GFCI 9 Rating	GFCI 8 Rank	GFCI 8 Rating	Change in Rank	Change in Rating
Hong Kong	3	759	3	760	-	▲ 1
Singapore	4	722	4	728	-	▼ 6
Shanghai	=5	694	6	693	▲ 1	▲ 1
Tokyo	=5	694	5	697	-	▼ 3
Shenzhen	15	653	=14	654	▼ 1	▼ 1
Seoul	16	651	24	626	▲ 8	▲ 25
Beijing	=17	650	16	653	▼ 1	▼ 3
Taipei	19	639	19	639	-	-
Osaka	31	594	30	601	▼ 1	▼ 7
Kuala Lumpur	45	573	48	569	▲ 3	▲ 4
Mumbai	58	541	57	550	▼ 1	▼ 9
Bangkok	61	536	60	537	▼ 1	▼ 1
Jakarta	63	532	=62	534	▼ 1	▼ 2
Manila	66	519	66	523	-	▼ 4

Chart 8 | The Leading Asian Centres over GFCI Editions



In general, fellow Asian centres are particularly well-supported by Asian respondents in both the number of assessments and the average assessment given. This is shown in **Chart 9** below by the mean without Asian assessments being well to the left of the overall mean. Outside Asia, the North American responses are more positive than average about Hong Kong and Shanghai but less positive than average

about Beijing. The number of assessments given to Asian centres by European based respondents is fairly low, suggesting that Asian centres are less well known and, probably as a consequence, less highly regarded than from within Asia. Respondents from the offshore centres also rate Asian centres less positively than average. This pattern can be seen in the following charts:



“Hong Kong, Singapore and Shanghai are all vital centres now and we are likely to expand our presence in Seoul very shortly.”

Investment Banking President based in Paris

North American Centres

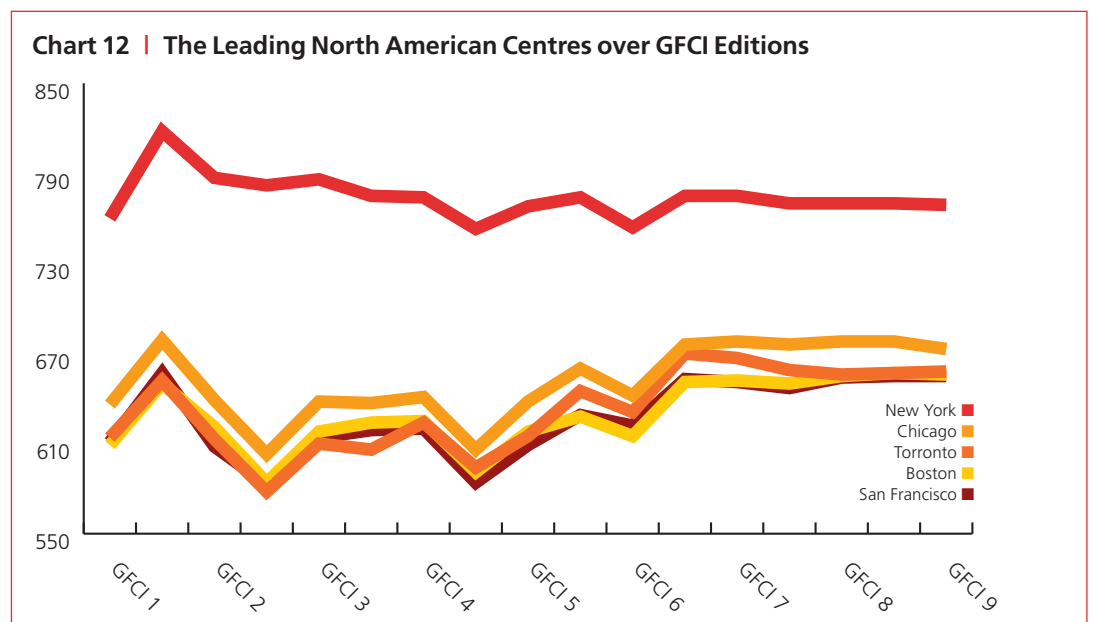
North American Centres have shown stability with GFCI 9 ratings very similar to those in GFCI 8:

Table 10 | The Leading North American Centres in GFCI 9

	GFCI 9 Rank	GFCI 9 Rating	GFCI 8 Rank	GFCI 8 Rating	Change in Rank	Change in Rating
New York	2	769	2	770	–	▼ 1
Chicago	7	673	7	678	–	▼ 5
Toronto	=10	658	12	656	▲ 2	▲ 2
Boston	12	656	13	655	▲ 1	▲ 1
San Francisco	13	655	=14	654	▲ 1	▲ 1
Washington D.C.	=17	650	17	649	–	▲ 1
Vancouver	22	626	21	627	▼ 1	▼ 1
Montreal	26	615	25	617	▼ 1	▼ 2
Sao Paulo	44	574	=44	573	–	▲ 1
Rio de Janeiro	50	563	52	561	▲ 2	▲ 2
Mexico City	52	561	=50	563	▼ 2	▼ 2
Buenos Aires	=64	525	65	528	▲ 2	▼ 3

Chicago retains its position in the GFCI 9 top ten and remains the second North American financial centre, after New York. Toronto has risen from 12th place to equal 10th with Sydney and continues to be the clear leader in Canada, 32 points above Vancouver. Calgary was recently added as a new financial centre to our

online survey – it will be included in the listings when it has obtained a sufficient number of assessments. Chart 12 below shows New York maintaining its leadership in North America:



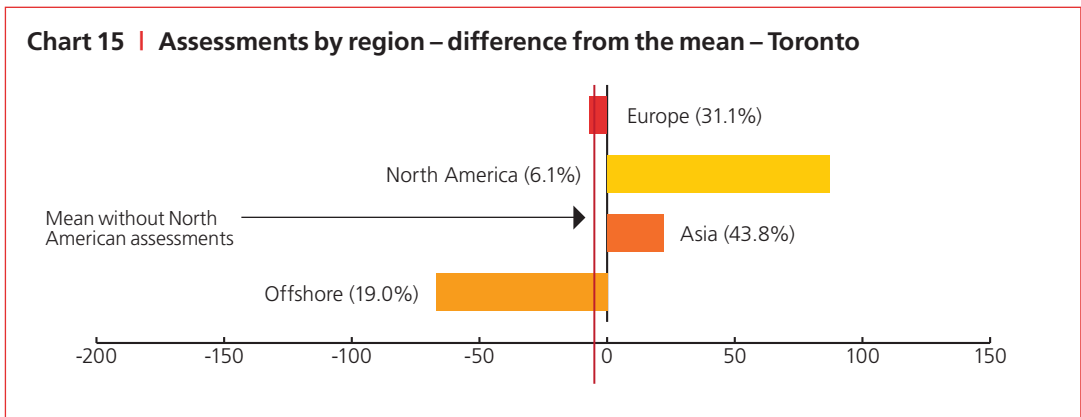
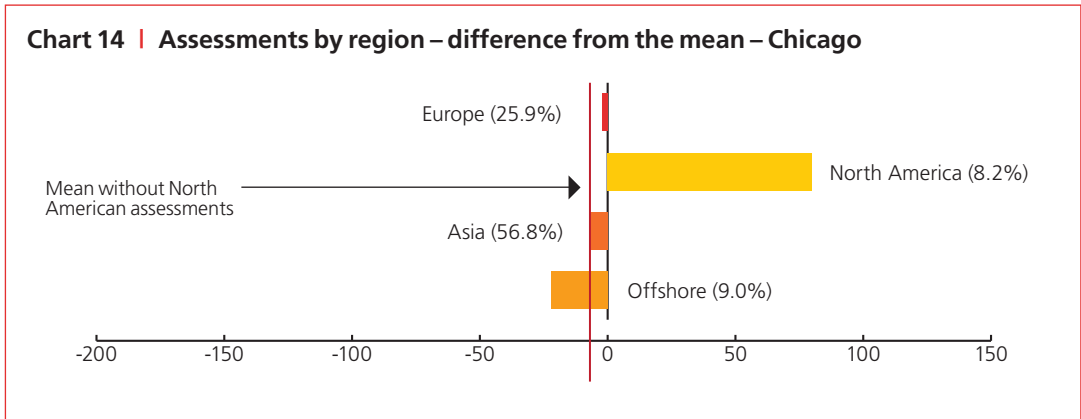
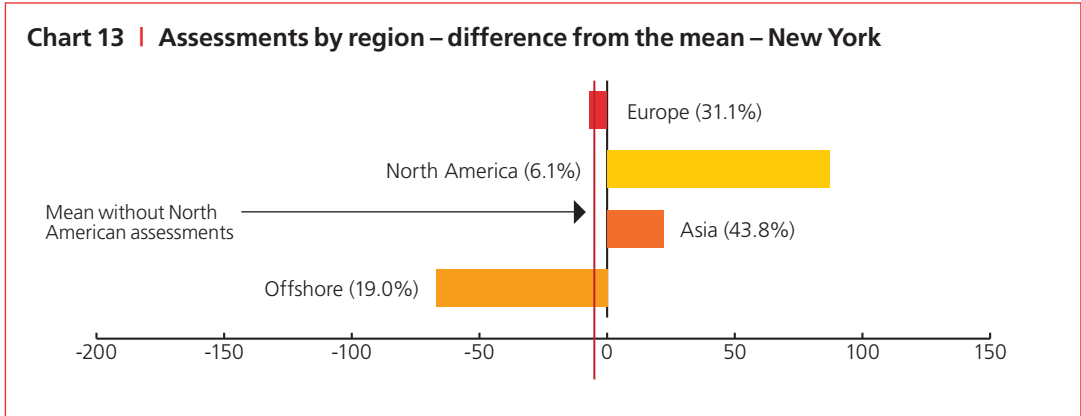
The difference between regional assessments for some of the major North American centres is shown below.

The overall average assessment for New York is 808. New York benefits from strong North American support. Offshore centres assess New York less positively, possibly due to US clampdowns on offshore activities. European and Asian assessments are both close to the overall mean:

Chicago has an overall average assessment of 697 and shows a similar pattern to New York with regard to the offshore and North American

assessments – the former being lower than average and the latter higher. A high number of assessments from Asian respondents is notable, although assessments given were lower than average.

Toronto is the only North American centre to receive a higher than average score from the offshore centres; it is also well regarded by respondents based in London, although less so by the rest of Europe.



Middle Eastern Centres

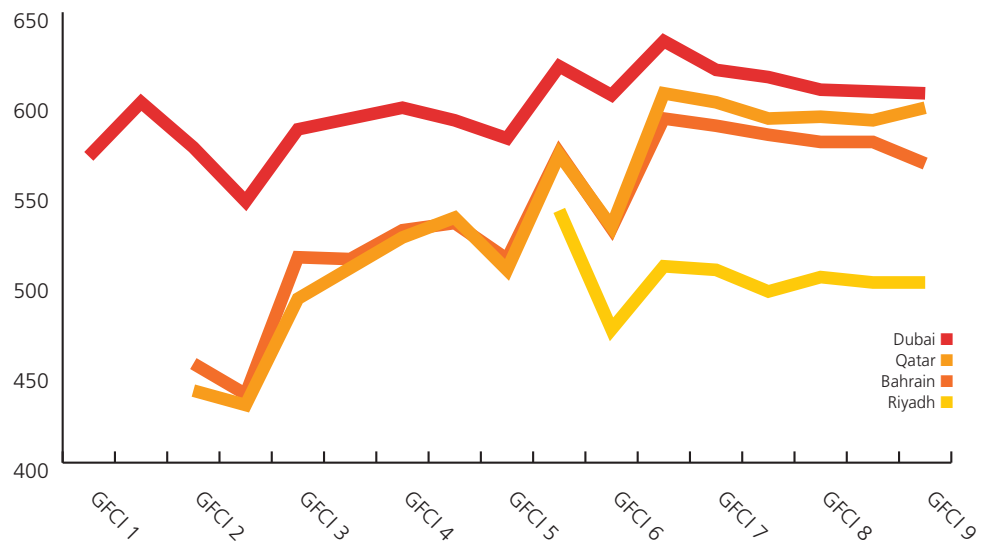


Of the four Middle Eastern centres in the GFCI, Dubai has maintained a lead since the GFCI began. However, Qatar is closing the gap in ratings and is now only 8 points behind Dubai having been 135 points behind in GFCI 2. Bahrain and Riyadh are still a fair way behind the two Middle Eastern leaders.

Table 11 | The Middle Eastern Centres in GFCI 9

	GFCI 9 Rank	GFCI 9 Rating	GFCI 8 Rank	GFCI 8 Rating	Change in Rank	Change in Rating
Dubai	28	605	28	607	–	▼ 2
Qatar	30	597	34	592	▲ 4	▲ 5
Bahrain	49	566	42	578	▼ 7	▼ 12
Riyadh	70	500	69	503	▼ 1	▼ 3
Istanbul	71	494	70	496	▼ 1	▼ 2

Chart 16 | Middle Eastern Centres over GFCI Editions



The pattern of assessments reveals that the Middle Eastern centres are particularly well supported by North American respondents. Respondents from Europe and the offshore centres rate Dubai less positively than average. Respondents from offshore centres are far more positive about Qatar. Nearly half of the assessments given to Qatar are from Asia and the average of these assessments is less than the overall mean:

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

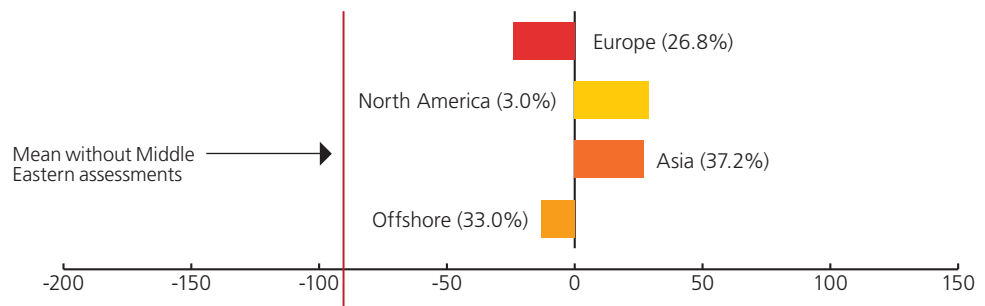
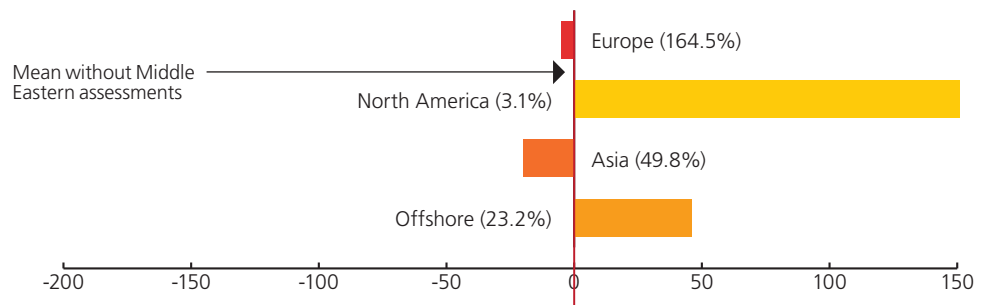


Chart 18 | Assessments by region – difference from the mean – Qatar



“Dubai is still experiencing difficulties and is being overtaken by a number of Asian centres at the moment – I hope it will get better soon.”

Asset Manager based in Dubai

Offshore Centres

The offshore centres continue to come under scrutiny during the financial crisis. Many offshore centres are still regarded as 'tax havens' and there has been significant pressure applied to these centres by many national regulators as well as international bodies such as the OECD. The rankings (with the exception of the British Virgin Islands) and ratings of the offshore centres continue to decline in GFCI 9:

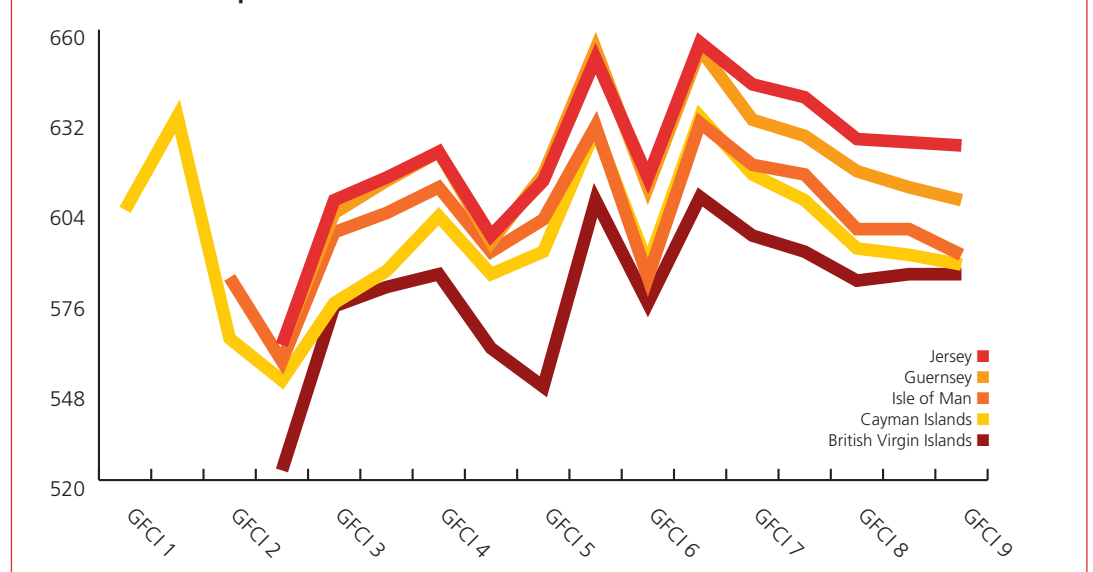
Jersey and Guernsey remain the only two offshore centres with ratings over 600.

The decline of the offshore centres is demonstrated clearly in Chart 19 below.

Table 12 | Top ten Offshore Centres in GFCI 9

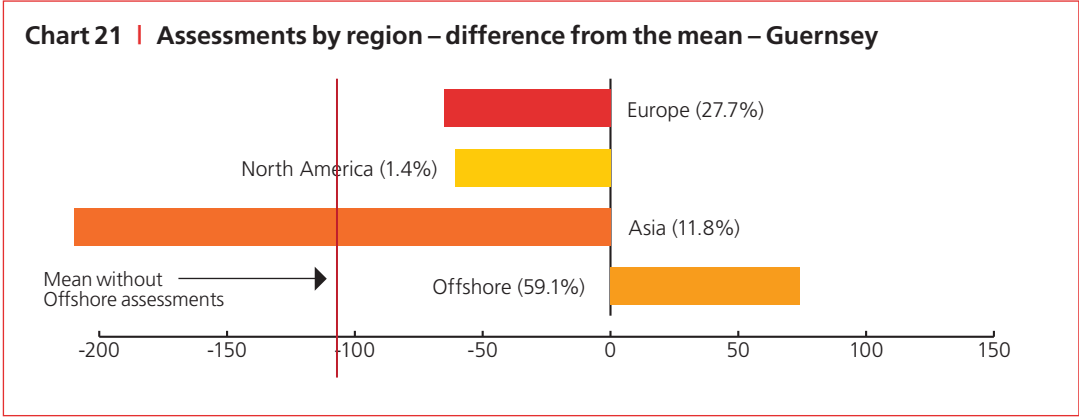
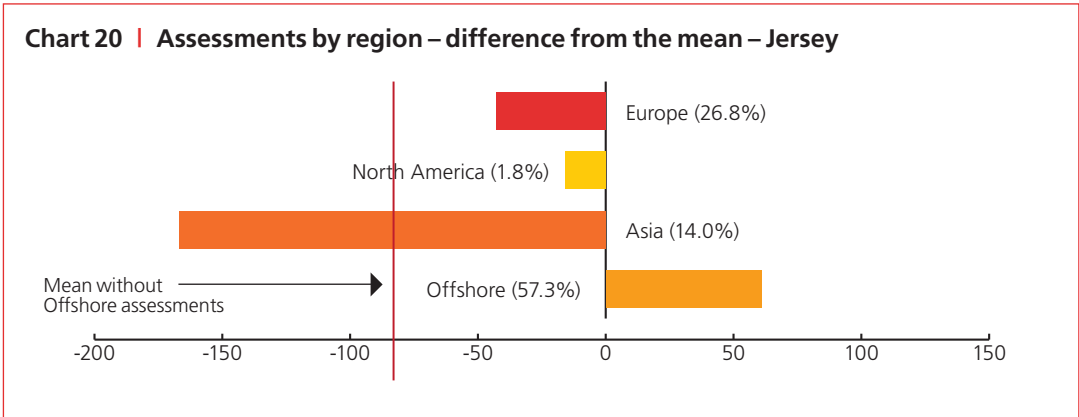
	GFCI 9 Rank	GFCI 9 Rating	GFCI 8 Rank	GFCI 8 Rating	Change in Rank	Change in Rating
Jersey	23	624	=22	626	▼ 1	▼ 2
Guernsey	27	607	26	616	▼ 1	▼ 9
Isle of Man	35	590	32	598	▼ 3	▼ 8
Hamilton	36	589	=34	592	▼ 2	▼ 3
Cayman Islands	=38	587	=34	592	▼ 4	▼ 5
British Virgin Islands	40	584	=40	582	↔	▲ 2
Monaco	51	562	49	567	▼ 2	▼ 5
Gibraltar	=56	546	=55	554	▼ 1	▼ 8
Malta	=59	538	=55	554	▼ 4	▼ 16
Mauritius	62	533	61	535	▼ 1	▼ 2
Bahamas	67	517	64	529	▼ 3	▼ 12

Chart 19 | The top Offshore Centres over GFCI Editions



A significant proportion of the assessments of offshore centres are coming from other offshore centres. However, Jersey and Guernsey are now very close to achieving the wider global awareness that would move them up to the profile of Global Specialists. Both these centres are working to change perceptions and to 'rise above' the status of offshore specialist centres by being seen as more diversified, although the following charts of average assessment by region suggest that they still have some way to go with changing global perceptions.

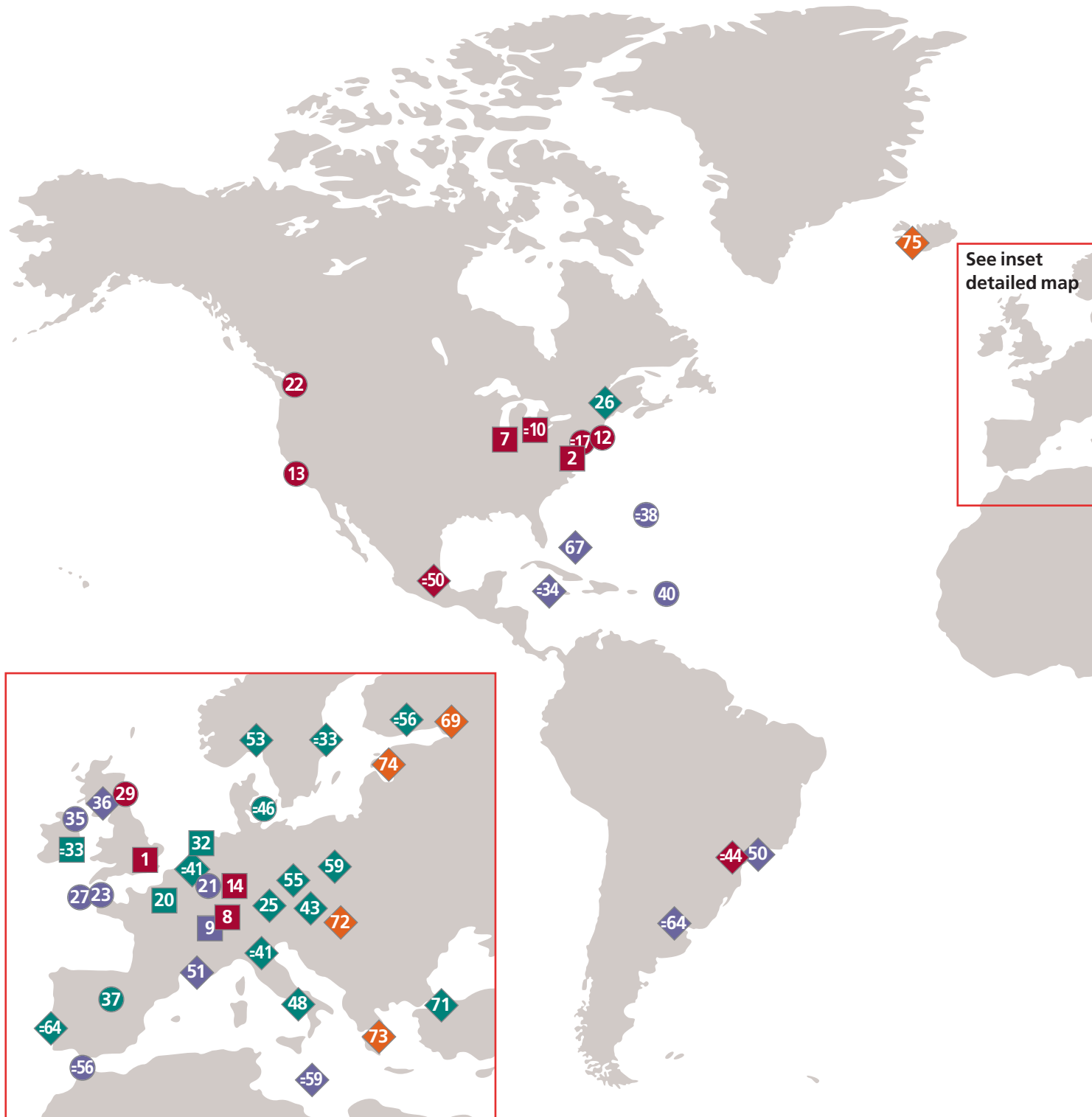
All the top offshore centres achieve higher than average assessments from other offshore centres and, generally, lower responses from elsewhere, particularly from Asia. Asian responses were particularly low for Jersey and Guernsey.

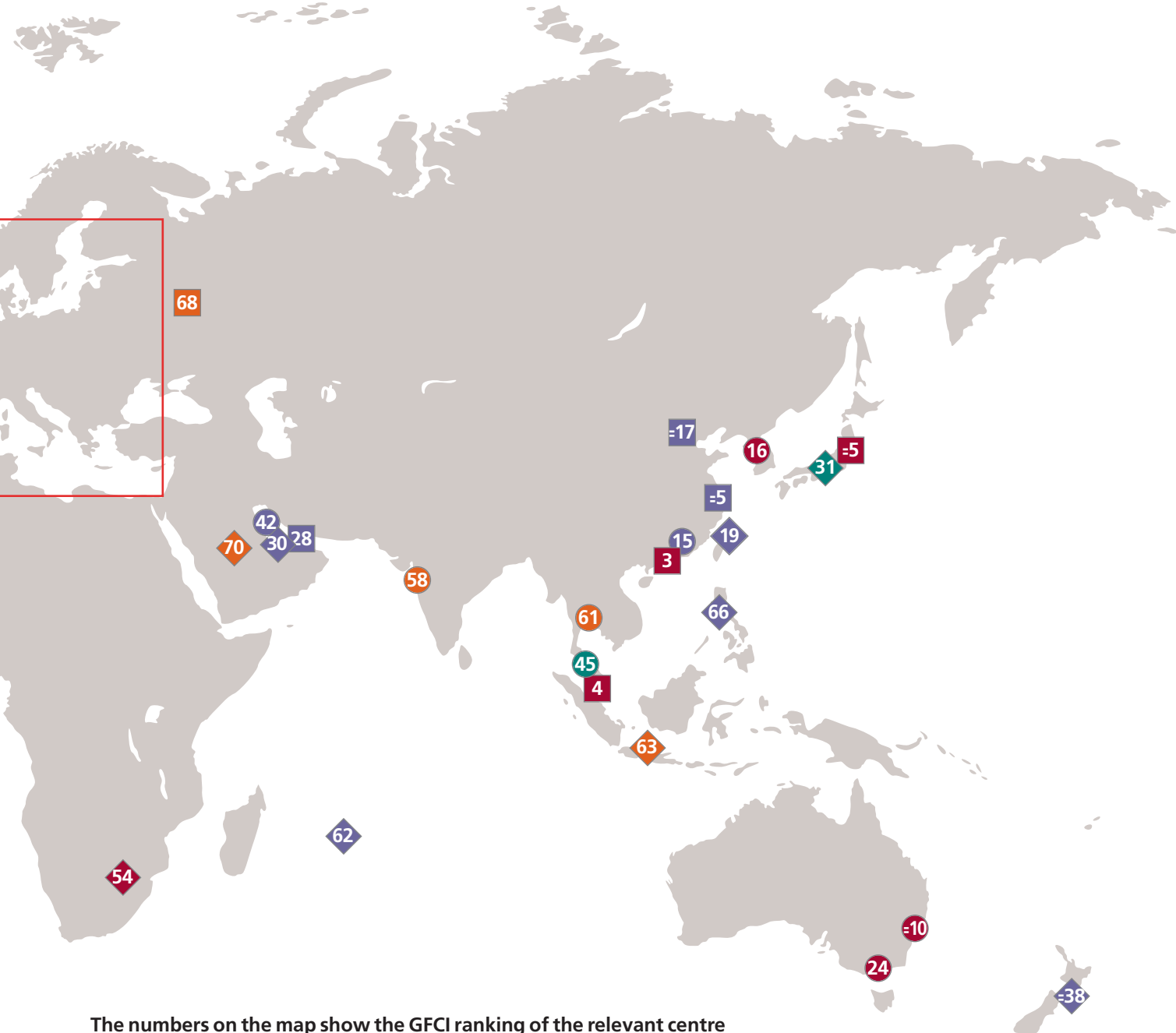


“I left the Caymans recently – business was going through the floor – and I’m happy to be working back on the mainland.”

Trust Fund Manager based in New York

The GFCI World





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

- | | | | |
|-----------------------------|-----------------------------|-----------------------------|----------------------------|
| Broad and deep | Relatively Broad | Relatively Deep | Emerging |
| ■ 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 9 statistical model using only the questionnaire responses from respondents working in the relevant industry sectors. The GFCI 9 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 four of the six sub-indices. New York tops the Banking sub-index and Hong Kong appears at the top of the Insurance sub-index where London is down in fourth place.

Table 13 below shows the top ten ranked financial centres in the industry sector sub-indices. The figures in brackets show how each centre has moved in these sub-indices since GFCI 8:

Table 13 | Industry sector sub-indices (changes from GFCI 9 in brackets)

Rank	Rank GFCI 9	Asset Management	Banking	Government & Regulatory	Insurance	Professional Services	Wealth Management/ Private Banking
1	London	London (-)	New York (-)	London (+1)	Hong Kong (-)	London (-)	London (-)
2	New York	New York (-)	Hong Kong (-)	New York (-1)	Shanghai (-)	New York (-)	Geneva (-)
3	Hong Kong	Hong Kong (-)	London (-)	Singapore (-)	New York (-)	Hong Kong (-)	New York (-)
4	Singapore	Singapore (-)	Singapore (-)	Hong Kong (-)	London (+1)	Singapore (-)	Hong Kong (+53)
=5	Shanghai	Tokyo (-)	Tokyo (-1)	Tokyo (-)	Singapore (-1)	Chicago (+2)	Toronto (-2)
=5	Tokyo	Chicago (-)	Shanghai (-1)	Chicago (-1)	Tokyo (-)	Tokyo (+1)	Singapore (+23)
7	Chicago	Shanghai (-)	Zurich (-1)	Geneva (-1)	Chicago (+1)	Geneva (-2)	Zurich (+47)
8	Zurich	Toronto (+3)	Sydney (+2)	Zurich (+1)	Toronto (+5)	Toronto (-1)	Chicago (-3)
9	Geneva	Sydney (-)	Chicago (-2)	Toronto (+2)	Sydney (-)	Zurich (-4)	Sydney (+2)
=10	Toronto	Zurich (-2)	Toronto (+1)	Sydney (-1)	Zurich (-3)	Sydney (-)	Tokyo (+17)
=10	Sydney	Geneva (+1)	Geneva (+1)	Shanghai (+1)	Geneva (-1)	Shanghai (+2)	Shanghai (+14)

The top five positions in each of the sub-indices are mostly occupied by the five top GFCI 9 centres. The Asian centres are well placed in the Insurance and Banking sub-indices taking four of the top six spots in both sub-indices.

The Wealth Management sub-index was only introduced in GFCI 8. It is not surprising to see two of the leading global wealth management centres (Geneva in 2nd place and Zurich in 7th) so high up the list.

The Five Key Areas of Competitiveness

The instrumental factors used in the GFCI 9 model are grouped into five key areas of competitiveness (People, Business Environment, Market Access, Infrastructure and General Competitiveness). The GFCI 9 factor assessment model is run with one set of instrumental factors at a time. Table 14 shows the top ten ranked centres in each sub-index (the figures in brackets show how the centre has moved in the sub-index rankings since GFCI 8):



Table 14 | Sub-indices by areas of competitiveness (changes from GFCI 7 in brackets)

Rank	Rank GFCI 9	People	Business Environment	Market Access	Infrastructure	General Competitiveness
1	London	London (-)	London (+1)	London (+1)	London (-)	London (-)
2	New York	New York (-)	New York (-1)	New York (-1)	New York (-)	New York (-)
3	Hong Kong	Hong Kong (-)	Hong Kong (-)	Hong Kong (-)	Hong Kong (-)	Hong Kong (-)
4	Singapore	Singapore (-)	Singapore (-)	Singapore (-)	Singapore (-)	Singapore (-)
=5	Shanghai	Shanghai (+1)	Chicago (-)	Shanghai (+1)	Tokyo (-)	Tokyo (-)
=5	Tokyo	Tokyo (-1)	Tokyo (-)	Tokyo (-1)	Chicago (-1)	Shanghai (-)
7	Chicago	Chicago (-)	Shanghai (-)	Zurich (+1)	Zurich (-1)	Chicago (-)
8	Zurich	Zurich (-4)	Zurich (-)	Chicago (-1)	Shanghai (+1)	Sydney (+2)
9	Geneva	Geneva (-5)	Toronto (+2)	Toronto (-)	Geneva (-)	Zurich (-1)
=10	Toronto	Toronto (-3)	Sydney (-)	Sydney (+1)	Sydney (-)	Toronto (-3)
=10	Sydney	Sydney (-2)	Geneva (-1)	Geneva (-1)	Toronto (-1)	Geneva (-1)

The top four financial centres in GFCI 9 – London, New York, Hong Kong and Singapore – also share the top four places in each of these sub indices (as they did in GFCI 8 and GFCI 7). This indicates that they are very strong in all five areas of competitiveness.



Size of Organisation

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

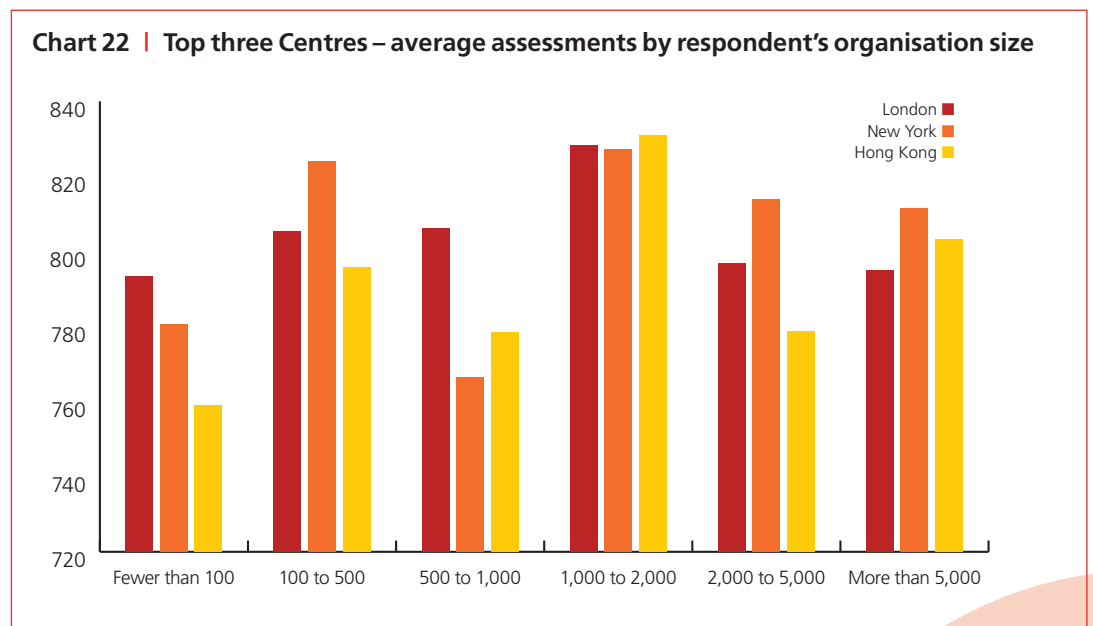


Chart 22 above shows that London is assessed significantly more highly than both New York and Hong Kong by respondents from small organisations (with fewer than 500 employees). New York is assessed more highly than both London and Hong Kong by respondents from organisations with over 2,000 employees. In the mid sized organisations (1,000 to 2,000 employees) the assessments for all three centres are very similar.



Reputation

The reputation of a financial centre is another indicator of potential success. In the GFCI model, one way to look at this 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 9 rating this indicates that respondents' perceptions of a centre are more favourable than the quantitative measures alone would suggest. Table 15 below shows the 20 centres with the greatest difference between average assessment and the GFCI rating:

“I think the rise of the Asian centres is a lot to do with reputation. Places like Shenzhen and Seoul were not on most people’s radar ten years ago. Now they are everybody’s favourite – did they hire a PR agent that I didn’t hear about?”

Asset Manager based in Frankfurt

Table 15 | Top 20 Centres assessments & ratings – reputational advantage

Centre	Average Assessment	GFCI 9 Rating	Reputational Advantage
Shanghai	728	694	34
New York	801	769	32
Hong Kong	788	759	29
Singapore	751	722	29
Chicago	698	673	25
Frankfurt	679	654	25
London	799	775	24
Zurich	688	665	23
Toronto	681	658	23
Sydney	680	658	22
Geneva	681	659	22
Boston	671	656	15
San Francisco	670	655	15
Tokyo	708	694	14
Seoul	670	656	14
Shenzhen	665	653	12
Washington D.C.	661	650	11
Beijing	659	650	9
Taipei	641	639	2
Paris	639	637	2

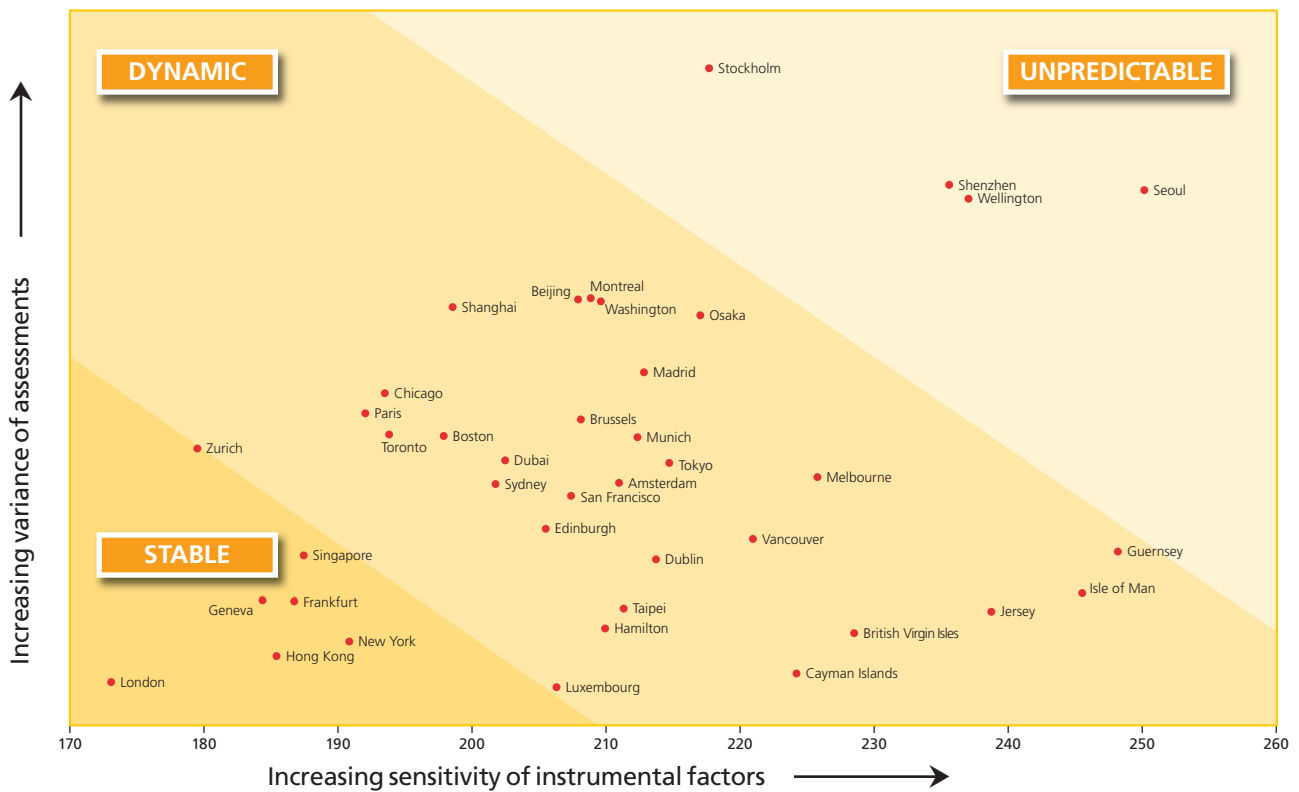
It is notable that three of the top four centres by reputational advantage are Asian. It should be stressed that for Shanghai, Hong Kong and Singapore a large proportion of favourable assessments came from other Asian centres rather than from non-Asian centres. Their positions help to explain the strong performance of Asia in GFCI 9.

Stability

The GFCI 9 model allows for analysis of the financial centres with the most volatile competitiveness. Chart 23 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 actors:

Chart 23 shows three bands of financial centres. The 'unpredictable' centres in the top right of the chart, Shenzhen, Wellington, Seoul and Stockholm, have a high sensitivity to changes in the instrumental factors and a high variance of assessments. These centres have the highest potential volatility of the top GFCI centres. It is

Chart 23 | Variance of assessments versus sensitivity to instrumental factors



interesting to note that the centres classed as unpredictable in GFCI 7 and GFCI 8 have shown the greatest movements in ratings over the past year. A good example is Beijing, being classed as unpredictable in GFCI 8 and now well established in the dynamic band.

The 'stable' centres in the bottom left of the chart, London, Geneva, Hong Kong, New York Frankfurt, Zurich and Singapore, have a 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, these centres are consistently in the top ten and we would not be surprised to see them remaining there for a while yet.

The centres in the middle band might be classed as 'dynamic' and have the potential to move in either direction.

Appendices

1. Assessment Details

Table 16 | Assessment details

Centre	GFCI 8	Number of Assessments	Average Assessment	St. Dev of Assessments
London	775	1,632	819	1.72
New York	769	1,322	808	1.91
Hong Kong	759	1,437	813	1.85
Singapore	722	1,034	760	1.88
Tokyo	694	781	718	2.15
Shanghai	694	919	751	2.01
Chicago	673	635	697	1.94
Zurich	665	762	695	1.81
Geneva	659	731	682	1.85
Sydney	658	526	683	2.03
Toronto	658	531	686	1.96
Boston	656	594	667	1.98
Seoul	656	558	727	2.50
San Francisco	655	472	667	2.08
Frankfurt	654	712	693	1.90
Shenzhen	653	867	797	2.30
Beijing	650	835	686	2.13
Washington D.C.	650	550	661	2.10
Taipei	639	473	642	2.12
Paris	637	824	642	1.92
Luxembourg	630	828	638	2.08
Vancouver	626	351	632	2.24
Jersey	624	825	691	2.44
Melbourne	621	254	607	2.27
Munich	617	325	587	2.12
Montreal	615	276	601	2.08
Guernsey	607	804	690	2.53
Dubai	605	739	610	2.04
Edinburgh	600	548	592	2.07
Osaka	594	256	576	2.17
Amsterdam	593	550	593	2.11
Dublin	592	941	649	2.19
Stockholm	592	233	572	2.19
Isle of Man	590	806	701	2.55
Hamilton	589	488	581	2.20
Madrid	588	382	617	2.22
Cayman Islands	587	650	582	2.30
Wellington	587	186	559	2.37
British Virgin Islands	584	614	584	2.33
Brussels	581	514	564	2.08
Milan	581	358	565	2.02
Vienna	576	273	542	2.19
Sao Paulo	574	237	555	2.28
Kuala Lumpur	573	286	571	2.13
Copenhagen	571	283	541	2.42
Glasgow	571	308	515	2.29
Rome	568	340	546	2.22
Bahrain	566	369	552	2.12
Riode Janeiro	563	177	511	2.36
Monaco	562	386	540	2.08
MexicoCity	561	242	523	2.27
Oslo	560	202	516	2.22
Qatar	558	261	532	2.53
Johannesburg	551	277	521	2.10
Prague	547	225	512	2.17
Gibraltar	546	516	527	2.39
Helsinki	546	195	488	2.43
Mumbai	541	329	511	2.18
Malta	538	430	515	2.11
Warsaw	538	194	485	2.28
Bangkok	536	337	517	2.13
Mauritius	533	343	499	2.25
Jakarta	532	235	503	2.18
Lisbon	525	223	471	2.28
Buenos Aires	525	188	481	2.22
Manila	519	225	482	2.21
Bahamas	517	346	470	2.13
Moscow	506	437	478	2.25
St. Petersburg	504	182	446	2.24
Riyadh	500	164	451	2.34
Istanbul	494	216	434	2.27
Budapest	468	236	412	2.13
Athens	457	277	376	2.01
Tallinn	456	125	423	2.69
Reykjavik	436	143	395	2.64

2. Respondent's Details

Table 17 | Respondents by industry sector

Sector	Total	%
Asset Management	341	17.3%
Banking	668	33.9%
Government & Regulatory	108	5.5%
Insurance	431	21.9%
Professional Services	343	17.4%
Wealth Management	54	2.7%
Other	25	1.3%
Grand Total	1970	

Table 18 | Respondents by size of organisation

Number of Employees Worldwide	Total	%
Fewer than 100	467	23.7%
100 to 500	286	14.5%
500 to 1,000	175	8.9%
1,000 to 2,000	103	5.2%
2,000 to 5,000	210	10.7%
More than 5,000	695	35.3%
Unspecified	34	1.7%
Grand Total	1970	

Table 19 | Respondents by location

Where Based	Total	%
Asia	838	42.5%
Europe	306	15.5%
London	224	11.4%
New York	38	1.9%
Offshore	483	24.5%
Other	81	4.1%
Grand Total	1970	100.0%

3. Methodology

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

- Instrumental factors (external indices that contribute to competitiveness): 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 75 external sources were used in GFCI 9. 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 33,751 financial centre assessments drawn from 1,970 respondents.

The 75 instrumental factors were selected because the features they measure contribute in various ways to the fourteen competitiveness factors identified in previous research³. These are shown below.

Table 20 | 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

³ 'The Competitive Position of London as a Global Financial Centre', Z/Yen Limited, The Corporation of London, 2005

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.

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). Only indices which have values for at least one third of the financial centres (currently 25) 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:

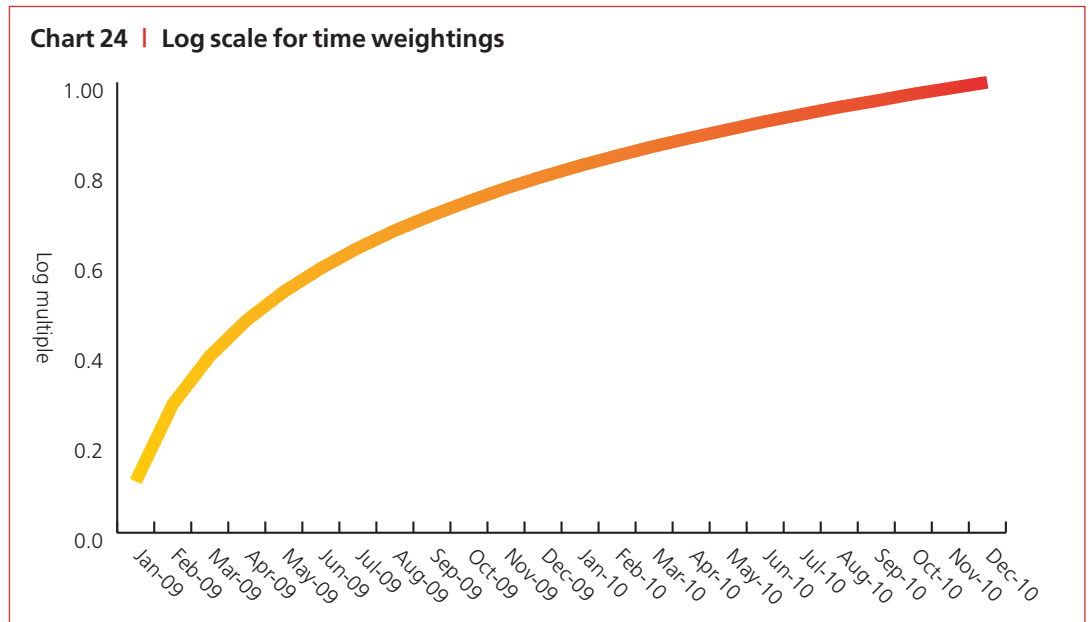
- indices are published in a variety of different forms: an average or base point of 100 with scores above and below this; a simple ranking; actual values (e.g. \$ per square foot of occupancy costs); a composite 'score';
- indices would have to be normalised, e.g. in some indices a high score is positive 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 at www.financialcentrefutures.net;
- 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.

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?

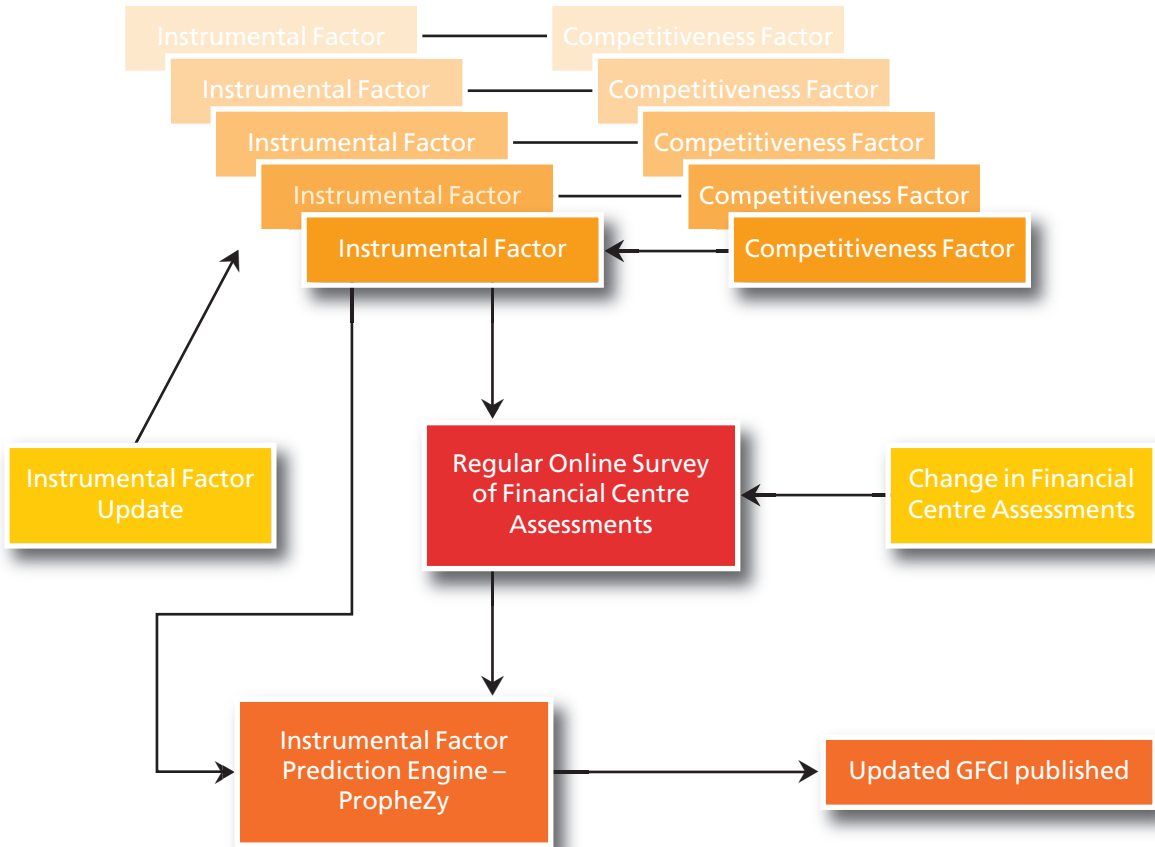
Or

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 25 | 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.

4. Instrumental Factors

Table 21 shows how closely instrumental factor rankings correlate with the GFCI 9 rankings for the top 20 instrumental factors:

Table 21 | Top 20 instrumental factors by correlation with GFCI 9

Instrumental Factor	R-Squared with GFCI 9
MA2 Centres of Commerce Index	0.5918
G1 World Competitiveness Scoreboard	0.5072
G14 Global Cities Index	0.4738
G13 World Cities Survey	0.4734
G2 Global Competitiveness Index	0.4485
G12 Global Power City Index	0.4294
MA18 Credit Ratings	0.3395
MA1 Capital Access Index	0.3294
19 Quality of Roads	0.3221
MA5 Capitalisation of Stock Exchanges	0.3118
G15 Number of International Fairs and Exhibitions	0.3071
BE16 Banking Industry Country Risk Assessments	0.3025
BE1 Business Environment	0.2949
MA3 The Access Opportunities Index	0.2849
G8 The World's Most Innovative Countries	0.2835
G4 Foreign Direct Investment Inflows	0.2706
MA6 Value of Share Trading	0.2669
MA10 Volume of Stock Options Trading	0.2633
BE18 Political Risk	0.2504
BE15 Economic Freedom of the World	0.2463

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 five 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 22 | People related instrumental factors

Instrumental Factor	Source	Website	Updated since GFCI 8
Graduates in Social Science, Business & Law	The World Bank	www.worldbank.org/education	✓
Gross Tertiary Graduation Ratio	The World Bank	www.worldbank.org/education	✓
Visa Restrictions Index	Henley & Partners	http://www.henleyglobal.com/citizenship/visa-restrictions/	✓
Human Development Index	United Nations	http://hdr.undp.org/	✓
Citizens Purchasing Power	City Mayors	http://www.citymayors.com/economics/usb-purchasing-power.html	
Quality of Living Survey	Mercer HR	http://www.mercer.com/qualityofliving	
Happy Planet Index	The New Economics Foundation	http://www.happyplanetindex.org	
Number of High Net Worth Individuals	City Bank & Knight Frank	http://www.knightfrank.com/wealthreport/	
Personal Safety	Mercer HR	http://www.mercer.com	
International Crime Victims Survey	UN Office of Drugs and Crime	http://rechten.uvt.nl/icvs	
Top Tourism Destinations	Euro Monitor	http://www.euromonitor.com/	
Average Days with Precipitation	Sperling's Best Places	http://www.bestplaces.net/Climate/	

Table 23 | Business environment related instrumental factors

Instrumental Factor	Source	Website	Updated since GFCI 8
Business Environment	Economist Intelligence Unit	http://www.eiu.com/	
Ease of Doing Business	The World Bank	http://www.doingbusiness.org/	✓
Operational Risk Rating	Economist Intelligence Unit	http://www.viewswire.com/	✓
Real Interest Rate	The World Bank	http://data.worldbank.org/indicator/	✓
Projected City Economic Growth (2008-2025)	Price Waterhouse Coopers	https://www.ukmediacentre.pwc.com/	
Global Services Location	AT Kearney	http://www.atkearney.com/	
Opacity Index	Milken Institute	http://www.milkeninstitute.org/publications/	
Corruption Perceptions Index	Transparency International	http://www.transparency.org/	✓
Wage Comparison Index	UBS	http://www.ubs.com/	✓
Corporate Tax Rates	Price Waterhouse Coopers	http://www.pwc.com/gx/en/paying-taxes	✓
Employee Effective Tax Rates	Price Waterhouse Coopers	http://www.pwc.co.uk/	
Personal Tax Rates	OECD	http://www.oecd.org/document/	✓
Tax As Percentage of GDP	The World Bank	http://data.worldbank.org/indicator/	✓
Bilateral Tax Information Exchange Agreements	OECD	http://www.oecd.org/	✓
Economic Freedom of the World	The Fraser Institute	http://www.freetheworld.com/	✓
Banking Industry Country Risk Assessments	Standard & Poor	http://www2.standardandpoors.com/	
Government Debt as Percentage of GDP	The CIA Fact Book	https://www.cia.gov/library/publications/the-world-factbook/	✓
Political Risk	Exclusive Analysis Ltd	http://www.exclusive-analysis.com/	✓

Table 24 | Infrastructure related instrumental factors

Instrumental Factor	Source	Website	Updated since GFCI 8
Office Occupancy Costs	CBRE	http://www.cbre.com/EN/Research/	
Office Space Around the World	Cushman & Wakefield	http://www.cushmanwakefield.com/cwglobal	
Global Property Index	IPD	http://www.ipd.com/	
Real Estate Transparency Index	Jones Lang LaSalle	http://www.joneslanglasalle.com/	
E-readiness Score	Economist Intelligence Unit	http://www.eiu.com/	
Telecommunications Infrastructure	United Nations	http://www.unpan.org/egovkb/global_reports/	
City Infrastructure	Mercer HR	http://www.mercer.com/qualityofliving	
Quality of Ground Transport Network	The World Economic Forum	http://www.weforum.org/en/initiatives/gcp/	
Quality of Roads	The World Economic Forum	http://www.weforum.org/en/initiatives/gcp/	
Roadways per Land Area	The CIA Fact Book	https://www.cia.gov/library/publications/the-world-factbook/	✓
Railways per Land Area	The CIA Fact Book	https://www.cia.gov/library/publications/the-world-factbook/	✓

Table 25 | Market access related instrumental factors

Instrumental Factor	Source	Website	Updated since GFCI 8
Capital Access Index	Milken Institute	http://www.milkeninstitute.org/research/	
Centres of Commerce Index	Master Card	http://www.mastercard.com/us/company/	
Access Opportunities	SRI International	http://about.fedex.designcdt.com/access/	
Securitisation	International Financial Services London	http://www.thecityuk.com/what-we-do/	
Capitalisation of Stock Exchanges	World Federation of Exchanges	http://www.world-exchanges.org/	✓
Value of Share Trading	World Federation of Exchanges	http://www.world-exchanges.org/	✓
Volume of Share Trading	World Federation of Exchanges	http://www.world-exchanges.org/	✓
Broad Stock Index Levels	World Federation of Exchanges	http://www.world-exchanges.org/	✓
Value of Bond Trading	World Federation of Exchanges	http://www.world-exchanges.org/	✓
Volume of Stock Options Trading	World Federation of Exchanges	http://www.world-exchanges.org/	✓
Volume of Stock Futures Trading	World Federation of Exchanges	http://www.world-exchanges.org/	✓
Domestic Credit Provided by Banking Sector (% GDP)	The World Bank	http://data.worldbank.org/indicator/	✓
Percentage of Firms Using Banks to Finance Investment	The World Bank	http://data.worldbank.org/indicator/	✓
Total Net Assets of Mutual Funds	The Investment Company Institute	http://www.ici.org/pdf/2010_factbook.pdf	
Islamic Finance	International Financial Services London	http://www.thecityuk.com/what-we-do/	
Net External Positions of Banks	The Bank for International Settlements	http://www.bis.org/statistics/bankstats.htm	✓
External Positions of Central Banks (% GDP)	The Bank for International Settlements	http://www.bis.org/statistics/bankstats.htm	✓
Credit Ratings	The Institutional Investor Magazine	http://www.iimagazinerankings.com/	

Table 26 | General competitiveness related instrumental factors

Instrumental Factor	Source	Website	Updated since GFCI 8
World Competitiveness Scoreboard	IMD	http://www.imd.ch/news/upload/	
Global Competitiveness Index	The World Economic Forum	http://www.weforum.org/documents/	✓
Business Confidence	Grant Thornton	http://www.grantthorntonibos.com/	✓
Foreign Direct Investment Inflows	UNCTAD	http://www.unctad.org/	✓
FDI Confidence	AT Kearney	http://www.atkearney.com/	
City to Country GDP Ratio	The World Bank & PWC	https://www.ukmediacentre.pwc.com/ http://data.worldbank.org/indicator/	✓
GDP per Person Employed	The World Bank	http://data.worldbank.org/indicator/	
The World's Most Innovative Countries	Economist Intelligence Unit	http://www.economist.com/markets/rankings/	
Global Intellectual Property Index	Taylor Wessing	http://www.global-ip-index.com/	
RPI (% change on a year)	The Economist	http://www.economist.com/markets/indicators/	✓
Cost of Living	City Mayors	http://www.citymayors.com/statistics/expensive-cities-world.html	✓
Global Power City Index	Institute for Urban Strategies	http://www.mori-m-foundation.or.jp/english/	
World Cities Survey	City Bank & Knight Frank	http://www.knightfrank.com/wealthreport/	
Global Cities Index	AT Kearney	http://www.foreignpolicy.com/	✓
Number of International Fairs & Exhibitions	The World Economic Forum	http://www.weforum.org/en/initiatives/gcp/	
City Population Density	City Mayors	http://www.citymayors.com/statistics/	

Notes





Long Finance

Established in 2007 by Z/Yen Group in conjunction with Gresham College, the Long Finance initiative began with a conundrum – “when would we know our financial system is working?” Long Finance aims to “improve society’s understanding and use of finance over the long-term” in contrast to the short-termism that defines today’s financial and economic views.

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