

FX Insight

Distilling The COVID-19 Effect

Of Complacency and Caution amid Fluid COVID19 Development

Different asset classes in equity, credit, commodity and FX space are telling a different story, implying mixed expectations of caution and complacency on COVID-19's fluid development. Some of these FX moves are noises and overshooting/undershooting of price action should correct when there is better clarity of the situation.

Framework for Evaluating COVID-19 Impact

Broadly, we postulate that eventual currency impact is a function of contagion risks in the country as well as perceived economic exposure to China via various channels. Our quantification of **contagion risk** takes into account each country's (i) current confirmed case counts, (ii) air connectivity or transport hub status, (iii) population density and (iv) preparedness to deal with public health risks. Meanwhile, **growth impact risks** is estimated via considering each economy's (i) tourism dependence on, (ii) supply chain linkages with, and (iii) exposure to domestic demand from China.

Combined risk scores suggest that **TWD, THB and SGD** could be most vulnerable to Covid-19 related risks. Among **AxJ, INR, IDR, PHP** could be relatively resilient to Covid-19 risks.

Stay Long IDR, Short TWD, Fade SGD Weakness

Our FX bias after taking into consideration our risk scoring matrix and relative FX moves thus far include: (1) tactical short TWD on asymmetry of strength vs. weak risk scoring driven by supply chain and tourism linkages to China; (2) fade SGD weakness towards 1.4050 as decline is adequately priced relative to risks; (3) take partial profit on PHP long as modest trade and tourism linkages to China pose downside risks ahead; (4) stay long IDR on carry appeal; (5) EUR could stay under pressure as China's economic fallout compound worries of a deeper slowdown in Germany; (6) Look to buy CAD on dips on asymmetry in FX underperformance to its healthy contagion and macro growth scoring. Eventual recovery could be more sustained when COVID-19 situation improves, alongside oil prices; (7) lean against USD and JPY strength.

Analysts

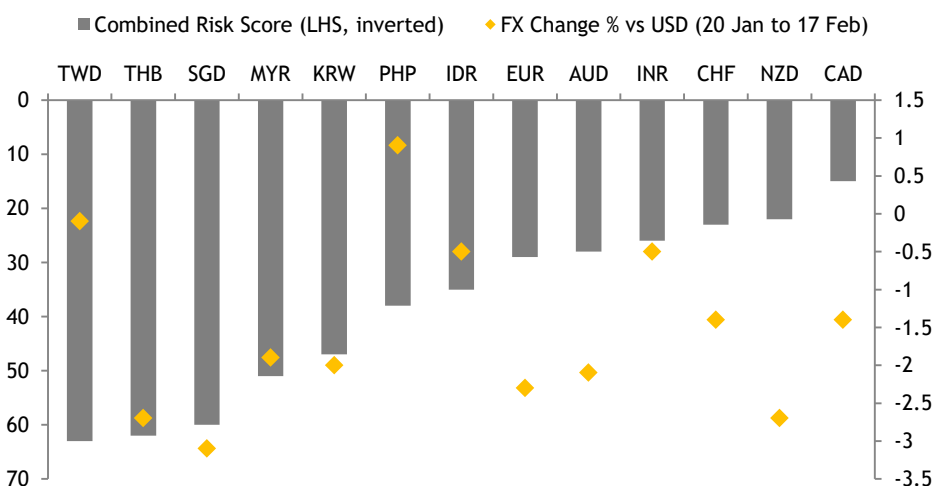
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Asymmetry between Risk Scores and FX Outcomes Provide Opportunities



Note: The larger the risk score, the greater the contagion risks and growth risk impact.
Source: Maybank FX Research & Strategy Estimates

This report is organised into 3 sections: (1) an Update on cross asset markets; (2) A framework to evaluate COVID-19 impact and a construct of a risk scoring matrix to assess contagion and macro growth concerns on selected FX; and (3) Our FX bias and trade recommendations.

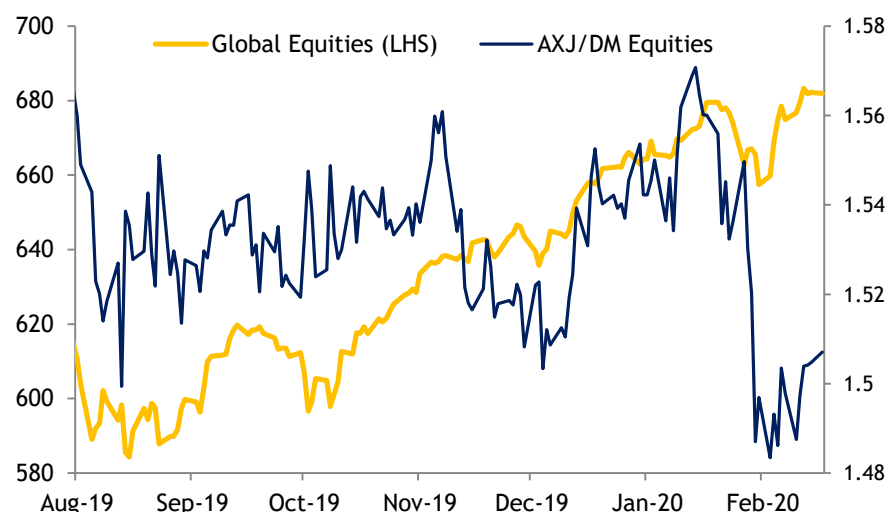
1. COVID-19 Market Impact: Cross Assets Telling a Different Story

The development of COVID-19 outbreak remains fluid, with new cases in China showing tentative signs of slowing but new cases outside China appear to show no signs of slowing. Global financial markets have reacted differently to heightened concerns over the spread and its economic repercussions. We look at cross assets in the equity, credit, commodity, FX and vol space and they are telling a different story. This implies that markets have a varied range of expectations on COVID-19's fluid development and to some extent, some of the moves are noises and this overshooting/undershooting of price action should correct when there is better clarity of the situation.

Global Equities Look Through COVID-19 Scare

In the global equity space, the sharp decline (>3%) from late-Jan 2020 to end-Jan has been more than reversed with global equities making fresh historical highs, taking the COVID-19 virus in its stride. But looking at geographical spread, the same cannot be said. Performance of developed market (DM) equities in US, Europe and Australia have diverged from Asian (AXJ) equities, with the latter underperforming the DM. That said tentative signs of Asian/DM equities bottoming can be seen. Overall it appears that the equity markets are somewhat more optimistic, and are looking through the effects of the COVID-19 outbreak.

Global Equities Taking COVID-19 in its stride; while Underperformance in AXJ Equities Relative to DM Shows signs of Bottoming



Source: FTSE indices, Bloomberg, Maybank FX Research & Strategy

Credit Markets Display Relative Risk Aversion

Unlike global equities, the credit space exhibits relative risk aversion. Corporate-HY credit spread widened (+70bps) on COVID-19 outbreak as 10Y treasury yield fell while corporate-HY bond yield rose. That said

credit spread has narrowed slightly (-50bps) since the turn of Feb, reflecting a partial sense of cautious optimism

Global Credit Spread Pricing in Risk Aversion



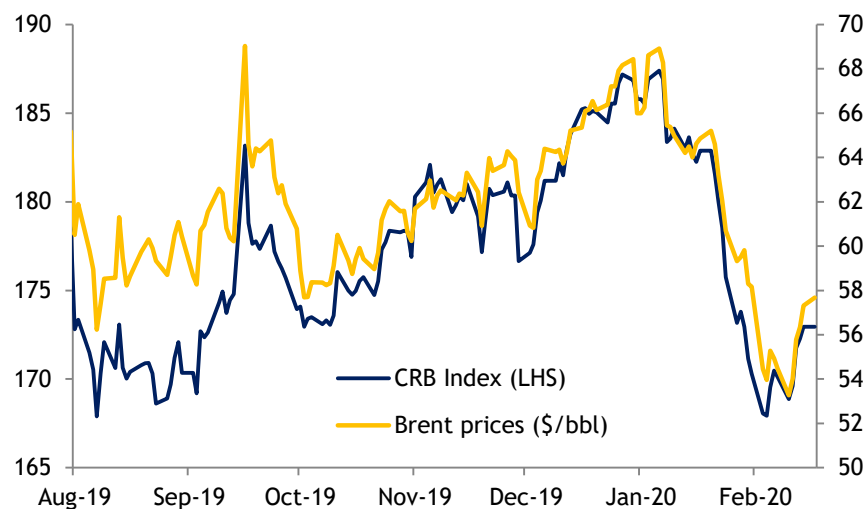
Note: Credit Suisse Asian Bond Corporate Spread over benchmark as proxy for Asian credit spread; US Corp HY-Trsy spread calculated using Bloomberg Barclays Bond index

Source: Bloomberg, Maybank FX Research & Strategy

Commodity Markets Yet to Bounce Back Meaningfully

The COVID-19 outbreak has a significant impact on commodities including Brent, iron ore and copper, as markets lowered demand and growth forecasts. IEA downgraded oil demand down by 365kb/d to 825kb/d for 2020. This is the lowest annual growth seen since 2011. Anecdotally, there have been reports that production plants are still not expected to operate at full capacity anytime soon and steelmakers are expected to lower output (this puts pressure on iron ore imports as China's import of iron ore is estimated at 70% of global imports). Softer demand prospects owing to COVID-19 outbreak could remain a drag on commodity prices.

CRB index, Oil Only a Modest Bounce from Its Lows



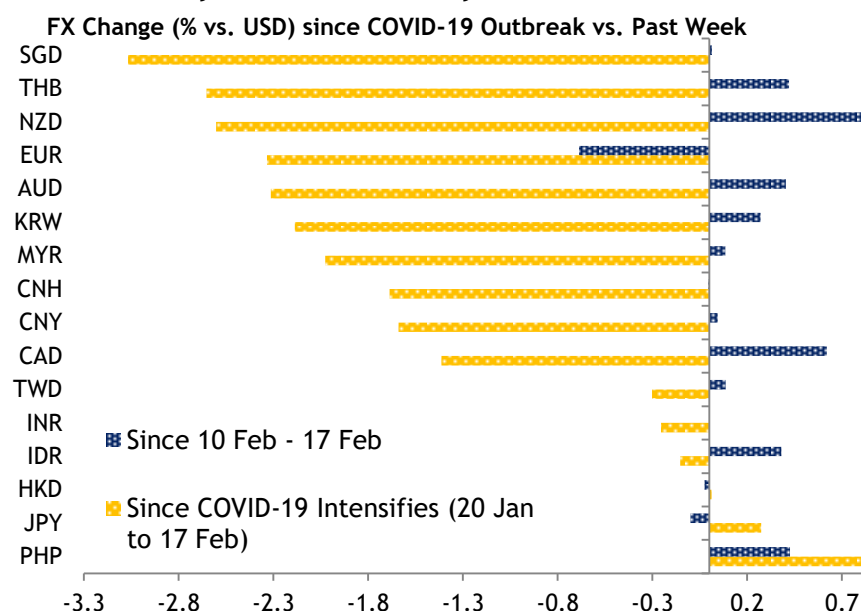
Source: Thomson Reuters/CoreCommodity CRB, Bloomberg, Maybank FX Research & Strategy

FX Markets Largely Cautious for Now

USD has been a clear beneficiary in this black swan episode of COVID-19 outbreak, with most AXJs and commodity-linked FX the main losers. This is due to their perceived ties with China via trade, tourism and market sentiment (driven by contagion concerns and fluid COVID-19 development).

In general, most currencies have recovered partially in part due to nascent hopes that COVID-19 situation maybe showing tentative signs of turnaround (as number of new cases slow in China while recoveries rise). But the modest magnitude of recovery also implies the cautiousness. EUR on the other hand, remains under pressure as potential China economic fallout (amid supply chain disruption and lower Chinese demand owing to COVID-19 outbreak) reinforces market expectations for ECB to cut rate as domestic growth in Germany had already started to show sign of entering a deeper slowdown.

Partial Recovery in Some FX Recently but EUR Remains Down



Source: Bloomberg, Maybank FX Research & Strategy

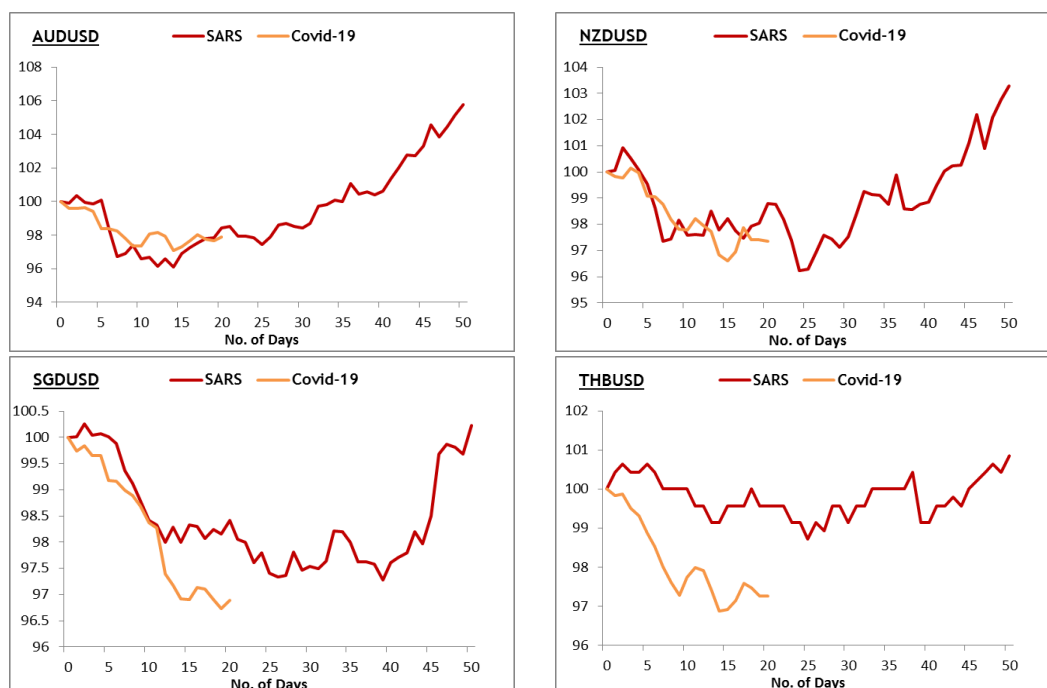
FX Trajectories During SARS Provide Useful Comparisons

While we acknowledge that the COVID-19 outbreak may not be similar to SARS in some aspects (i.e., higher contagion, lower mortality), a comparison of the trajectories for some regional currencies can still be useful.

- Pace of decline in regional FX sentiments has moderated, around the time when contagion in China was perceived to be under control. This tapering off (in further declines) at the 2-3 weeks' mark is similar to the SARS experience.
- Certain FX such as SGD and THB performed discernibly worse compared to the SARS episode, alongside higher number of confirmed cases in these two countries (relative to regional peers). SGD is also oftentimes taken to be a RMB proxy, while Thailand has very high dependence on Chinese tourism spending.

We share some comparison charts below. More can be found in the Appendix.

FX Trajectory: COVID-19 vs SARS2003



Source: Bloomberg, Maybank FX Research & Strategy

Note: SARS' Day 0 Set at 3 March 2003; Covid-19 Day 0 Set at 20 Jan 2020.

Day 0 values of individual currency strength (relative to USD) are indexed to 100.

Vols Woken Up from Deep Slumber but Not For Long Before Snoozing

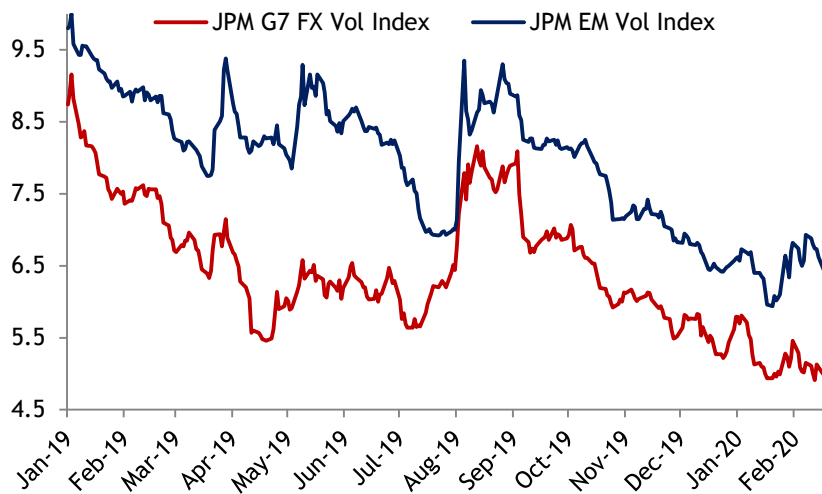
Implied FX vols have risen YTD in light of the unexpected COVID-19 outbreak in China. JPM EM FX vols rose from near an all-time low of 5.95 (mid-Jan) to 6.93 (early- Feb) and has since eased back to 6.43 levels. We caution that lower vols do not mean low risks. In fact vols can sharply be repriced upward and disproportionately (vs. realised vols), as evidenced in past events such as oil price shocks in 2014-15, Brexit in 2016, US-China trade war in 2018, etc.

The trend decline in volatility over the past decade or so can be attributable to structural changes in financial markets such as improvement to market liquidity, greater role of institutional investors, considerable increase in the supply of options offering protection from hedge funds, high-net worth clients (with the objective of receiving premium for writing an option and this brought about downward pressure on option prices, reducing implied vol with feedback loop effect on realised vol) as well as the bigger role central banks are assuming in the conduct of monetary policy (Quantitative easing (QE), forward guidance on rates trajectory, etc.) resulting in (1) narrower credit spreads; (2) anchoring volatility of long-end rates.

Major central banks including BoJ, ECB embarking on QE, market expectations for central banks to ease further in response to economic slowdown/shocks and the resulting hunt for yield activity (by investors) somewhat led to a divergence in real world uncertainty and market-derived volatility. The latter could play catch up should real world uncertainty hits or when central banks exit their QE mandate and volatility normalises as a result. While there may be economic shocks or negative market events that could see vols spike but they are usually not sustained because of the expectation that central banks will respond and

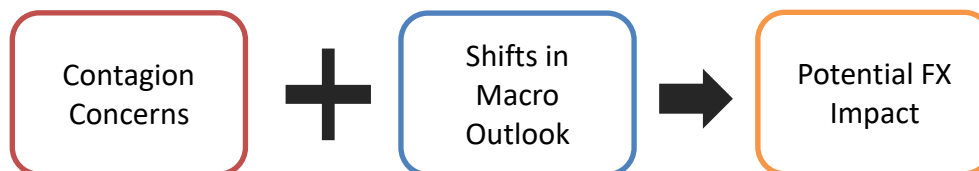
the underlying assumption that they will not exit their QE mandate anytime soon. Spikes in vols will eventually ease as a result.

Structural Downtrend in Vols Overwhelm Temporary Spikes



Source: Bloomberg, Maybank FX Research & Strategy

2. A Simple Framework For Evaluating COVID-19 Impact and A Construct of Risk Scoring Matrix to Assess Contagion and Macro Growth Concerns



Broadly, we postulate that eventual currency impact is a function of contagion risks in the country as well as perceived economic exposure to China via various channels.

In turn, we proxy contagion risks via the following 4 indicators:

- **Current Confirmed Case Counts**, which forms the “base” for further spreading.
- **Air connectivity or transport hub status**, as measured by ratio of scheduled international connections to number of destinations served (using OAG Megahubs data).
- **Population Density** (Log-form), to proxy for extent of daily physical interaction among residents.
- **Preparedness** to deal with public health risks, using WHO scores for capacity to detect, assess, notify, report and respond to such events. *This series is inverted for ease of reference.*

The higher the levels of each indicator therefore, the higher the contagion risks. A contagion “risk score” is also derived via scaling each indicator appropriately and weighting each indicator equally. The higher the score, the higher the likelihood of a greater potential drag on market sentiments due to contagion concerns.

Risk Scoring Matrix (1): Quantifying Contagion Concerns

Country/ Currency	Contagion Concerns				Risk Score
	Confirmed Cases (as of 17 Feb)	Air Connectivity	Pop. Density (Log)	Preparedness (Higher = Less Prepared)	
USD	15	186	3.6	9	36
EUR	35	200	4.9	14	50
JPY	59	153	5.8	6	52
CHF	0	114	5.4	13	33
GBP	9	317	3.6	7	43
CAD	7	173	1.4	1	20
AUD	15	158	1.1	10	27
NZD	0	99	2.9	10	23
SGD	75	240	9	9	75
MYR	22	229	4.6	5	41
IDR	0	191	5	37	54
INR	3	117	6.1	25	44
THB	34	156	4.9	21	52
KRW	29	233	6.3	6	50
TWD	20	-	6.5	-	49
PHP	3	153	5.9	31	51

Source: WHO, OAG, Bloomberg, Maybank FX Research & Strategy Estimates

Note: Scaling is achieved via indexing the largest value in each indicator at 100. Preparedness score for EU is average of Germany and France’s scores.

We note that broadly, AxJ FX could be more susceptible to contagion risks versus DM FX. While Singapore is relatively prepared for health crises, and some have argued that the larger case counts registered is due to more stringent detection approaches, its status as a regional transport hub and its high population density doubtless exacerbates contagion concerns.

Asia was on its way to a modest growth recovery in 2020 before the Covid-19 outbreak hit. In particular, easing tensions from the US-China trade conflict, as well as an ongoing recovery in global tech demand, had bode well for trade and tech-linked FX.

Nonetheless, the narrative has shifted significantly as markets began to assess the economic impact of Covid-19 more comprehensively. We think that there could be three key channels of macro exposure.

- **Tourism Linkages.** The larger the Chinese tourists’ share of visitor spending in a country or the greater the share of overall tourism receipts in GDP, the more likely sectors such as accommodation, transport and retail will be hit in the economy.
- **Supply Chain Effects.** China is a key production node in global production chains. We account for linkages via (i) other countries’ demand of intermediate components from China, and (ii) other countries’ supply of intermediate components to China.
- **China Demand Slowdown.** We also assess the impact to each economy via linkages to China’s domestic demand, either in consumption or investment needs.

The higher the levels of each indicator therefore, the higher the growth impact risks. A growth impact “risk score” is also derived via allocating equal weights to the three channels above. The higher the score, the higher the likelihood of a greater potential drag on market confidence due to growth concerns.

Risk Scoring Matrix (2): Quantifying Growth Concerns

Country/ Currency	Growth Concerns					Risk Score
	Tourism: China Visitors' Share	Tourism: Receipts as % of GDP	Supply Chain: Intermediate Goods From China (% of GDP)*	Supply Chain: Intermediate Goods To China (% of GDP)*	Exposure to China's Domestic Demand (% of GDP)*	
USD	13.5%	1.2%	1.4%	0.7%	1.2%	8
EUR	6.0%	1.6%	1.0%	1.2%	1.7%	8
JPY	26.9%	0.9%	1.7%	2.2%	2.6%	14
CHF	5.3%	3.0%	1.4%	1.8%	2.4%	12
GBP	3.2%	1.1%	1.0%	0.6%	1.2%	6
CAD	3.4%	1.2%	1.8%	1.8%	1.7%	10
AUD	26.7%	2.3%	2.1%	5.2%	4.9%	29
NZD	14.8%	3.0%	1.9%	2.8%	4.2%	22
SGD	14.5%	5.5%	2.8%	9.1%	7.8%	44
MYR	14.6%	5.8%	9.1%	12.7%	8.5%	60
IDR	13.5%	1.8%	2.4%	2.1%	2.5%	15
INR	2.7%	1.1%	2.3%	0.9%	1.1%	7
THB	27.8%	11.5%	7.7%	7.9%	7.0%	72
KRW	43.9%	1.1%	6.0%	10.5%	6.9%	45
TWD	24.4%	4.3%	5.5%	19.4%	13.0%	78
PHP	17.6%	2.3%	3.2%	5.0%	3.9%	25

Source: CEIC, Bloomberg, OECD-TiVA Database, Maybank FX Research & Strategy Estimates

Note: Scaling is achieved via indexing the largest value in each indicator at 100. Tourism and supply chain sub-scores are computed before averaging with scores for exposure to Chinese domestic demand. Tourism data are as of 2018; estimate for EU is average of Germany & France's.

* Computed by OECD by decomposing the actual input of each country in the production of goods & services consumed worldwide. Latest data point is 2015 due to complexity of calculations.

As expected, Thailand's expected hit to its economy comes via tourism linkages with China.

While SGD is often taken as a RMB proxy, its actual integration with Chinese supply chains could be a tad less tight compared to regional peers such as Malaysia or Taiwan.

Europe as a whole seems more shielded from macro spillovers from China, but we acknowledge that certain economies such as Germany could be more intricately linked with China. Bundesbank has warned that German exporters could suffer due to disruption in global supply chains. Outside the EU, China is Germany's second largest market (after US), with exports of EUR106bn in 2018.

Looking for Asymmetries: Combining Both Risk Scores vs FX % Change

We proceed to combine the contagion and growth concern risk scores and compare it to FX changes since the onset of the crisis.

We remove JPY and USD from the comparison since they are viewed to be haven or semi-safe haven assets which saw gains due to Covid-19. Recent moves in GBP were largely idiosyncratic (due to perceptions of Brexit-related developments) and we remove it from the comparison as well.

Combined Risk Scoring vs. FX Change

	Contagion Concerns	Growth Concerns	Combined Risk Score	FX Change % vs USD (20 Jan to 17 Feb)
SGD	75.0	44.2	60	-3.1
THB	51.5	72.1	62	-2.7
NZD	22.8	21.6	22	-2.7
EUR	50.1	8.2	29	-2.3
AUD	27.3	28.7	28	-2.1
KRW	49.6	44.6	47	-2.0
MYR	41.5	60.0	51	-1.9
CAD	20.5	9.5	15	-1.4
CHF	33.0	12.0	23	-1.4
INR	44.2	7.3	26	-0.5
IDR	54.0	15.0	35	-0.5
TWD	49.4	77.6	63	-0.1
PHP	50.6	25.4	38	0.9

Source: Maybank FX Research & Strategy Estimates

Key Findings:

- SGD, THB, NZD, EUR, AUD and KRW were the biggest casualties (falling between 2 - 3% vs USD), given contagion concerns and perceived linkages with China while IDR, INR, PHP and TWD were relatively less affected (vs. peers) since COVID-19 outbreak.
- IDR, PHP and INR continue to benefit from carry appeal amid expectations for interest rate and inflation to stay soft and that central banks should keep monetary policies accommodative for longer as well as the blessings of softer oil prices (lower import bill for net oil importers Indonesia, Philippines and India). At the same time, they also do not rank highly in terms of first order effect from contagion concerns.
- Though TWD does not have the carry appeal, it benefitted from the tech recovery (SOX staged a v-shaped rebound) and foreign inflows to local equity markets and is perceived to have lower contagion concerns (relative to its North Asian and SG peers).
- But if we take into consideration the macro factors of supply chain disruption (proxy via intermediate goods imports from China) and tourism, the outcome may not be the same for some FX including MYR and TWD.
- In particular TWD's appeal deteriorated to the worst amongst all given its supply chain and tourism linkages with China. This is worth a caution (given that TWD has seen relative outperformance) especially if the outbreak persists for longer than expected and if the outbreak is more severe than expected. Continued closure of factories, plants in China will impact TW output via supply chain disruption (OECD TIVA database shows that TW's intermediate goods imports and exports from/to China is the highest amongst the list of regional countries in our list). Our study also found that weakening in China demand will also

impact TW the most while a decline in Chinese tourism revenue will also impact TW to some extent.

- Macro concerns of China supply chain disruption and tourism will also affect THB, MYR, SGD and KRW if the outbreak persists for longer, resulting in factories staying shut for longer. For Malaysia, import of intermediate goods from China as % of its intermediate imports from world stood at one of the highest (amongst the list of countries we tracked) at 21%. South Korea and Australia are also amongst the highest at around 22%. Elsewhere Chinese tourism impact is quite significant for MYR, SGD and AUD as well.
- For MYR, though contagion risk score is generally lower than its AXJ peers including SGD, IDR, THB, we are cautious of its growth concerns score, which is estimated to be higher than some of its AXJ peers including IDR. MYR weakness could exacerbate if COVID-19 outbreak persists for longer amid disruption to China supply chain and Chinese inbound tourism.

3. Our FX Bias Taking into Consideration COVID-19:

- **Stay Long IDR:** IDR sentiments remain favourable amid the environment of low rate for longer, benign inflation and central bank's pledge to ensure FX stability. We expect IDR resilience to continue unless BI changes tone. Potential trading range at 13,600 to 13,800 for the 1M NDF.
- **Take Partial Profit on Long PHP:** While we are constructive of PHP outlook, we think the outperformance this episode calls for a reduction in PHP-long position. Philippines does have modest tourism and trade linkages to China (as captured in the growth risk score of 25), which could lead to some delayed impact on FX sentiments if these concerns emerge more saliently later. Support for the 1M USDPHP NDF at 50.39 and 50.0 could be key.
- **Consolidate on Weaker Side:** Most AXJs including SGD, THB, KRW, MYR as well as commodity-linked FX, AUD and NZD could stay under pressure in the interim, given its trade, supply chain and tourism linkages with China. But we do note that most of these currencies are nearing their respective key levels: USDSGD at 1.3960; USDTHB at 31.45; USDKRW at 1195; USDMYR at 4.16.
- **Tactical Short TWD:** Asymmetry in TWD's strength relative to its vulnerability weak scoring (via macro concerns) suggests that TWD's resilience could be tested. Market's re-pricing of weak macro factors of supply chain linkages and tourism (especially if outbreak persists for longer and severity intensifies) could see TWD weakness play catch up to regional AXJ.
- **Fade SGD Weakness if it Exacerbates.** SGD weakness this episode is a function of contagion worries (country with highest number of cases outside China) and MAS comments (5 Feb) triggering expectations that the MAS expects a softer SGD in line with current weak macro conditions. We think that there might be some frontloading of SGD weakness and expect a bounce back when Singapore demonstrates that the situation is well under control. Targeted fiscal measures put in place ensures a more

sustainable and durable economic recovery. SGD relative underperformance should correct at some stage. Can consider shorting of USDSGD near 1.4050 (equivalent to -1.5% below implied policy mid in SGD NEER band) if reached.

- **EUR Could Get Worse Before Recovering:** The downward pressure on EUR could persist as China's potential economic fallout (amid supply chain disruption and lower Chinese demand owing to COVID-19 outbreak) is expected to impact Europe. In particular Germany's activity data, including industrial production, factory orders, retail sales and investor sentiment have already weakened even prior to COVID-19 outbreak in China. The risk of a downturn in Europe (dragged by Germany) reinforces market expectations for ECB to cut rate. This suggests that EUR downside could persist for longer. But on policy rates, we remain sceptical if ECB would ease further given that rates are near lower bound and there is diminishing marginal returns to lower them further. ECB is likely to fall back on policy mix of fiscal measures to support growth while keeping rates low (but short of cutting rates further). Also the macro growth concern vulnerability score suggests that the impact of China fallout on Europe should be buffered. As such interim EUR weakness could retrace when we get clarity of COVID-19 outbreak development (severity peaks) and that recovery momentum in Europe remains intact (albeit fragile).
- **Lean against USD and JPY Strength:** While USD and JPY remains the beneficiary of risk aversion flows for now, we expect their resilience to soften when outbreak shows clearer signs of peaking. Return in risk appetite should see risk assets in Asia play catch up and asset reallocation in this space should support AXJs while safe havens USD and JPY unwind.
- **Long CAD:** Asymmetry in CAD's underperformance performance relative to its healthy contagion and macro growth scoring suggests that CAD may have been oversold in this episode. Its eventual recovery could be more sustained when the COVID-19 development improves, alongside oil prices (which have been depressed owing to outbreak) and risk sentiment.

How Long Will We Need to Battle COVID-19

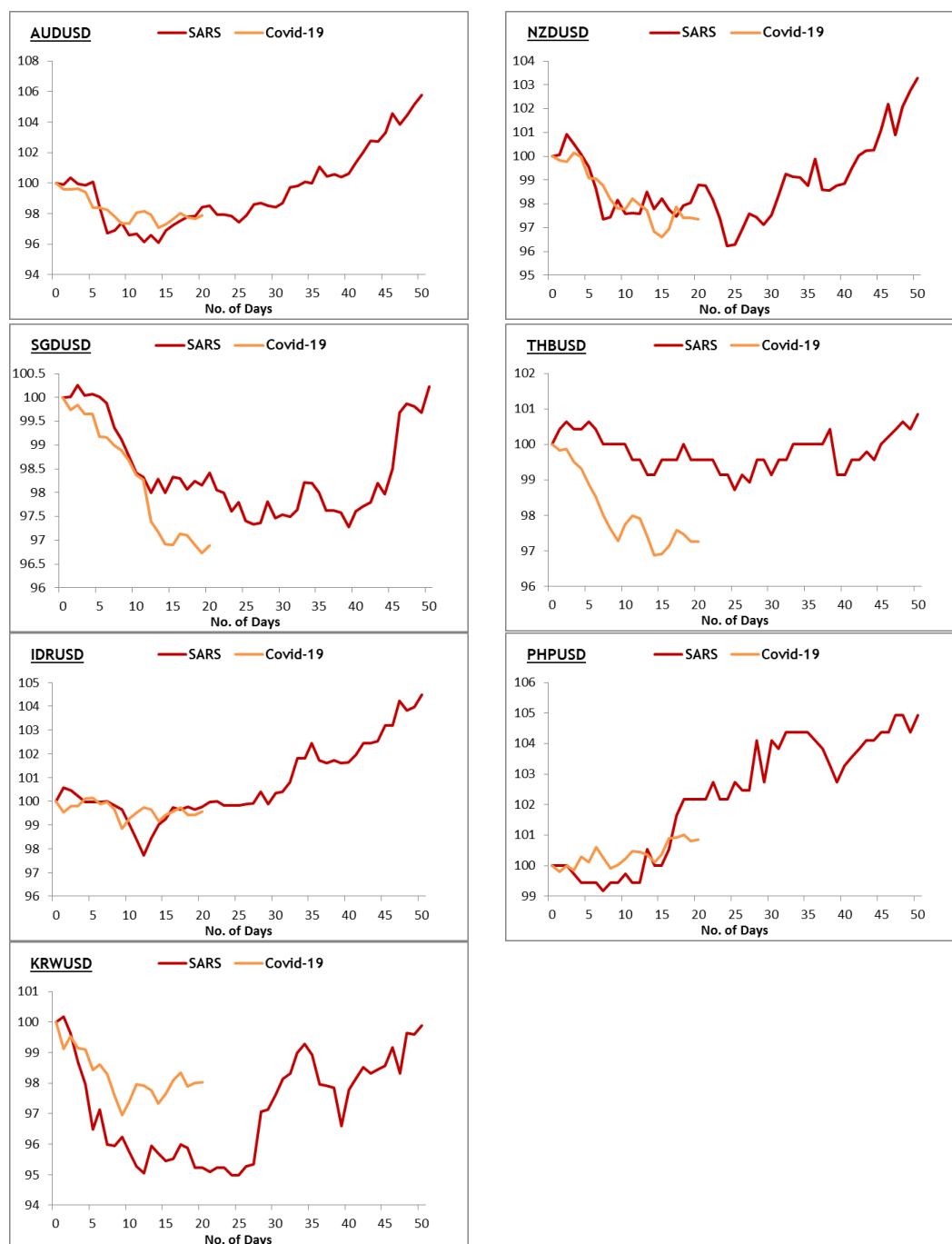
We have attempted to sieve out relative performances using the risk scoring matrix. A key uncertainty that is on the fore of everyone's mind is still the length of the outbreak. We see two potential scenarios being played out from this point.

<u>Base Case Scenario</u>	<u>Alternative Scenario</u>
<ul style="list-style-type: none"> ■ Outbreak in China and overseas last for 3-6 months ■ Direct impact on most regional FY2020 growth could be around 0.5-1.0ppts for economies that are more dependent on Chinese tourist spending, affected by supply chain disruptions due to China's factory closures and China's domestic demand. Impact on economies that are less exposed to China would be less. ■ A V-shaped recovery in global growth as fiscal measures start to take effect. 	<ul style="list-style-type: none"> ■ Outbreak in China and overseas last beyond 6 months with new infection clusters found spreading intensely in and out of China. ■ Border closures remain in place for longer than a quarter. ■ Business and consumer sentiment deteriorate significantly with investment decisions postponed ■ Global trade weakens as second order effect from the softening global demand. ■ Governments are likely to start digging deeper into their coffers to cushion economic impact.

Should the outbreak play out according to the base case scenario with a V-shaped recovery in growth expected, affected currencies should also see corresponding recovery within the quarter.

However, should the alternative scenario play out with new infection clusters found in and out of China that are not contained within first 6 months, investors and consumer sentiments could take a more lasting and deeper hit as the possibility of a pandemic looms. Border closures could be in place longer than expected. Governments may find themselves needing to provide more fiscal stimulus to cushion the economic impact and to save jobs. FX with stronger fiscal surplus could stand to outperform along with traditional safe havens vs. those with weaker fiscal positions. In addition, countries with the ability to be more self-sustainable in the case of prolonged reductions in trade flows could be perceived to be relatively more positive. These include economies with large geographical expanse and ability to be a closed economy.

Appendix 1: FX Trajectories for Selected FX–SARS and Covid-19



Source: Bloomberg, Maybank FX Research & Strategy

Note: SARS' Day 0 Set at 3 March 2003; Covid-19 Day 0 Set at 20 Jan 2020.

Day 0 values of individual currency strength (relative to USD) are indexed to 100.

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