

Infrastructure New vs Old

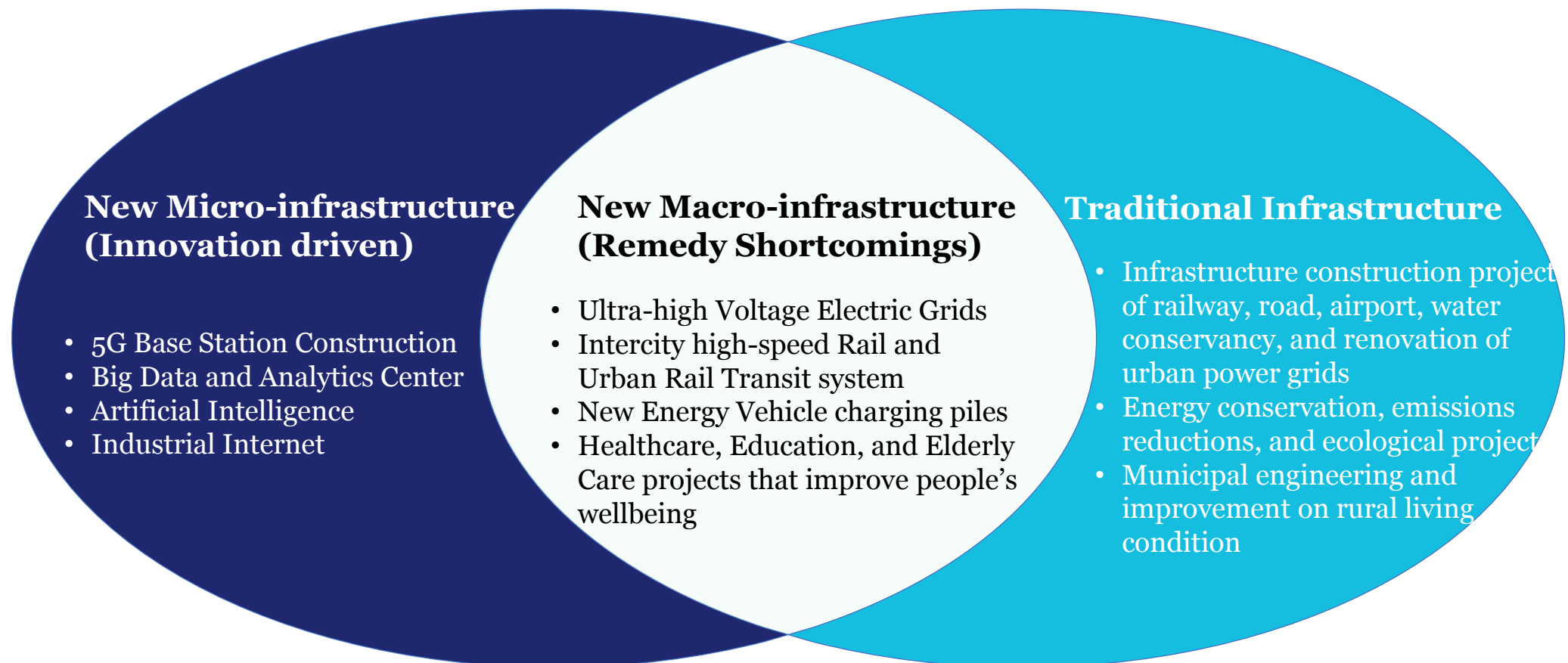
Li Zengxin

Director of Caixin Global Intelligence

cgi@caixin.com

Time	Conference	Description
Dec 19-21, 2018	Central Economic Work Conference	New Infrastructure includes 5G, AI, IoT, Industrial IOT
Apr 30, 2020	NDRC press conference	Three tiers: 1) Next-gen IT: 5G, industrial internet, satellites, data centers ... 2) Integration: application of above, such as smart city, smart power grids ... 3) Innovation: science and education infrastructure, tech parks, R&D centers ...
May 22, 2020	Report on the Work of the Government	Priority will be given to new infrastructure and new urbanization initiatives and major projects “两新一重”
May 22, 2020	NDRC report	Planning to set up around 10 regional data processing/ smart computing centers

New Infrastructure Definition Map (Venn Diagram)



Construction Tasks

Local Infrastructure Construction Tasks Exceed 30 Trillion

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Location	No.	Total	In 2020	List of Items
Beijing	300		252.3 bn	100 infrastructure projects, 100 social welfare projects, 100 high-tech industry projects
Hebei	536	1883.31 bn	241.01 bn	Investment in newly started projects at 44.62 billion yuan, in already existing construction projects 442.26 billion yuan, in guaranteed feasible projects 332.75 billion yuan, and investment in projects that are in their early stages 664.68 billion yuan.
Shanxi	248			170 newly started construction projects, 78 projects in their preliminary stages
Shanghai	212			152 projects are official, 57 on urban infrastructure, 16 on urban-rural integration as well as rural revitalization, and 60 projects are in preparatory stages
Heilongjiang	300	885.6 bn	200 bn	300 "Top 100 Megaprojects"
Jiangsu	240		541 bn	The annual planned investment for Innovation Carrier projects is 8.7 billion yuan, Industrial projects 185.1 billion yuan, ecological and environmental protection projects 30.1 billion yuan, social welfare projects 958 billion yuan, and infrastructure projects 221.2 billion
Fujian	1567	3.84 tn		1,257 projects under construction with total investment of 2.97 trillion yuan, the annual planned investment is 500.5 billion yuan; there are 310 projects in their preparatory stages, with a total investment of 0.87 trillion yuan.
Shandong	321			233 major construction projects, and 88 major projects in their preparatory stages
Henan	980	3.3 tn		6 major areas included are industrial transformation and development, innovation driven practices, infrastructure construction, new urbanization, ecological and environmentally sustainable development, and social welfare
Yunnan	525	~5 tn	~440 bn	"Double Ten" major infrastructure construction project, about 3.6 trillion-yuan investment in a total of 3373 key pre-projects ("overcoming shortcomings, and increasing power"), with a total investment of about 8 trillion yuan
Sichuang	700	~4.4 tn	over 600 bn	484 continued construction of existing projects and 216 planned new construction projects
Chongqing	924	~2.7 tn	~340 bn	Divided into five major areas: rural revitalization, infrastructure, industry, social welfare, and regional sustainably coordinated development
Ningxia	80	~226.8 bn	~51.0 bn	
Shaanxi		3.38 tn	0.5 tn	
Guangdong	1230	5.9 tn	700 bn	Aim at building 60,000 5G base stations throughout the year, covering over 90% provincial population; leveling up intercity and inter-province connectivity through the construction of high-speed intercity railway and transportation infrastructure

Source: Wind, provincial reports on the work of the government, Caixin news, compiled by Caixin Global Intelligence

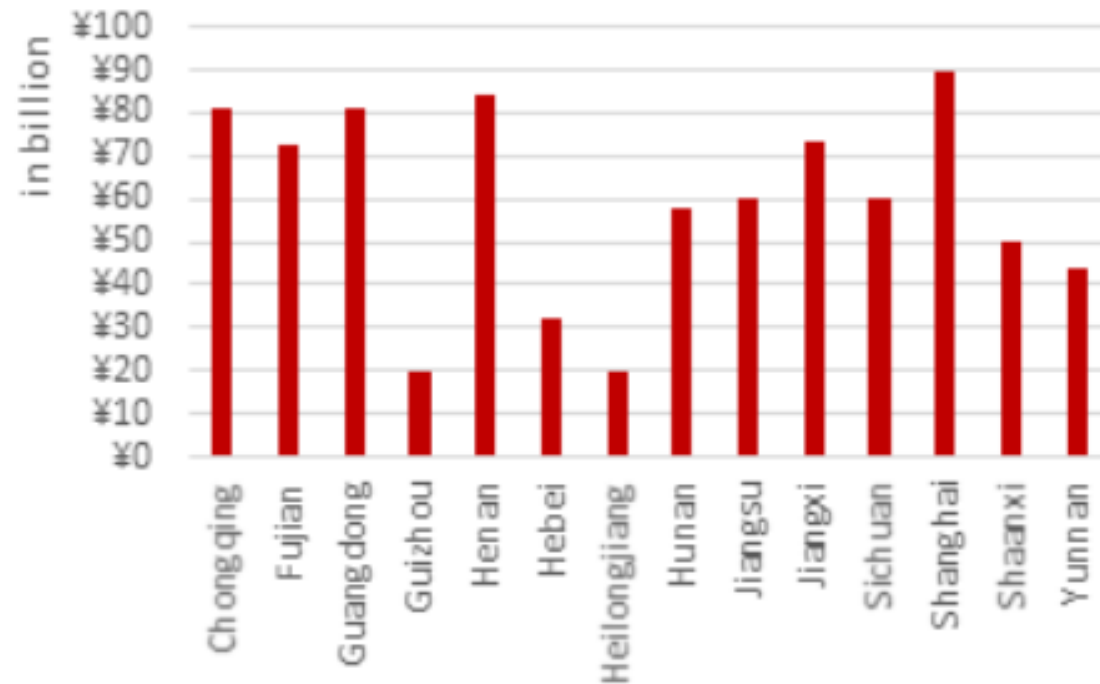
Old versus New

	Traditional	New
Impact on growth	Direct, immediate	Indirect, long-lasting
Characteristics	Physical	Physical & virtual
Major players	Governments	Governments & private entities
Source of fund	Bank loans through LFVs, PPP programs	“social financing”, private equity Fiscal interest rate subsidy
Other effects	Capital intensive High energy/environmental cost Construction/manufacturing focused	Capital & knowledge based Thinking ahead on energy/environmental effects Services-oriented, gig-economy may help more on jobs

Various Players Super Charge

Estimated investments in new infrastructure in 2020

- Ministries
- Local governments
- Tech companies
- Financial markets



5G investment: from a slow start

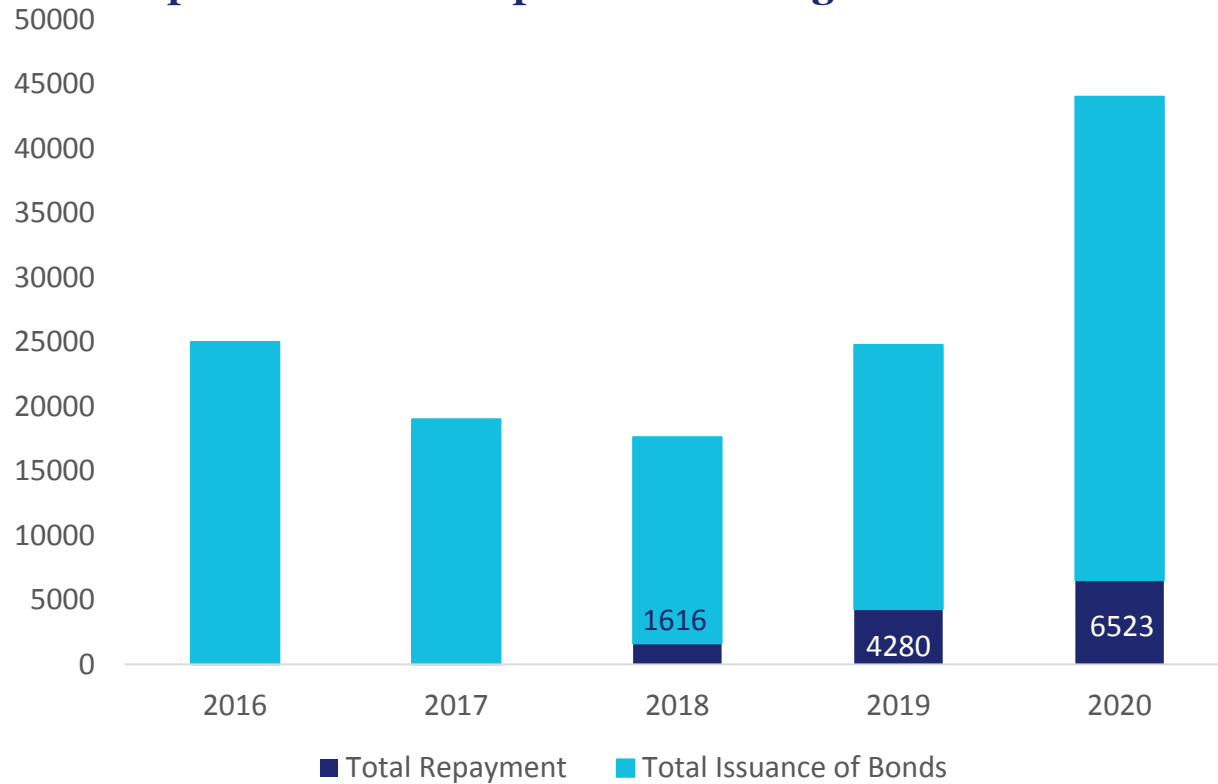
Expected 5G construction and investment volume

	2019		2020		
	5G Capex (bn, CNY)	% in total Capex	5G Capex (bn, CNY)	% in total Capex	Base Station Target
China Mobile	24	14	100	56	300,000
China Telecom	9	12	45	53	300,000
China Unicom	8	14	35	50	250,000
Total	41	13	180	53	850,000

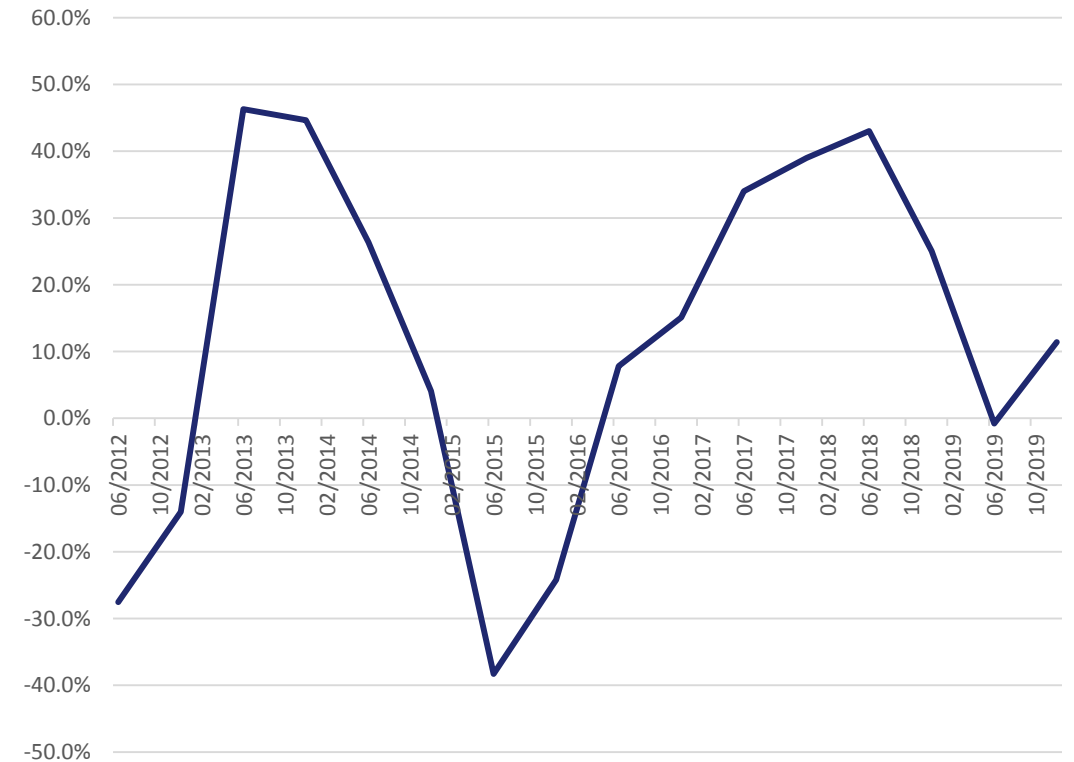
Source: telecom suppliers' annual reports, research results by Caixin Global Intelligence and Sinolytics

Where is the money?

Local Governments' Issuance of Special Bonds is Expected to Rise again in 2020



Growth Rate of Land Ownership Compensated Transfer Income in China



Source: CEIC, Wind, compiled by Caixin Global Intelligence

What to watch next?

- **Top-level guidelines**
 - NDRC
 - Individual ministries on each area
- **Implementation details**
 - e.g. 10 regional data center clusters – where, how?
- **Investment guidance from industrial funds & other market-oriented state sources**
- **Integration with larger economy: “finding the nails”**

Thank you!

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cgi@caixin.com