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Greater Bay Area: Connectivity fostering innovation

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From the Shenzhen Special Economic Zone to the Greater Bay Area: a transition from high-speed growth to quality growth The Guangdong-Hong Kong-Macau Greater Bay Area (GBA) initiative marks a milestone as significant as the Special Economic Zone laid out in the early 1980s, and the Pudong New Area in the early 1990s. 2019-2035 will be a crucial period for China to shift its economy from rapid growth to high quality growth, from industrialization to modernization, and from a developing economy to an advanced one. The integration of the GBA is one of China's major development strategies for the coming 15 years.

GBA lags behind world-class bay areas, but this suggests huge potential A high-income economy is defined by the World Bank as a country with a gross national income per capita of over US\$12,056. In 2017, the GBA had a higher GDP per capita of US\$22,000, but this is just 40% of the Tokyo Bay Area, one fourth of the New York Bay Area, and one fifth of the San Francisco Bay Area.

Region could benefit from economies of scale and urbanization The GBA has a population of nearly 70m, 1.6/3.4/8.9 times that in the Tokyo Bay Area/New York Bay Area/San Francisco Bay Area, which could mean it is able to benefit from substantial economies of scale. As seen in other countries, the higher the urbanization ratio, the more concentrated the population. In the US, 48% of the population live in the regions surrounding the top-three city clusters, while the ratio in China is just 28.3%. As such, the GBA is likely to see its population double in the future.

GBA strong in innovation upgrades and connectivity Guangdong province has the world's fifth largest manufacturing industry, making it the "factory of the world". The province also enjoys leading advantages in terms of upgrading its manufacturing, with 14% of China's engineers and 13.3% of China's R&D investment in 2017, both higher than the proportion of its GDP during that year. In the GBA, openness and connectivity will mean reform and innovation. Going forward, well-controlled cross-border capital flows will be needed to meet the demand for global allocation of assets and resources.

Potential breeding ground for world-class companies, new trading hub and resource allocation platform 1) World-class enterprises are set to emerge in the area with the allocation of regional resources optimized via connectivity. Meanwhile, traditional competitive industries such as consumer, retail, healthcare and downstream manufacturing are likely to see higher concentrations. Midstream manufacturing could thrive on the back of economies of scale. Innovation upgrades and new business types could provide space for quality growth. 2) As China transfers its low-end manufacturing toward Southeast Asia, the GBA could rise as a new trading hub. 3) When the region develops its economy to a certain stage, cross-border capital and resource allocation will be required to make the GBA an important platform for global investment and asset management.

Risks Slower-than-expected progress for the initiative.



Figure 1: China's strategic regional development plan

Source: Public information released by the government, GF Securities Development & Research Center

Table 1: Major bay areas around the globe, 2017

	The GBA	Tokyo Bay Area	San Francisco Bay Area	New York Bay Area
GDP (US\$100m)	15,134	19,000*	8,375	17,177
% of national GDP	12.4	43.3 [*]	6.3	8.86
GDP growth (%)	7.0	3.6*	4.8	3.3
Population (m)	69.6	44.0	7.8	20.3
% of national population	5.0	29.7*	2.4	6.2
Area (km²)	55.9	13.5	17.9	34.5
GDP per capita (US\$10k)	2.2	5 [*]	11.3	8.5
Population density (10k/km²)	125	279*	44	59
GDP per unit area (US\$100m/km²)	270.7	1407.4*	467.9	497.9
Proportion of tertiary industry (%)	65.6	82.3 [*]	82.8*	89.4*
No. of headquarters for Global 500 companies	20	38	12	23
World ranking of its container terminal	Shenzhen (3) Hong Kong (6) Guangzhou (7)			
World ranking of its international airports	Hong Kong (8)	Tokyo (4)		
- Passenger volume - Cargo volume	Hong Kong (1)	Tokyo (5)		New York (22)
Stock exchange ranking	Hong Kong (5) Shenzhen (8)	Tokyo (3)		New York (19)

Source: BEA, CEIC, HKTDC, GF Securities Development & Research Center

*Data for 2016

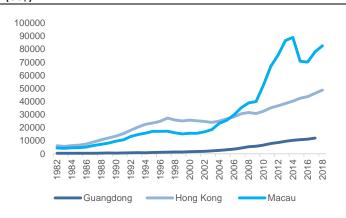


Table 2: Data for countries and regions with major bay areas

	Mainland China	Hong Kong	The US	Japan	
Minimum wage (2017, US\$)	1,988	9,245	15,080	14,773	
10-year treasury bond rate (%, 2017)	3.23	1.83	2.76	0.001	
Total tax rate (% of commercial profits, 2017)	64.9	22.9	43.8	46.7	
% of outstanding direct financing (2015)	41.9	-	72.4	58.2	
% of new direct financing (2015)	26.4	-	44.0	19.7	

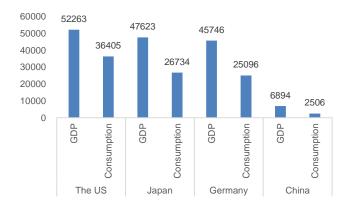
Source: CEIC, World Bank, People's Bank of China, GF Securities Development & Research Center

Figure 2: GDP per capita in Guangdong, Hong Kong and Macau (US\$)



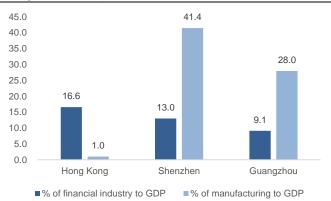
Source: CEIC, GF Securities Development & Research Center

Figure 4: GDP per capita and consumption per capita in the US, Japan, Germany and China (US\$, 2016)



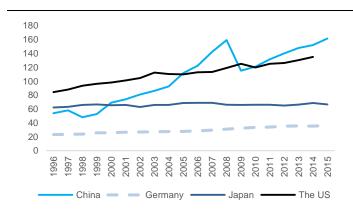
Source: CEIC, GF Securities Development & Research Center

Figure 3: Economic structure in Hong Kong, Shenzhen and Guangzhou (2017, %)



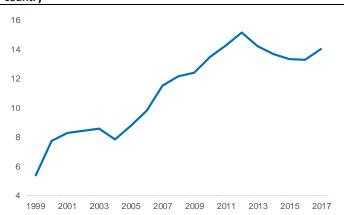
Source: CEIC, GF Securities Development & Research Center

Figure 5: R&D staff in China, Germany, the US and Japan (10 k)



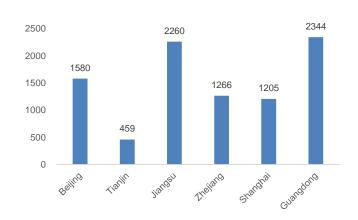
Source: World Bank, GF Securities Development & Research Center

Figure 6: The number of engineers in Guangdong as % of the whole country



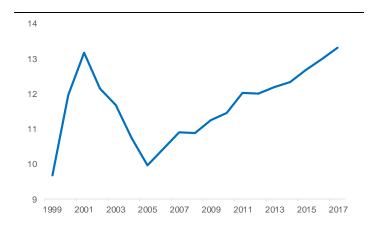
Source: CEIC, GF Securities Development & Research Center

Figure 8: R&D investment by major provinces and cities (Rmb100m, 2017)



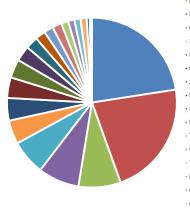
Source: CEIC, GF Securities Development & Research Center

Figure 7: R&D investment in Guangdong as % of the whole country



Source: CEIC, GF Securities Development & Research Center

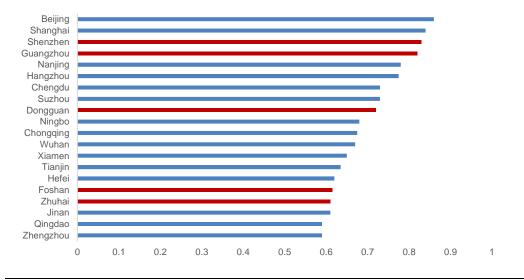
Figure 9: GBA: innovative institutions by industries (2014-1016)



- Electrical machinery and equipment manufacturing
- · Computer, communication and other electronic
- equipment • Higher education institutions
- · Information transmission, software and IT services
- · Chemicals
- Scientific research and technology services
- Rubber and plastic products
- · Commercial services
- Agriculture and animal husbandry
- Medicine, medical research and manufacturing
- Special equipment manufacturing
- Electric power, heat production and supply
- Transportation
- General equipment manufacturing
- Textiles and apparel
- Metal products
- Construction decoration and others
- Other manufacturing
- Oil and gas exploration
- Civil engineering
- · Real estate

Source: GDI, GF Securities Development & Research Center

Figure 10: Top 20 cities by new economy sector output (July 2018-January 2019)

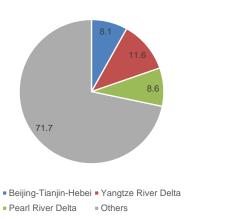


Source: Caixin, GF Securities Development & Research Center

Figure 11: US: Population in the regions surrounding the top three city clusters as % of total population (2010, %)

The Great Lakes • The Northeast • California • Others

Figure 12: China: Population in the top three city clusters as % of total population (2017, %)



Source: CEIC, GF Securities Development & Research Center

Source: CEIC, GF Securities Development & Research Center

Figure 13: Urbanization ratio in China and Guangdong (%)

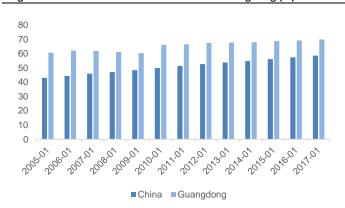
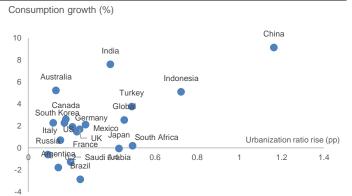


Figure 14: G20: Urbanization ratio and consumption growth (2016)



Source: CEIC, GF Securities Development & Research Center

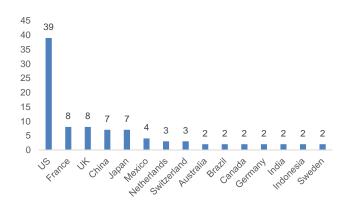
Source: CEIC, GF Securities Development & Research Center

Table 3: Locations and industries of Fortune Global 500 (2017)

12010 01 20000000 010000000000000000000		No of companies 9/		%		
		No. of companies				
Industry	Total	US	China	US	China	
Healthcare	27	15	2	56	7	
Retail	17	11	2	65	12	
Food, beverage and tobacco	16	9	0	56	0	
Food and drug retail	20	5	0	25	0	
Transportation and logistics	19	6	3	32	16	
Media	3	3	0	100	0	
Financial	118	27	26	23	22	
Technology	44	14	13	32	30	
Telecommunications	18	4	3	22	17	
Chemicals	7	2	1	29	14	
Household consumption	3	1	0	33	0	
Apparel	2	1	0	50	0	
Aviation and national defense	14	6	6	43	43	
Commercial services	3	0	0	0	0	
Catering and hotels	0	0	0			
Trade	28	8	9	29	32	
Industrial goods	15	4	6	27	40	
Auto and auto parts	34	2	7	6	21	
Materials	16	0	7	0	44	
Energy	83	14	22	17	27	
Engineering construction	13	0	8	0	62	
Total	500	132	115	26	23	

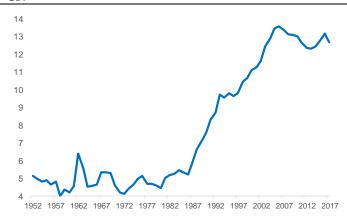
Source: Fortune, GF Securities Development & Research Center

Figure 15: No. of global top-100 consumer retailers (2015)



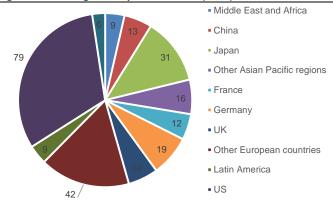
Source: PWC, GF Securities Development & Research Center

Figure 17: Guangdong's industrial GDP as % of national industrial GDP



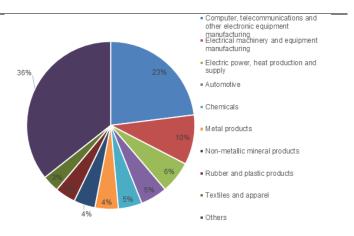
Source: CEIC, GF Securities Development & Research Center

Figure 16: No. of global top 250 retailers (2017)



Source: Deloitte, GF Securities Development & Research Center

Figure 18: Guangdong: industrial value added by sector, 2016



Source: Guangdong Provincial Bureau of Statistics, GF Securities Development & Research Center



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Company ratings

Buy Stock expected to outperform benchmark by more than 15%

Accumulate Stock expected to outperform benchmark by more than 5% but not more than 15%

Hold Expected stock relative performance ranges between -5% and 5% **Underperform** Stock expected to underperform benchmark by more than 5%

Sector ratings

Positive Sector expected to outperform benchmark by more than 10%

Neutral Expected sector relative performance ranges between -10% and 10%

Cautious Sector expected to underperform benchmark by more than 10%

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