

September 11, 2017

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## Survey Structure

- ▶ Survey of 10 construction equipment companies covering a total of 17 provinces, speaking with sales directors and general managers.
- ▶ The survey was conducted by phone in the week of 4th September

## Objectives

- ▶ To understand whether current commodities prices are being driven by physical demand and how long that demand is likely to last

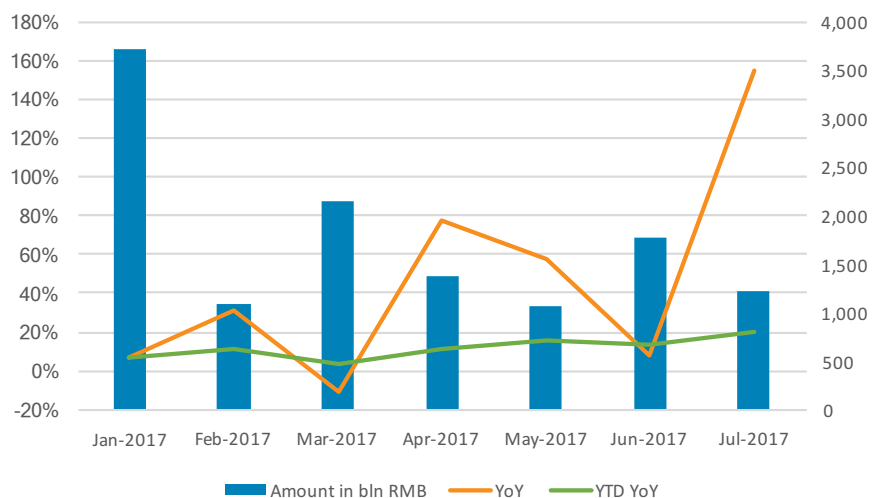
## Construction Survey

# All About Infrastructure But Growth Has Peaked

- ▶ China's government has been forcing construction growth with a massive infrastructure stimulus, but August was the peak.
- ▶ Property construction is flat and looks like it will decline
- ▶ Expect it to end--but stimulus seems to keep working.
- ▶ 2017 excavator sales to match historical high

The success of the Chinese economy through August can be directly attributed to infrastructure stimulus. Sales of construction equipment, among the best proxies for near-term construction demand, are reaching historical highs. In the first quarter, equipment manufacturers were surprised by the surging demand, and some attributed it to implementation of a new emissions standard. But as sales growth continued through Q3, we interviewed sales directors of 10 large equipment companies, and all said they were seeing real demand growth from government infrastructure projects.

## Chart 1. Aggregate Financing to the Real Economy



Source: PBOC

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Mining equipment has sold especially well, since high commodity prices have induced more mines to reopen and purchase excavators. Improved profits in construction and mining have provided the capital to replace exhausted capital equipment.

Financing has been pushing into local governments, but the bank data do not tell the whole story: financial institutions have also driven more of their own balance sheets into local government economies.

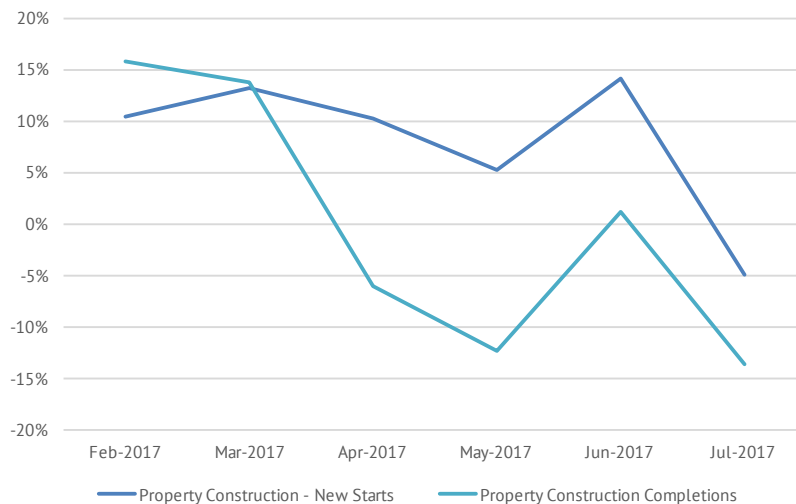
### Downhill from Here

We think the peak may have passed.

- ▶ Most equipment dealers saw growth decline in July/August.
- ▶ Many also suggested that projects had been rushed to start before the all-important Party Congress in mid-October. After the Party Congress, new projects and therefore equipment sales will likely slow.
- ▶ Housing construction has stopped growing.

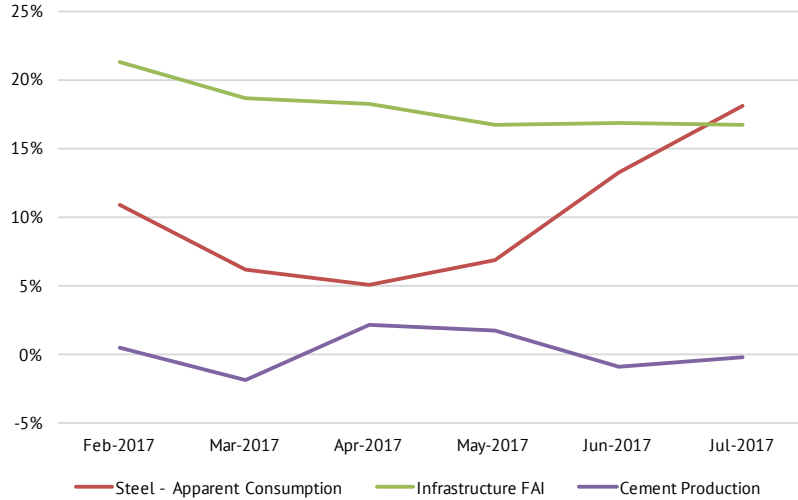
Infrastructure FAI is growing by around 20%, but property construction new starts have fallen from an increase of 10% in June to a decline of 5% in July. Property completions stopped growing in April. Residential housing construction has started to contract.

### Chart 2. Property Starts and Completions



Source: Wind, Mysteel, J Capital

**Chart 3. Infrastructure FAI and Materials Demand**



Source: Wind, Mysteel, J Capital

Cement production is flat, while apparent steel demand rose by nearly 20% in July, suggesting that infrastructure, which is more steel-intensive than housing, is driving materials demand. Our checks with material suppliers to the housing-intensive tile sector also indicated that tile production is down 3–5% this year.

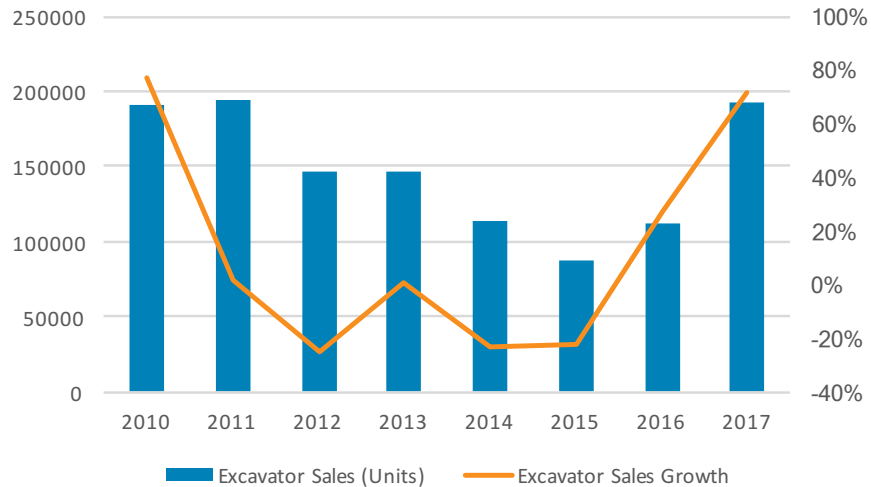
We see the growth in infrastructure spending going to utilities tunnels. They, like metro rail systems and high-speed rail, are steel intensive. Utilities tunnels require 5,500 tons of steel per kilometer and we expect around 4,000 km to be under construction this year. Utilities tunnels also require excavators to dig the tunnels.

**Excavator Sales Back to Historical Peak**

Excavator sales grew by 80% YTD July and are on target to match or slightly exceed the historical high point of sales in 2011. Cement equipment demand has been relatively stable and did not suffer the same dip in demand as excavators from 2012 to 2016. This year, cement equipment production is up 20% YTD July but only 8% for the month of July.

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### Chart 4. Excavator Sales



Source: Mysteel, J Capital

Construction equipment sales companies were clear that infrastructure is the key driver of demand followed by replacement and an increase in mine resumptions.

### Key Findings:

- ▶ Very strong growth: Eight of the 10 construction equipment sales companies reported growth, with three having growth at 100%, two of growth over 50% and two with growth above 25%.
- ▶ Growth slowing: Six of the eight companies report growth said that the growth rate slowed in July/August. We believe that the peak of growth may have passed.
- ▶ Infrastructure is the standout driver of sales, with nine of the 10 respondents claiming increase in infrastructure projects and funding was the key driver of sales.
- ▶ Replacement: Five of the 10 companies claimed replacement was driving sales. Construction equipment sales last peaked five years ago, and now it is time to replace that equipment.
- ▶ Mining: An upturn in commodity prices, particularly iron ore and coal, has led closed mines start up and purchase equipment. Mines in operation can now afford to replace old equipment.

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**Table 1: Construction Equipment Survey by Province**

Province	Guangdong	Shaanxi, Hunan, Hubei, Qinghai, Ningxia	Liaoning	East China 7 provinces	Tianjin
<b>Sales increase YTD YoY %</b>	Flat	100%	50%	60%	-80%
<b>Sales Increase July YoY</b>	Flat	100%	25%	20%	-80%
<b>Why is demand better this year?</b>	Guangdong has few new projects	Infrastructure like rail, airports, expressways, city infrastructure, and industrial parks. High replacement demand. Urgency to start projects before Party Congress	More infrastructure projects started in 1H. High replacement demand. New environment standards requiring non-compliant equipment be replaced.	Increased infrastructure projects particularly expressways. Iron ore and coal mines have restarted or merged and are buying more equipment.	Sales are only replacement. This region is not typical of the rest of the country there are a lot of environmental controls in place.
<b>Which categories of clients are buying equipment?</b>	Ceramics industry, mining sector and to a less extent road construction.	Rail, road and infrastructure	Infrastructure, city governments and construction companies	Transport, mining, leasing, infrastructure and city governments	Materials loading and unloading
Province	Zhejiang	Beijing, Tianjin, Hebei	Hunan	Shaanxi	Jiangsu
<b>Sales increase YTD YoY %</b>	40%	100%	100%	30%	50%
<b>Sales Increase July YoY</b>	40%	60%	75%	10%	40%
<b>Why is demand better this year?</b>	Infrastructure like Asian Games facilities and demolition for land sales. Mining sector is replacing equipment.	Infrastructure projects like the Beijing Winter Olympics, World Garden Exhibition, and Xiongan New Area. Projects moved faster and purchased more equipment in 1H in anticipation of the strict construction restriction for the Party Congress in October.	There are a lot of new government infrastructure projects. This is a peak year in the replacement cycle.	Infrastructure such as rail, road and high speed rail. This year there are about 40-60% more new government projects starting. The property construction sector has picked up after a lot of projects halted last year.	This is a key year for replacement. Infrastructure is strong.
<b>Which categories of clients are buying equipment?</b>	Mainly private small business as most big projects outsource to small contractors	Mainly small private companies	Mining and rail construction	China rail construction, expressway construction, small coal mines	Mainly small private construction companies and leasing companies

Source: J Capital

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### Notable Quotes:

“Demand is great this year from infrastructure, rail, airports, expressways, city infrastructure, and industrial parks. Coal and steel prices have increased dramatically which is good for mining sales. It is also a time for equipment replacement. Sales were strong in 2011 and 2012, we are 5 years past that time and it is time to replace. There are also a lot of projects that want to get started before the Party's 19th Congress. “

Shaanxi, Hunan, Hubei, Qinghai, Ningxia

“This year there are lots of infrastructure projects, like expressway projects. Many iron ore and coal mines have restarted, many mines have purchased new equipment. There is a lot of mining consolidation, where small mines are becoming large mines which is also good for demand.”

East China

“This year there is no low or high season, demand is strong in every month. Zhejiang is hosting the Asian games, areas are being demolished, land sales are up. There is improved sales to the mining sector as equipment is renewed. “

Zhejiang

“The Party Congress is about to start. Restrictions on construction will start in September. We hear the restrictions will be very tight and there will be significant fines. The reason for the high growth in sales this year is lots of new projects. Beijing and Zhangjiakou will jointly hold the Winter Olympics. There is a lot of new high speed rail, there is the World Garden Exhibition, and the new Beijing Administrative Area. My understanding is these new projects require at least 500 new excavators. “

Beijing Tianjin Hebei

“We have also been wondering why the market is so good and looking at industry forecasts the growth will continue into the second half. This year there has been no low season. The excavator market has been particularly strong. Excavators are widely used to replace manual labor, so small excavators are selling well. There are two main reasons why the market is so good. There are lots of new government infrastructure projects. The second is the five year replacement cycle. This is now the time for replacement. “

Hunan

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