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Completed: 07-Feb-20, 15:43 GMT
 Released: 07-Feb-20, 15:43 GMT

China

Coronavirus: GDP forecast downgrade

We cut our GDP growth forecasts by 40bp for 2020 to 5.4% y/y and by 180bp for Q1 to 4.0% y/y to reflect shock from the coronavirus outbreak. Our new base case forecasts (Figure 1) fall within the "medium disruption" scenario noted in [China Coronavirus: Evaluating the potential economic impact](#) (1 February 2020), although we have updated some model specifications and parameters to reflect the latest developments. This note details our base case and its assumptions, two downside risk scenarios, and the outlook for the nCoV outbreak, including some regional variations and provincial features that we think worth noting for the length and extent of the disruptions expected.

Figure 1: GDP forecasts: base case and risk scenarios

	Base case: q/q, saar % (change in pp vs. previous forecasts)	Base case: y/y, % (change in pp vs. previous forecasts)	Risk 1: Outbreak and disruption persist longer (impact on y/y growth, pp)	Risk 2: Disruption worse than expected (ie, larger permanent loss of output in non-essential sectors) (impact on y/y growth, pp)
Q120	-1.1 (-7.3)	4.0 (-1.8)	3.6 (-2.2)	0.6 (-5.2)
Q220	10.0 (+4.2)	5.0 (-0.8)	4.5 (-1.3)	4.1 (-1.7)
Q320	9.1 (+3.6)	6.0 (+0.2)	5.8 (0.0)	5.4 (-0.4)
Q420	7.4 (+2.0)	6.2 (+0.5)	5.3 (-0.4)	4.9 (-0.8)
2020		5.4 (-0.4)	5.0 (-0.8)	4.5 (-1.3)

Sources: Haver, Wind, Barclays Research

Baseline outlook: V-shape rebound in momentum, with partial loss of output to recover gradually

Assumption: Activities outside Hubei recover from March as nCoV eases

On a q/q saar basis, our base case is for GDP to contract by 1.1% in Q1, then rebound to growth of 10.0% and 9.1% in Q2-Q3, before some moderation in Q4. This assumes that the nCoV outbreak starts to ease by the end of February and that activities in most provinces outside of Hubei start to return to normal. This new quarterly path reflects: 1) our expectation that some (but not all) of the output losses in January-February are made up from March to the end of Q2, with a stronger payback in manufacturing versus services, and 2) effects from stepped-up government stimulus to boost economic activities once the outbreak eases (see the last section of this note). The quarterly path leads to downward revisions of our Q1-Q2 y/y forecasts but upward revisions for Q3-Q4 (see Figure 1). Moreover, partly reflecting the lower base, our 2021 GDP growth forecast rises to 5.8% (from 5.6%).

The drags from nCoV on GDP growth can be examined through three perspectives:

- **By region,** our province-specific calculation suggests that production disruptions will result in drags on full-year 2020 (and Q1) national growth of ~0.2pp (0.8pp) from Hubei and ~0.2pp (1.0pp) from the rest of China. The disproportionately large drag from Hubei (accounting for 4.6% of China's GDP), reflects the much longer and severe outbreak expected, hence the disruption in the province's economic activity.
- **From the production side,** our three-sector production-based calculation suggests both the manufacturing and services sectors will cause drags on 2020 growth (Q1), of ~0.2pp (1.0pp) and ~0.2pp (0.8pp), respectively.
- **By expenditure breakdown,** we estimate that consumption and net exports will drag 2020 GDP growth by 0.3pp and 0.1pp, respectively, while we keep the percentage contribution from investment broadly unchanged, as we expect the government to issue more special bonds to step up infrastructure investment to help offset a potential drag from lower manufacturing investment.

Downside risks to our outlook mainly from 1) a longer outbreak, and 2) more severe disruption

- **Longer-than-expected nCoV outbreak** – If the outbreak outside Hubei persists beyond Q1, the disruption could be more severe than we assume in our base case, where provinces worth ~95% of China's GDP will resume activities from mid-March the latest. In a scenario of the outbreak not peaking until April-May, we estimate the drag on 2020 (Q1) growth could increase to 80bp (220bp), more in line with our "heavy disruption" scenario in the [1 February report](#).
- **More severe disruption than assumed** – Even if nCoV developments are in line with our expectation, the disruption to manufacturing and services activities on the ground could be worse than we assume, due to both supply and demand factors including (self-imposed) restrictions to consumer

behaviour, production capacity constraints, or supply chain spillover effects.

- We note that the heavily hit regions (gauged by new infections) have tended to be economically important regions, eg Guangdong and Zhejiang (each with +1000 cases), which in total account for 17% of national GDP (Figure 6 and 7). So a longer outbreak and extended quarantine in such provinces would have more negative consequences on growth.
- In an extreme case of assuming a large chunk of the output from non-essential sectors is permanently lost (higher wipeout ratio assumed in the whole country), we estimate that the drag on 2020 (Q1) growth could be as much as 130bp (520bp).

Figure 2: nCoV much more contagious than SARS



Figure 3: Confirmed declined but suspected rose...



Figure 4: ...both in Hubei province...

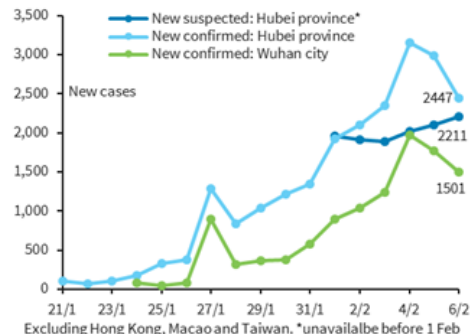
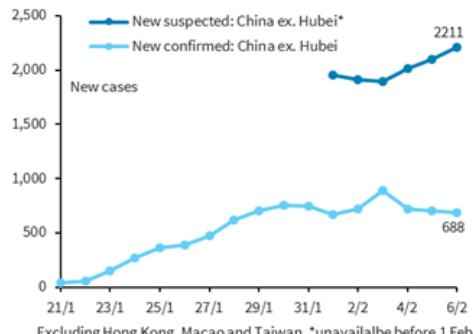


Figure 5: ... and outside Hubei



Disease outlook: watch for total cases, but also those outside Hubei and regional variations

We saw 6-8 February and end-February as two key windows for turning points...

In our [1 February report](#), we argued that 6-8 February and end-February were two key windows to watch for potential turning points in the outbreak that would reflect and indicate the effectiveness of virus detection and quarantine measures outside Wuhan/Hubei province. Based on Barclays' data science team projection (see [Data Science: Coronavirus Model Update](#), 6 Feb), if more than 35k cases are reported in China on 8 February and more than 49k by Wednesday 12 February, then the outbreak is unlikely to peak before mid Feb, in our view.

... and remain optimistic that the outbreak outside Hubei can be stabilised before end-February

Developments since 1 February suggest that the peak of the outbreak (gauged by new infections outside Hubei, by our standard) might occur at end-February, later than our previously more optimistic outlook of mid-February. The caution mainly comes from 1) the Hubei/Wuhan cases may underestimate the severity and outlook ("Researchers say the coronavirus may be more contagious than current data shows", CNBC, 4 Feb). With more suspected patients being gathered and quarantined and tested, we may see another rise in numbers, like we saw beginning of this week as a result of new hospitals put to use; and 2) while there are some signs that new confirmed cases may be beginning to decline, the number of new suspected cases has increased, suggesting there still may be some upward pressure on confirmed cases. Such a pattern can be seen nationwide, including both inside and outside Hubei (see Figure 3-5).

Regional variations help us understand nCoV disruptions, as well as governance and medical capacity

1) While it is not surprising that the heavily hit regions are mostly provinces bordering Hubei, the two provinces reporting the highest number of infected cases – Guangdong and Zhejiang – are also among the two economically most important provinces in China, ranking #1 and #4 in terms of provincial GDP and together accounting for 17% of national GDP (Figure 6 and 7).

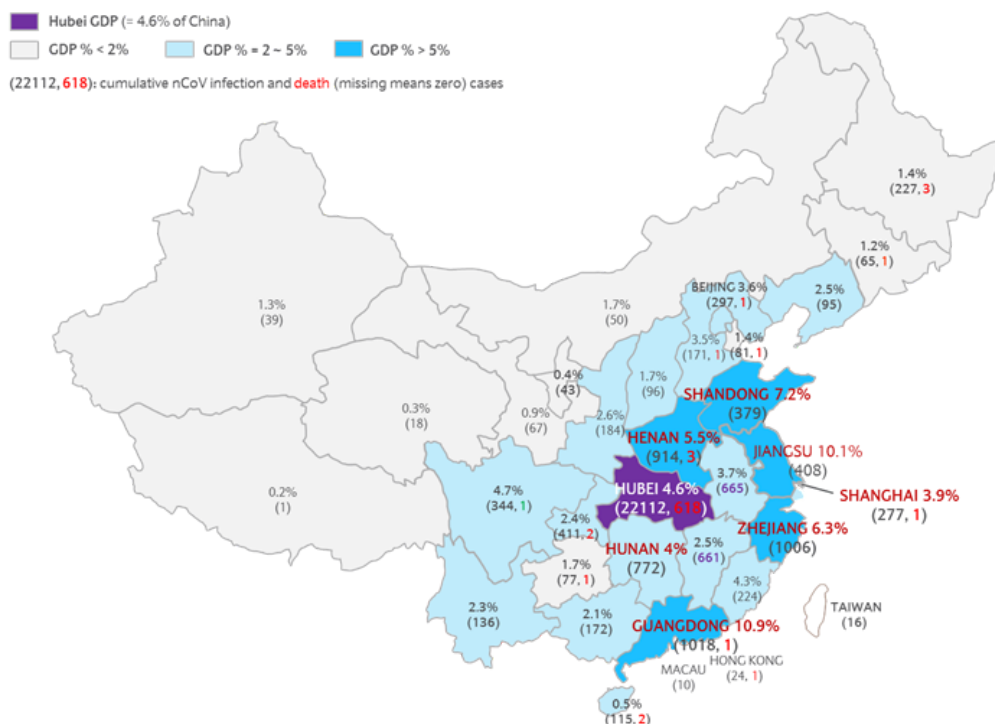
2) Despite reporting the third highest number of confirmed cases (>1000), Zhejiang province has seen zero deaths so far, which is likely attributable to the local governments' effective handling and medical capacity.

3) Possibly reflecting improving medical capacity and methods of treatment (especially in Hubei), the number of people classified as 'cured' is increasing faster than the number of deaths, both inside and outside of Hubei.

Moreover, as the WHO commented on 6 February, there is still no vaccine or treatment for nCoV, and the development of a vaccine and therapeutics will take time. That said, the Chinese government is trying various ways to fight the virus, including using traditional Chinese medicine. Elsewhere, Gilead Sciences Inc is partnering with the Chinese government with its experimental coronavirus drug for trials (Bloomberg, 5 Feb 2020) while researchers in Zhejiang have reportedly "found an effective drug to treat people with the new coronavirus (*Guardian*, 5 February 2020).

We are cautiously optimistic that the *outbreak outside Hubei* could start to steadily decrease from around end-February, by which time most returning workers will have exited the 2- to 14-day incubation period (this is conditional on quarantine measures being effective). Meanwhile, treatment appears to be improving over time, which could in part ease the pressures, if the scale of the outbreak can be restrained.

Figure 6: Regional variation in nCoV epidemic and economic development



Hubei	2447	22112	817	618	4.6%	0.35
Wuhan city	1501	11618	476	478	1.6%	0.12
Rest of China	688	8999	796	19	95.4%	5.76
Guangdong	74	1018	75	1	10.9%	0.68
Shenzhen city	25	339	22	0	2.6%	0.18
Guangzhou city	30	285	20	0	2.5%	0.17
Zhejiang	52	1006	104	0	6.3%	0.43
Wenzhou city	25	421	36	0	0.7%	0.06
Henan	63	914	73	3	5.5%	0.39
Hunan	61	772	104	0	4.0%	0.30
Anhui	74	665	47	0	3.7%	0.28
Jiangxi	61	661	45	0	2.5%	0.20
Chongqing	15	415	25	2	2.4%	0.15
Jiangsu	35	408	40	0	10.1%	0.62
Shandong	32	379	36	0	7.2%	0.40
Sichuan	23	344	37	1	4.7%	0.35
Beijing	23	344	37	1	3.6%	0.22
Shanghai	20	277	30	1	3.9%	0.23
Heilongjiang	50	227	12	3	1.4%	0.06
Fujian	9	224	15	0	4.3%	0.33
Shaanxi	11	184	17	0	2.6%	0.16
Guangxi	4	172	17	0	2.1%	0.13
Hebei	14	171	16	1	4.6%	0.31
Yunnan	3	136	12	0	2.3%	0.19
Hainan	8	115	8	2	0.5%	0.03
Shanxi	6	96	12	0	1.7%	0.11
Liaoning	7	95	7	0	2.5%	0.14
Tianjin	2	81	2	1	1.4%	0.07
Guizhou	6	77	6	1	1.7%	0.14
Gansu	5	67	9	0	0.9%	0.06
Jilin	6	65	4	1	1.2%	0.04
Inner Mongolia	4	50	5	0	1.7%	0.09
Ningxia	3	43	5	0	0.4%	0.03
Xinjiang	3	39	0	0	1.3%	0.00
Qinghai	na	18	3	0	0.3%	0.02
Tibet	na	1	0	0	0.2%	0.02

Taiwan	na	16	1	0
Hong Kong	na	24	0	1
Macao	na	10	0	0

Sources: China and provincial NHC, Wind, Barclays Research

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