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Covid-19 and Global Financial Markets Outlook

雄心與夢想
Ambitions & Dreams of "Going Global"

Monetary Policy, Interest Rate, Equities, Fixed Income, FX, and Commodities

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Today's Topics

Chapter 1	The Unprecedented Monetary Easing and Fiscal Stimulus
Chapter 2	Interest Rate Market
Chapter 3	Currency Markets
Chapter 4	Equity Markets
Chapter 5	Fixed Income Markets
Chapter 6	Emerging Markets
Chapter 7	Crude Oil Market
Chapter 8	The World Post Covid-19 Pandemic

Unprecedented Events: March 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3 Fed cut O/N rate 50bp, to 1.00% ~1.25%	4	5	6 OPEC+ Russia oil production cut negotiation broke down	7 Saudi announced to ramp-up production & cut price
8 Note: June Brent futures closed: 3/05: $50.17, 3/06: $45.52	9 June Brent futures closed at $35.10 S&P closed 7.79% lower. NYSE circuit breaker triggered	10 Note: 10-yr US Govt bond yield reached historic low of 0.313% in early London trading hour on March 09	11	12 US announced travel ban from Europe . S&P closed 9.99% lower. NYSE circuit breaker triggered	13 IG & HY bond market frozen for the week. No new issuance for this week.	14
15 (Sunday evening US time, Monday morning Asia time): Fed cut O/N rate 100bp, to 0~0.25%. Restart QE, and CP buying.	16 S&P closed 12.93% lower. NYSE circuit breaker triggered	17	18 Trump floated a US$ 1.2 trillion stimulus. S&P closed 6.36% lower. NYSE circuit breaker triggered. ECB: €750 Bil PEPP	19 Credit market: LQD (IG) bottomed 3/19 (rallied 14.7% this week). HYG (HY) and leveraged loan bottomed 3/23	20 IG & HY bond market frozen. No new issuance for 2nd week.	21
22 Note: from 2/29 – 3/23, S&P: -33.93%, Nasdaq: -30.12%	23 Fed announced unlimited QE. Set-up PMCF & SMCF to buy bonds & ETFs. Dow, S&P, Nasdaq bottomed.	24 Congressional leaders assured investors the $2 Trillion package can be agreed. DJIA soared 2,112 points	25	26 US: 3.3 mm people filed jobless claims (week 3/21). US Senate passed $2 trillion stimulus package	27 US House passed $2 trillion stimulus package & Trump signed	28 Note: for the week of 3/23, 49 companies issue d US$107 billion of IG bonds
29 Note: from the low of 3/23 to 3/27, Dow: +16.38%, S&P: +13.59%, Nasdaq: + 9.35%; in 4 trading days.	30	31 Note: for 1st week of March + 3/23-3/30, 106 companies issued US$ 213 Bil of bonds in March, a record month.	1	2	3	4

Unprecedented Events: April 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1	2 US: 6.65 mm people filed jobless claims . Trump intervened in Saudi-Russia oil production cut negotiation	3 Brent futures recovered to $34.11	4
5	6	7 Japan declared a state of emergency and unveiled a US$ 988 Bil stimulus package (upsized to $1.08 trillion)	8 Wuhan unlocked at mid night, after 76 days (since Jan 23)	9 US: 6.61 mm people filed jobless claims. Fed expanded size & scope of bond buying, include HY.	10 Good Friday holiday.	11 Note: Nikkei up 4.96% this week, 4/6-4/10
12 OPEC+ and Saudi announced production cut agreement	13	14	15	16 US: 5.24 mm people filed jobless claims.	17 China Q1 GDP -6.8% (YoY) and -9.8% QoQ May WTI futures closed at $18.27	18
19	20 May WTI futures traded as low as negative $40.32, settled at negative $37.63	21 May WTI last traded at $10.01, June closed at $11.57	22 US Senate (House 4/23) passed the 2nd stimulus package of US$484 Billion	23 US: 4.42 mm people filed jobless claims. Five week total = 26.5mm. Wiped out 10 year of job creation	24	25
26	27 BOJ expanded QE : CP, Corp bond, ETFs, J-REITS	28	29 US Q1 GDP -4.8% Note: from 3/23-4/30, S&P: +30.17%, Nasdaq: +29.57% Euro Stoxx 50 Index was -1.78% from 4/30-5/5	30 Japan passed 2nd stimulus package of US$ 240 Billion. Eurozone Q1 GDP: -14.4%. ECB launched PELTROs, with rate at -1% for 3 years	1 June WTI futures closed at $19.78 on May 01.June Brent futures (last traded on 4/30) at $25.27	2 Note: US$285 billion of IG bond new issuance in month of April, another record month.

Equity and Fixed Income Markets: March debacle, April thru June dramatic recovery, and MTD July performance

Equity Markets (as of July 17, 2020)									
		Recovery	2020				Recovery	2020	
	July MTD	to 6/30	Declined	YTD		July MTD	to 6/30	Declined	YTD
MSCI ACWI	4.41%	36.68%	-33.90%	-3.04%	FANG+ Index	11.96%	60.08%	-34.19%	48.07%
MSCI World	4.18%	41.52%	-34.20%	-2.74%	NBI (BioTech)	5.30%	45.09%	-23.65%	19.51%
Dow Jones	3.33%	40.25%	-37.09%	-6.54%	S&P Software	0.63%	46.87%	-31.21%	16.80%
S&P 500	4.01%	42.35%	-33.93%	-0.19%	OSX (Oil Serivces)	0.27%	55.42%	-73.48%	-57.25%
Nasdaq	4.42%	46.61%	-30.12%	17.06%	KBW US Bank Index	-1.91%	32.64%	-50.76%	-35.51%
MSCI EU	3.38%	25.89%	-34.39%	-11.19%	Stoxx Euro Bank Index	5.86%	25.09%	-50.36%	-31.24%
MSCI EM	6.03%	29.84%	-33.10%	-5.35%	S&P Airlines	-2.33%	45.10%	-66.08%	-50.64%
MSCI Asia ex-J	5.80%	28.93%	-29.32%	-0.27%	S&P Hospitality	4.80%	48.24%	-67.19%	-48.44%
HangSeng Index	2.71%	12.52%	-24.61%	-11.00%	S&P Retailing	6.03%	50.25%	-25.73%	29.82%
Shanghai Index	7.69%	10.46%	-13.03%	5.38%	Dow Transportion	7.93%	31.58%	-37.92%	-9.18%

FICC Markets (as of July 17, 2020)									
		Recovery	2020						
	July MTD	to 6/30	Declined	YTD		17-七月	June 30	March 31	Dec 31
BB US IG Corp TRR	2.05%	17.46%	-15.44%	7.18%	Libor-OIS	19.888	23.960	137.870	34.638
BB US HY Corp TRR	2.22%	19.92%	-20.78%	-1.66%	TED	15.982	15.996	135.897	35.975
LQD (IG)	2.10%	28.03%	-21.76%	7.31%	Dollar Index	95.942	97.391	99.048	96.389
HYG (HY)	2.33%	18.93%	-22.36%	-5.03%	EM Currency Index	55.208	54.235	53.541	61.499
US Leveraged Loan	1.29%	19.35%	-20.73%	-3.37%	Brent (Sep futures)	43.14	41.27	34.13	62.48
Euro Leveraged Loan	0.25%	19.28%	-20.06%	-3.61%	WTI (Aug futures)	40.59	39.27	29.79	58.31
EMB (EM Bond)	1.35%	27.30%	-26.67%	-3.37%	10-yr US Treasury	0.627%	0.657%	0.670%	1.919%

The Unprecedented Monetary Easing and Fiscal Stimulus

Unprecedented Monetary Easing and Fiscal Stimulus

Fed:

1) Lowered O/N Fed Funds rate to zero

2) Unlimited QE (Fed B/S increased from $4.24 to $7.04 trillion in 77 days)

3) Direct purchased of (A1 / P1) commercial paper

4) $5.4 trillion 3-month term-repo, and $ 1 trillion O/N repo

5) Established PMCF and SMCF: to purchase IG and HY bonds and ETF in the market. (HY bond as low as BB-). Deployed $50Bil and $25Bil of ESF from US Treasury as first cushion from losses. IG: 10x leverage. HY: 7 time leverage (Maximum purchasing power: $750 billion)

*1: CARES Act injected $450 billion into ESF, to assist Fed for credit programs

6) $600 billion Main Street Lending Program: for SME lending program

7) $500 billion Muni-lending Plan for loans to states and municipalities

8) Executed US Dollar swap with 9 CBs (Asia: Korea & Singapore)

9) Established FIMA to conduct repo with foreign CBs

Unprecedented Monetary Easing and Fiscal Stimulus

US Government (US Treasury):

a) $ 2.2 trillion fiscal stimulus (CARES Act)

$350 billion earmarked for PPP (*1). Exhausted in 2 weeks

b) $ 484 billion fiscal stimulus

$310 billion to replenish PPP

c) House passed another US$ 3 trillion stimulus plan (HEROES Act)

to provide $ 1 trillion loans to state & municipalities

PPP ? $600/week enhanced unemployment benefit ?

d) Post-pandemic: will see multi-trillion dollar stimulus packages

(*1) PPP: Paycheck Protection Program distorted the May employment number reported on June 05

Unprecedented Monetary Easing and Fiscal Stimulus

ECB:

a) For 2020, the ECB has announced net asset purchases exceeding EUR 1.1tn:

Asset purchases have already been resumed in November 2019 at a monthly pace of EUR 20bn per month (open-ended, announced 12-Sep-19)

This Asset Purchase Program ("APP") has been stepped up by an additional envelope of EUR 120bn to be deployed until end-2020 (announced 12-Mar-20)

On top, a new Pandemic Emergency Purchase Program ("PEPP") has been announced on 18-Mar-20, which will provide an additional envelope of EUR 750bn to be deployed until end-2020

b) Terms of refinancing operations for banks have been eased further

On 30-Apr-20, the ECB announced an easing of conditions for targeted longer-term refinancing operations (TLTRO-3) for the period Jun-20 to Jun-21. The "charged" standard rate now is -50bps and can even reach -100bps depending on how a bank's lending volume to the private sector develops

On top, a new series of non-targeted pandemic emergency longer-term refinancing operations (PELTROs) has been introduced to provide an effective liquidity backstop. They will be carried out as fixed rate tender procedures with full allotment, with an interest rate that currently stands at -25 bps

European Union:

EUR 750 stimulus plan has been proposed (EUR 500bn grants + EUR 250bn credit), but still needs to be approved by all 27 member countries. The European Commission plans to finance the plan via supra-nationally backed bonds issued by itself, which would be a novelty. Payout to individual countries would be contingent on compliance with EU longer-term (e.g. environmental) targets

Fiscal stimulus in selected countries (partly precautionary „umbrella“ measures):

Germany	EUR 346bn of immediate fiscal stimulus (10.1% of GDP) + EUR 500bn of deferrals (14.6% of GDP) + ÉUR 932bn of other liquidity & guarantee measures (27.2% of GDP) = **EUR 1.8tn**
France	EUR 57bn (2.4% of GDP) + EUR 228bn (9.4% of GDP) + EUR 337bn (14% of GDP) = **EUR 622bn**
Italy	EUR 16bn (0.9% of GDP) + EUR 235bn (13.2% of GDP) + EUR 530bn (29.8% of GDP) = **EUR 781bn**
Spain	EUR 29bn (2.3% of GDP) + EUR 11bn (0.9% of GDP) + EUR 114bn (9.2% of GDP) = **EUR 154bn**

Unprecedented Monetary Easing and Fiscal Stimulus

BOJ： Unlimited QE

Japan: Early April: US$ 988 billion fiscal stimulus (upsized to $ 1.086 trillion)
Late April: another US$ 240 billion fiscal stimulus
Late May: another US$ 1.1 trillion stimulus package

China/ PBOC:

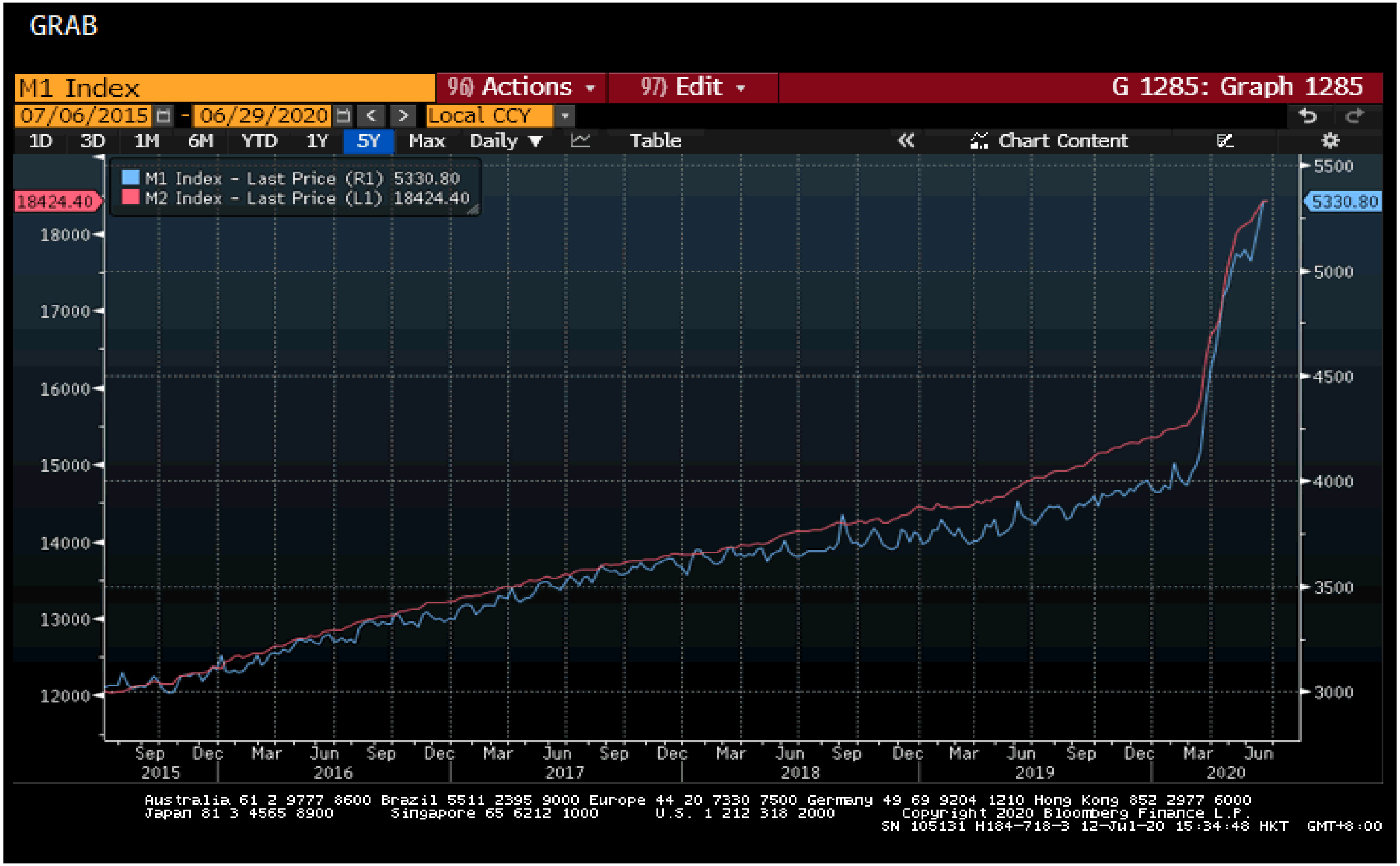
The PBOC set-up 2 programs to support the real economy:

1) The PBOC created a quota of RMB400bn to purchase 40% of S&M credit loans under the inclusive finance caliber newly issued by qualified local banks from 1 March 2020 to 31 December 2020. The policy essentially provides interest-free funds with one-year maturity to strengthen S&M credit loans.

2) The PBOC and the MoF will provide local banks with incentives, equaling 1% of the principal amount being extended, for the extension of S&M loans under the inclusive finance caliber. The quota for the incentives is RMB40bn where the PBOC estimated that S&M loans totaling RMB3.7trn may be supported.

Fed, ECB and BOJ: Unlimited QE. Fed balance sheet increased from $4.31 trillion to $ 7.17 trillion in 90 days (+66%)

US Money Supply: **Since March, M1 increased from $4.03 trillion to $5.33 trillion, M2 from $15.6 trillion to $ 18.4 trillion. CFS Divisia M4 (the broadest and most important measure of money) in May increased 28.5% YoY, and 20.0%** QoQ



US MMF assets: increased from $3.68 trillion to $4.79 trillion
US bank deposits: increased from $13.5 trillion to $ 15.6 trillion

The Unprecedented Monetary Easing and Fiscal Stimulus - Summary part 1

- Due to the 2020 Covid-19 pandemic, and the economic lock-down, the March 2020 financial market debacle was the most rapid and severe in history. For example, the S&P 500 index and Nasdaq index both made all time high on February 19. By March 23, they have declined 34% and 30% respectively. Credit market (both investment grade and high yield) new issuance stopped, secondary markets prices declined dramatically, and liquidity essentially dried up.
- However, since March 23, 2020, the equity markets and the corporate bond markets (since March 19) recovered spectacularly. From March 23 through April 30, the S&P 500 index recovered 30%, Nasdaq recovered 29.5%, LQD (investment grade corporate bond ETF) recovered 22.96% from March 19 through April 30 **(Fed officially announced purchase of IG and HY corporate bonds and ETFs on Monday morning March 23)**. HYG (HY corporate bond ETF) recovered 12.73% from March 19 through April 30 (Fed buying was concentrated in IG).
- Besides the traditional central bank monetary easing (cutting interest rate to zero) and unlimited QE**, the Fed did something totally unorthodox, the Fed became the lender of last resort to corporate America**. Fed set up the **Primary and Secondary Corporate Debt Facilities** with US$ 75 billion of equity capital from US Treasury (to absorb the first loss). The Primary Corporate Debt Facility is to purchase bonds directly from companies issuing the bonds. The Secondary Corporate Debt Facility is to purchase bonds and ETFs in the secondary market. Investment grade bonds can be leveraged 10 times (assuming a 10% credit loss). Non-Investment grade bonds can be leveraged 7x (assuming 30% credit loss); which means a maximum purchasing power of US$ 750 billion ($75 billion x 10). The programs also extend helping hand to fallen angels (companies who were rated BBB before March 20, but downgraded to BB- or above due to the coronavirus impact are eligible).

The Unprecedented Monetary Easing and Fiscal Stimulus - Summary part 2

- The Fed has crossed the Rubicon. In addition to being a central bank, the Fed is also a commercial bank, and THE lender of last resort. Financial market history WILL remember the Fed rescued the US credit markets in 2020, with the actual purchased of IG and HY bonds and ETFs, and the perceived unlimited support for corporate America.

- The new issue market came back life after March 23. Weeks of March 09 and March 16, there were no corporate bond issuance in US. Week of March 23, together with the first week of March, and last 2 days in March, there was a US$267 billion of bonds in March (biggest month on record). The borrowing binge continued into April, with US$ 336 billion of bond issuance (eclipsed month of March as the biggest month on record). New Issuance remained robust for the month of May, with US$302 billion of new issuance (second biggest month on record). Seven IG rated oil producing countries issued a total of US$ 40.3 billion of bonds from April 6 to April 22.

- Nothing epitomized the Fed magical power than the Boeing example. **The Fed bailed out Boeing without spending one penny**. Due to 737-Max problems and Covid-19 disruption on the airline industries (airlines cancelled orders and plane deliveries), and with credit market frozen in March, Boeing went to Washington in March to seek a US$ 60 billion bail-out. As the negotiation bogged down, and credit market condition improved, Boeing (Baa2/BBB-/BBB; was A3/A-/A- in January) on Thursday April 30, was able to issue a total US$ 25 billion of bonds in the market, 7 tranches with maturity from 3, 5, 7, 10, 20, 30 and 40 years. The order book reached US$ 70 billion. **Boeing withdrew the government bail-out request**.

Interest Rate Market

Global Government bond yield

13 developed countries with negative 2-year government bond yield

Globally: there are about US$ 10 trillion of debt securities with negative return

Countries		Bond Yield (%)			
	Policy Rate (%)	Maturity (2 yrs)	Maturity (5 yrs)	Maturity (10 yrs)	Maturity (30 yrs)
USA	**0.25**	0.15	0.29	0.63	1.32
Germany	**0.00**	-0.71	-0.69	-0.47	-0.05
France	**0.00**	-0.63	-0.53	-0.15	0.55
Italy	**0.00**	0.08	0.70	1.22	2.16
Spain	**0.00**	-0.43	-0.19	0.41	1.20
Finland	**0.00**	-0.64	-0.64	-0.31	0.15
Netherlands	**0.00**	-0.66	-0.64	-0.33	-0.03
Austria	**0.00**	-0.65	-0.56	-0.27	0.22
Belgium	**0.00**	-0.59	-0.54	-0.16	0.55
Ireland	**0.00**	-0.56	-0.42	-0.04	0.57
Switzerland	**-0.75**	-0.87	-0.72	-0.52	-0.35
Sweden	**0.00**	-0.41	-0.39	-0.16	-
Denmark	**0.05**	-0.65	-0.58	-0.38	0.08
UK	**0.10**	-0.12	-0.08	0.15	0.62
Japan	**-0.10**	-0.14	-0.11	0.01	0.57

Source: Bloomberg, data as of July 13 2020

Fed: Cut over night interest rate to zero

US Overnight interest rate vs 3-month Libor

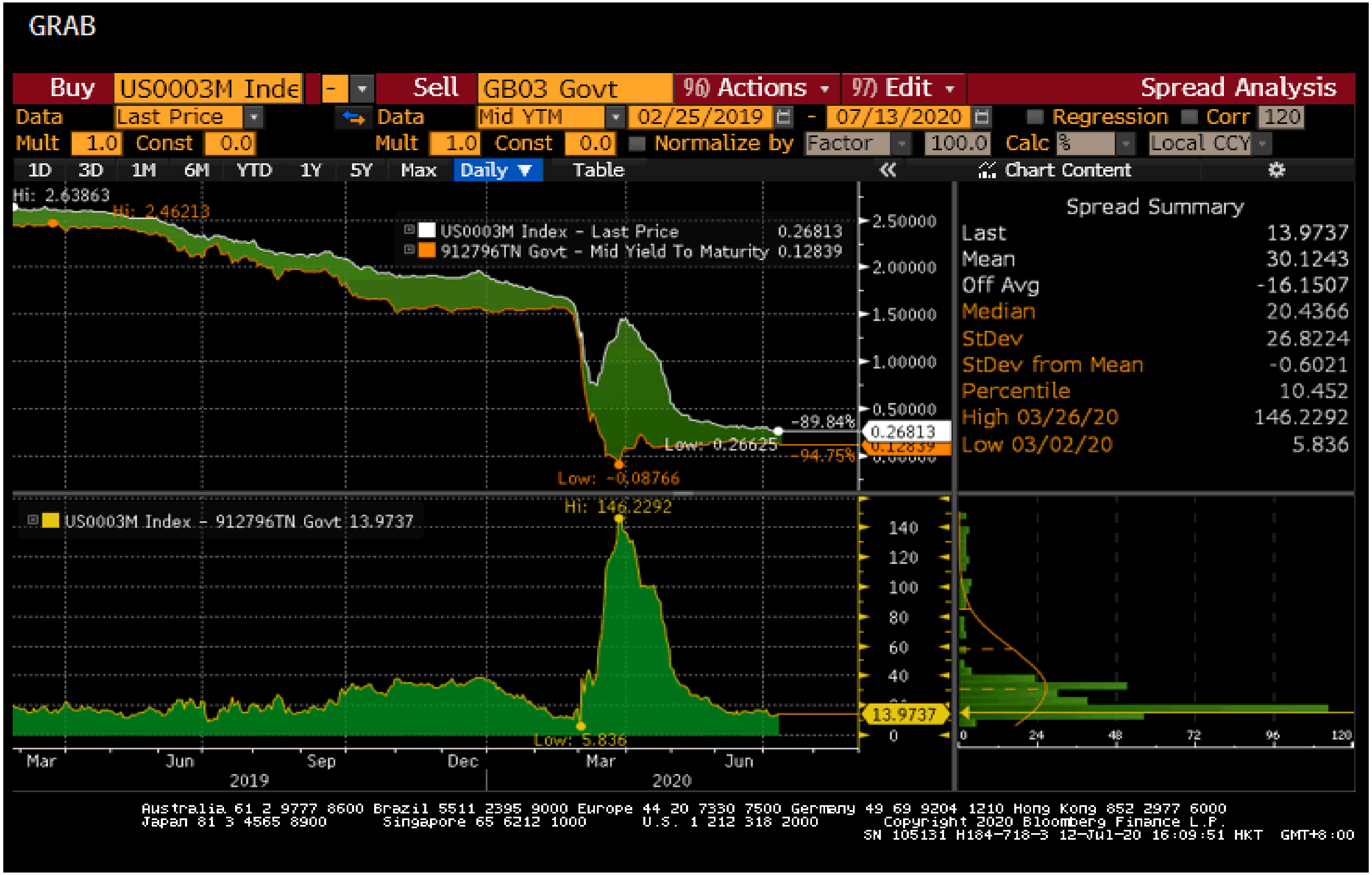
US: 2-yr, 5-yr, 10-yr, 30-yr Govt Bond Yield

(US Treasury to auction $ 3 trillions of securities in Q2)

Currency Markets

US Dollar (domestic USA) Liquidity (TED: 3-month T-bill vs Eurodollar spread)

Mid March to early April: US domestic liquidity was tight (but not as tight as 2008: 463.11)

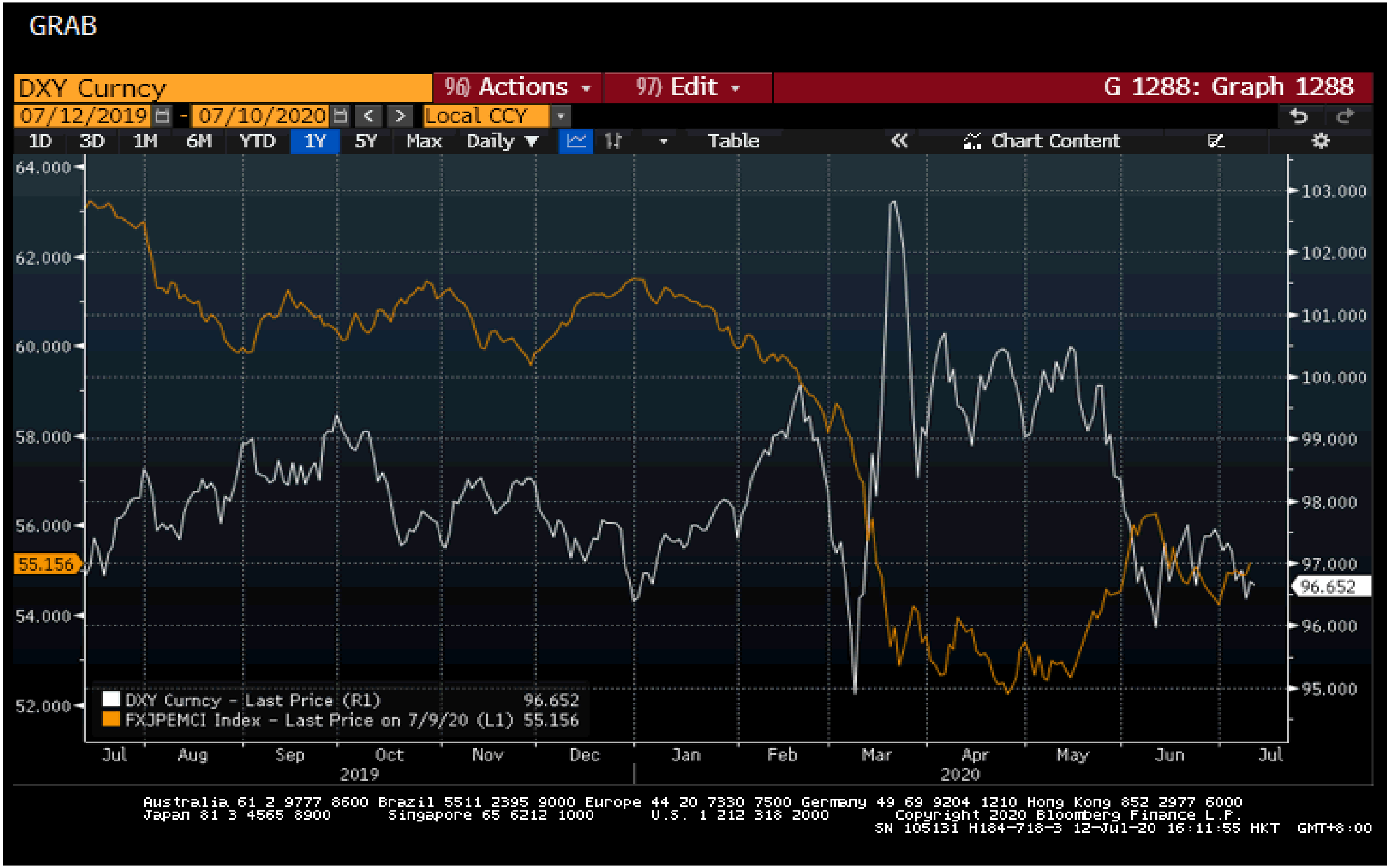


US Dollar (offshore) liquidity Libor-OIS Index

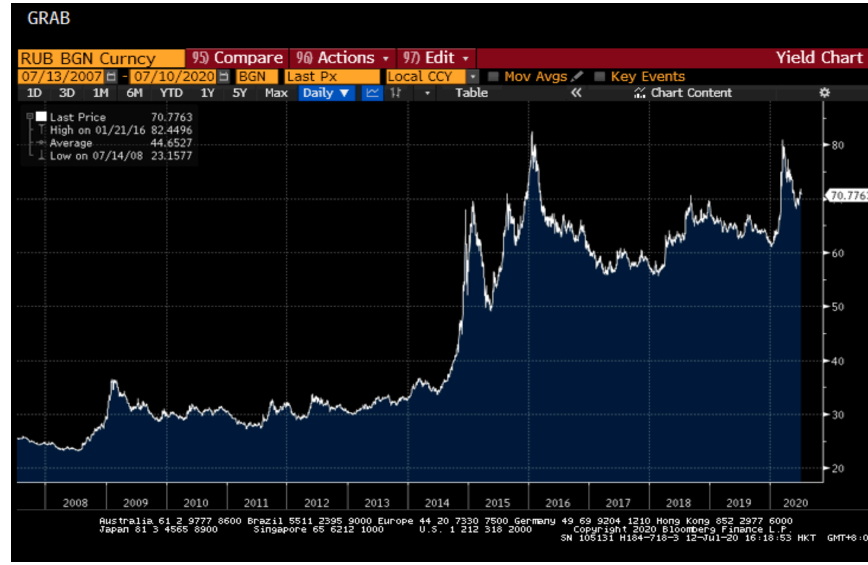
Mid March to early April: Dollar offshore liquidity was very tight
(But not as tight as 2008: 238.725)

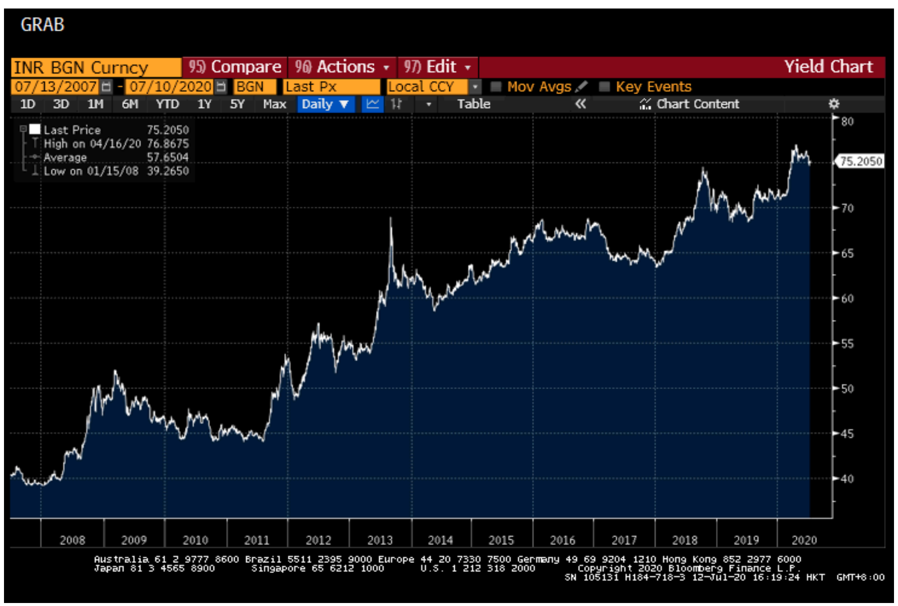
Dollar Index vs EM Currency Index:

March 18: Fed executed swap line with 9 foreign central banks
March 31: Fed established temporary repo facility with foreign central banks



Emerging Market Currencies: (BRICS)





RMB: Expects Global Investors to increase RMB Asset weighting

1) A-Share inclusion in MSCI Index, B) RMB Bond inclusion in Bloomberg Barclays Global Aggregate Index

Equity Markets

Global Equity Return: 2008-2019, 2020 Jan - June

	2020 YTD June	Month of June	Month of May	Month of April	Month of March	2019	2018	2010	2010-2019	2009	2008
MSCI All Country	-7.14%	3.03%	4.15%	10.58%	-13.73%	24.05%	-11.18%	10.42%	88.77%	31.52%	43.54%
MSCI World Index	-6.64%	2.51%	4.63%	10.80%	-13.47%	25.19%	-10.44%	9.55%	101.82%	26.98%	-42.08%
S&P 500	-4.04%	1.84%	4.53%	12.68%	-12.51%	28.88%	-6.24%	12.78%	189.73%	23.45%	38.49%
MSCI Europe	-14.08%	2.88%	2.57%	5.85%	-14.64%	22.24%	-13.10%	8.04%	58.13%	27.15%	-45.52%
Japan (Nikkei)	-5.78%	1.88%	8.34%	6.75%	-10.53%	18.20%	-12.08%	-3.01%	124.31%	19.04%	-42.12%
MSCI EM Index	-13.45%	4.59%	4.25%	6.22%	-17.29%	15.42%	-16.64%	16.36%	12.65%	74.50%	54.48%
MSCI Asia ex-Jpn	-5.73%	7.87%	-1.41%	8.90%	-12.24%	15.37%	-16.38%	16.99%	41.93%	68.32%	53.65%
HangSeng Index	-13.35%	6.38%	-6.83%	4.41%	-9.67%	9.07%	-13.61%	5.32%	28.88%	52.02%	-48.27%
MSCI China	2.01%	8.35%	-0.84%	6.33%	-7.10%	20.36%	-20.31%	2.58%	32.02%	58.88%	-52.23%
Shanghai Comp	-2.15%	4.64%	-0.27%	3.99%	-4.51%	22.30%	-24.59%	-14.31%	-6.93%	79.98%	-65.39%
MSCI Latin Am	-36.03%	5.18%	6.23%	5.95%	-34.63%	13.71%	-9.27%	12.07%	-29.13%	98.14%	52.78%

Source: MSCI, Bloomberg

Dow Jones, S&P 500, Nasdaq: Made new highs on 2/12, 2/19, 2/19 Declined 37%, 34%, 30%.

Dow Jones, S&P500, Nasdaq and FANG+ Index

Cumulative % return (FANG+ started in mid 2014)

Growth out-performed Value

FAAMG: Cumulative % Return

FAAMG Market cap = 20% of S&P500, = 40% Nasdaq

Inclusion of China A share in MSCI and FTSE Russell Indexes

MSCI Indexes:

- MSCI announced on March 2019 that it will increase the weight of China A shares in the MSCI Indexes from 5% to 20% using 3-step inclusion process (including large and mid cap, and ChiNext shares)
- 253 large cap stocks (169 originally proposed) and 168 mid cap stocks. Expected fund in-flow: $400 billion over a decade
- Based on historical date, China A share weighting in MSCI EM Index was 0.73% as of Aug 2018
- As of the close of Nov 26, the net inflow of northbound funds on that day had reached 24.363 billion yuan, a record high in history of single day net inflows
- On Nov 27, MSCI announced that the Phase One of China's A-share inclusion was completed. The inclusion factor for large-cap A shares is increased to 20%, and mid-cap A shares will be included in its global index for the first time with a 20% inclusion factor. This is the last and the largest of the “”three steps” to increase the weight of A shares in 2019. It is expected that this expansion will bring in about 43 billion yuan of passive incremental capital

FTSE Russell Indices:

- China A shares have been added to the FTSE Emerging Index as of Jun 2019, will be included in a phased timeline which targets to complete by Mar 2020
- At the completion of Phase 1, projects that China A shares' weight will increase to 5.57% in the FTSE Emerging Index

Inclusion of China A share in international indices (continues)

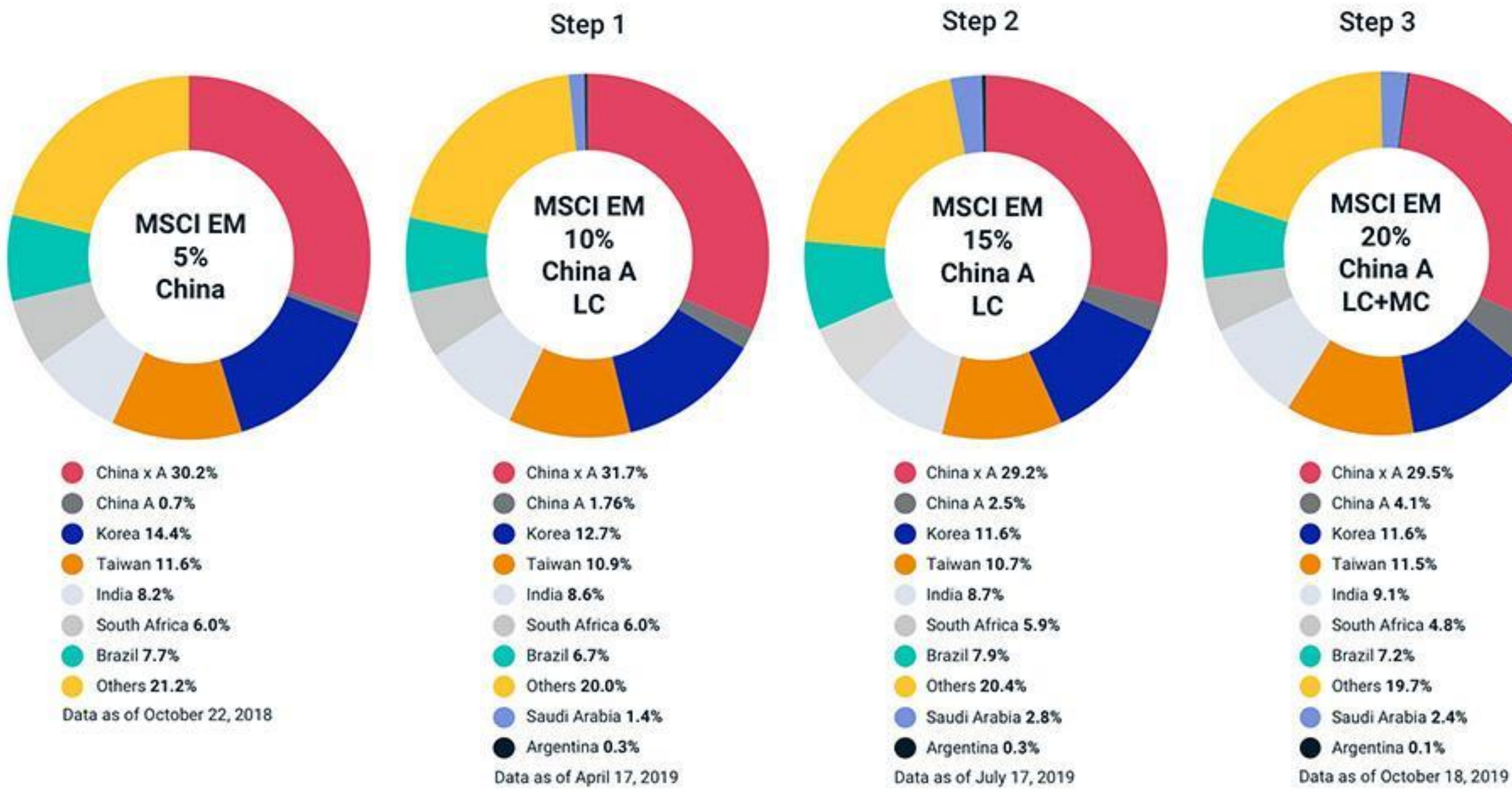
S&P Dow Jones Indices:

- 1099 China A shares was added to S&P Emerging BMI which was effective on Sep 23, 2019 including 147 large cap stocks, 251 mid caps and 701 small caps (ex ChiNext listed)
- China A shares are projected to represent a weight of 6.2% in the S&P Emerging BMI, in which China as a whole is expected to weight 36% (A-shares, HK and overseas listed)
- Forecasts show that the inclusion of S&P Dow Jones in A shares will generate a passive incremental capital of $1.1 billion for A shares

Significance：

- **1980: Special economic Zone (Shenzhen: a success story)**
- **2001: China Joined WTO**
- **2010~2015: RMB Internationalization, One Belt One Road**
- **2018: A share inclusion in MSCI Indices, Bond Connect**
- **2019: A share inclusion in FTSE Russell and S&P Dow Jones indices**
  On-shore RMB bond inclusion in Bloomberg Barclays Indices, JPM GBI-EM Index

A-Share Weighting in MSCI Index: 2018 Oct 22, 2019 Apr 17, 2019 Jul 17, 2019, Oct 18



Source: MSCI Research

Fixed Income Markets

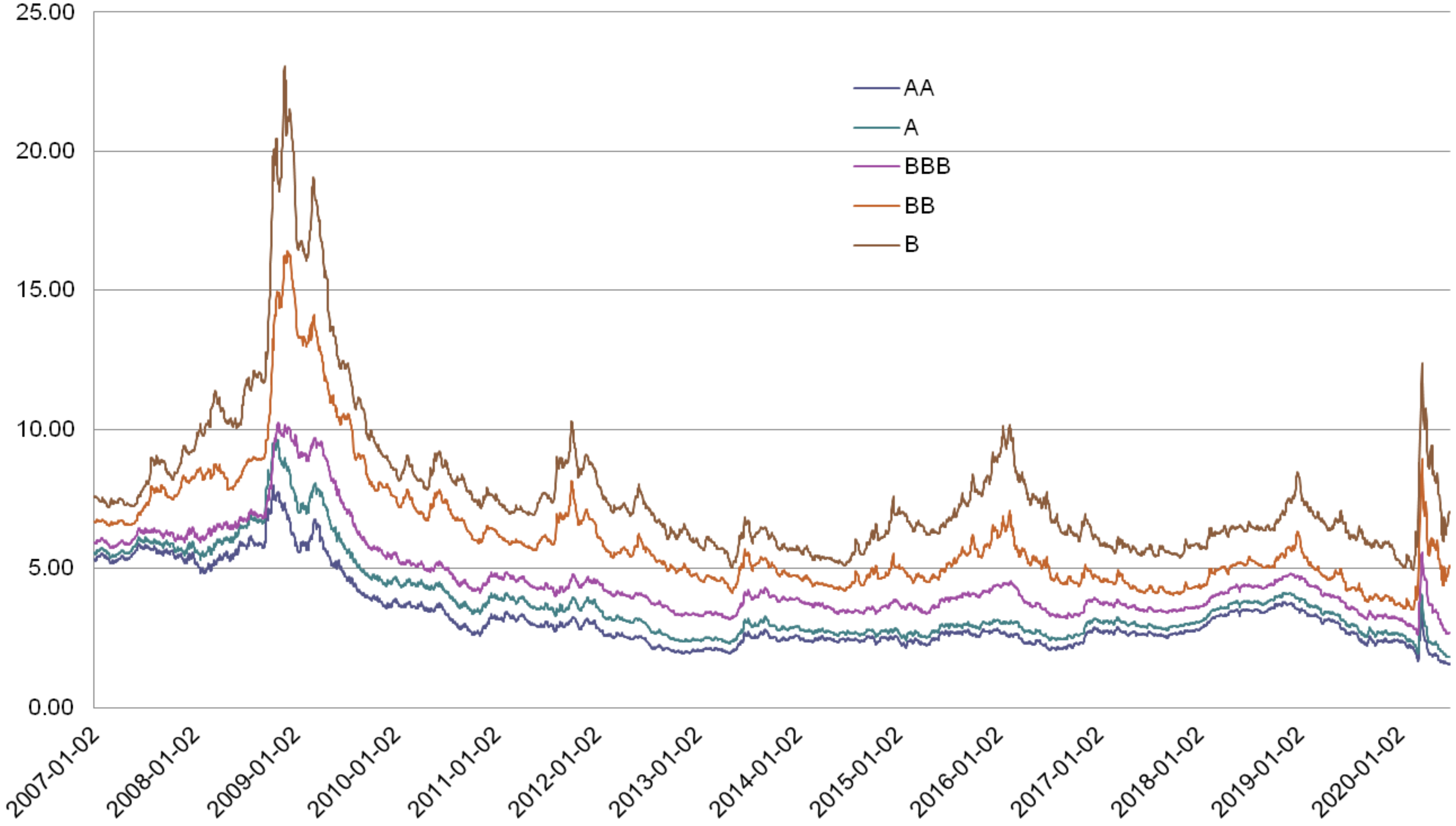
March 2020: Global Debt Markets (Risk Assets) experienced the worst month performance in over a decade

Data as of 2020 June 30

	2020							
	YTD June	YTD Mar	YTD Feb	2019	2018	2010	2009	2008
BB US Agrregage Index	6.14%	3.15%	3.76%	8.72%	0.01%	6.54%	5.93%	5.24%
BB US Treasury Index	8.71%	8.20%	5.16%	6.86%	0.86%	5.87%	-3.57%	13.74%
BB US IG Corporate Bond	5.02%	-3.63%	3.71%	14.54%	-2.51%	9.00%	18.68%	-4.94%
BB US HY Corporate Bond	-3.80%	-12.68%	-1.38%	14.32%	-2.08%	15.12%	58.21%	-26.16%
BB Global IG Bond Index	2.98%	-0.33%	1.96%	6.84%	-1.20%	5.54%	6.93%	4.79%
BB Euro Aggregate Index	1.24%	-1.13%	2.34%	5.98%	0.41%	2.18%	6.95%	6.22%
BB USD Global EM Bond Index	-0.43%	-9.48%	1.34%	13.11%	-2.46%	12.84%	34.23%	-14.75%
Asia Ex-Japan Bond	2.23%	-3.73%	2.34%	10.50%	-0.69%	8.89%	22.32%	-6.49%
Asia Ex-Japan Corporate Bond	2.31%	-3.62%	2.19%	10.17%	-0.73%	10.77%	25.10%	-8.62%
China Offshore Bond	2.97%	-1.68%	2.26%	9.85%	-0.75%	12.16%	26.00%	-7.86%
China Offshore Corp Bond	2.86%	-2.00%	2.16%	9.97%	-0.92%	15.32%	43.74%	-19.78%
China Offshore USD IG Bond	3.56%	0.62%	2.91%	9.08%	0.37%	7.49%	20.99%	-8.64%
China Offshore USD HY Bond	1.57%	-7.19%	0.68%	12.22%	-4.22%	23.34%	100.60%	-38.20%

USD Corporate Bond Total Return: AA, A, BBB, BB, B rated

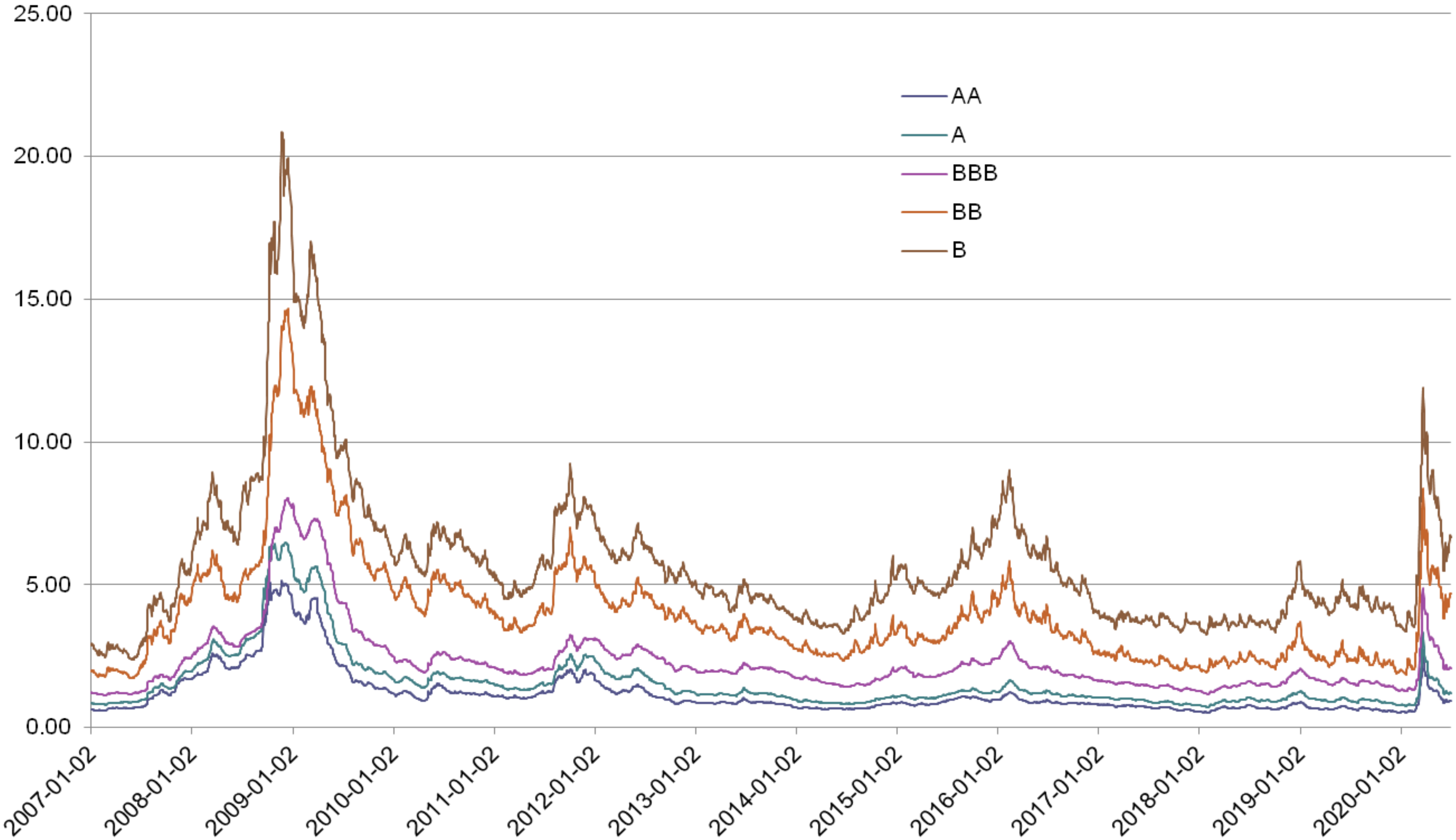
2020-June 30: AA: 1.57%, A: 1.81%, BBB: 2.68%, BB: 5.11%, B: 7.01%



Source Fred Data, data as of 30 June 2020

USD Corporate Bond Credit Spread: AA, A, BBB, BB, B rated

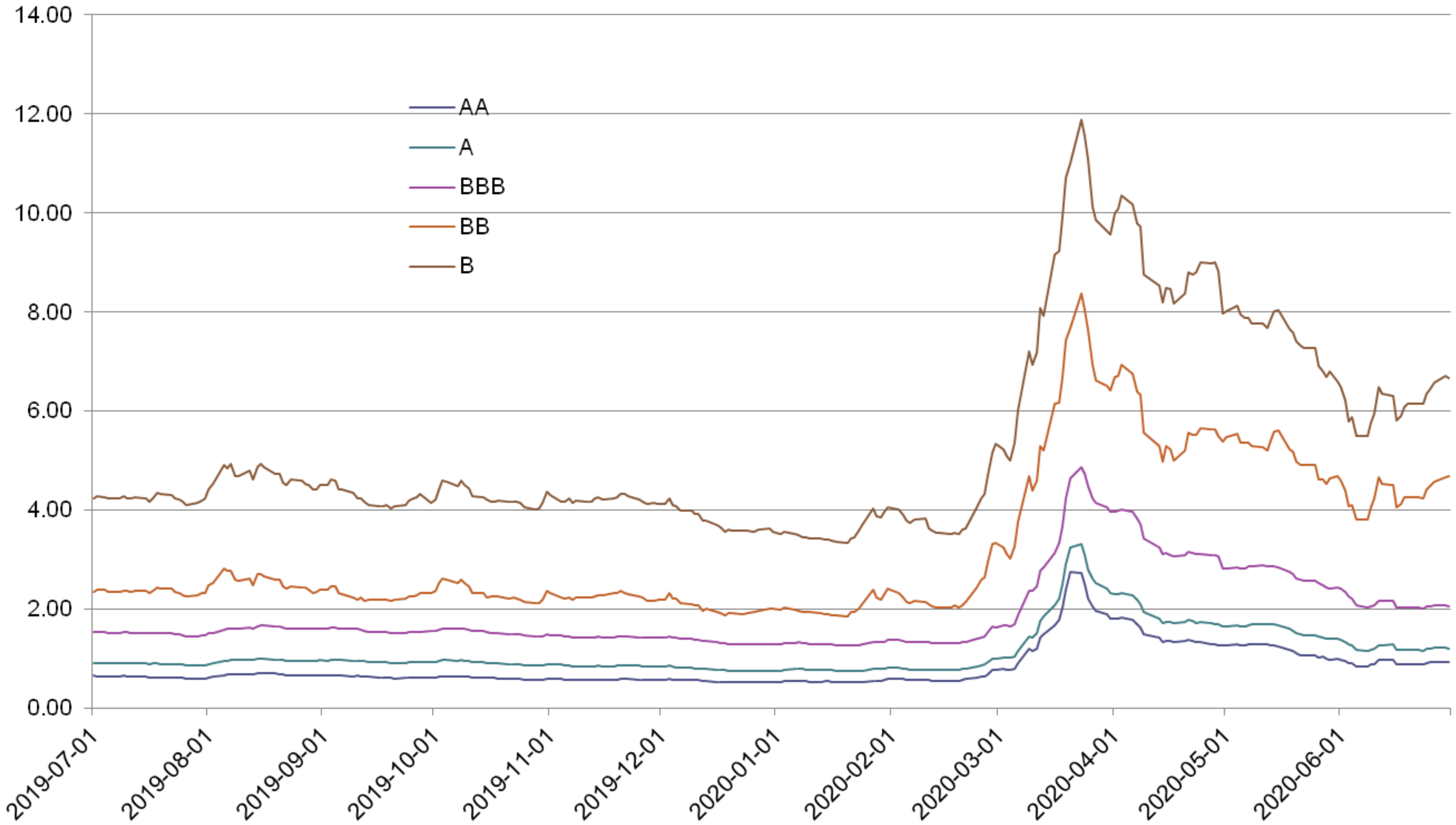
2020-May-31: AA: 0.93%, A: 1.20%, BBB: 2.07%, BB: 4.69%, B: 6.66%



Source Fred Data, data as of 30 June 2020

USD Corporate Bond Credit Spread: A, A, BBB, BB, B (since 2019)

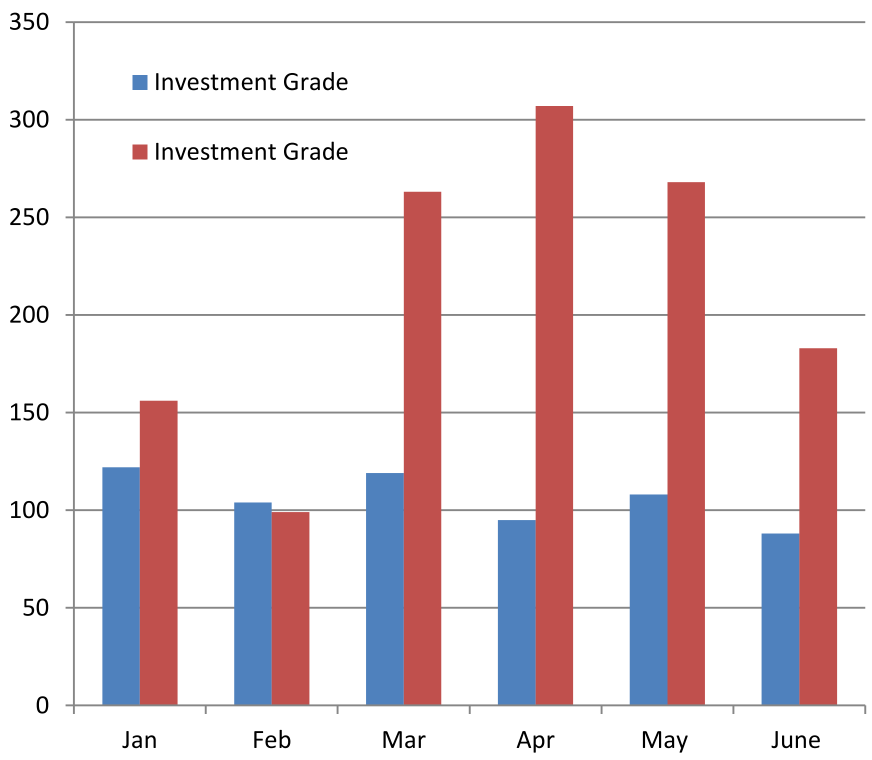
2020-June 30: AA: 0.93%, A: 1.20%, BBB: 2.07%, BB: 4.69%, B:6.66%

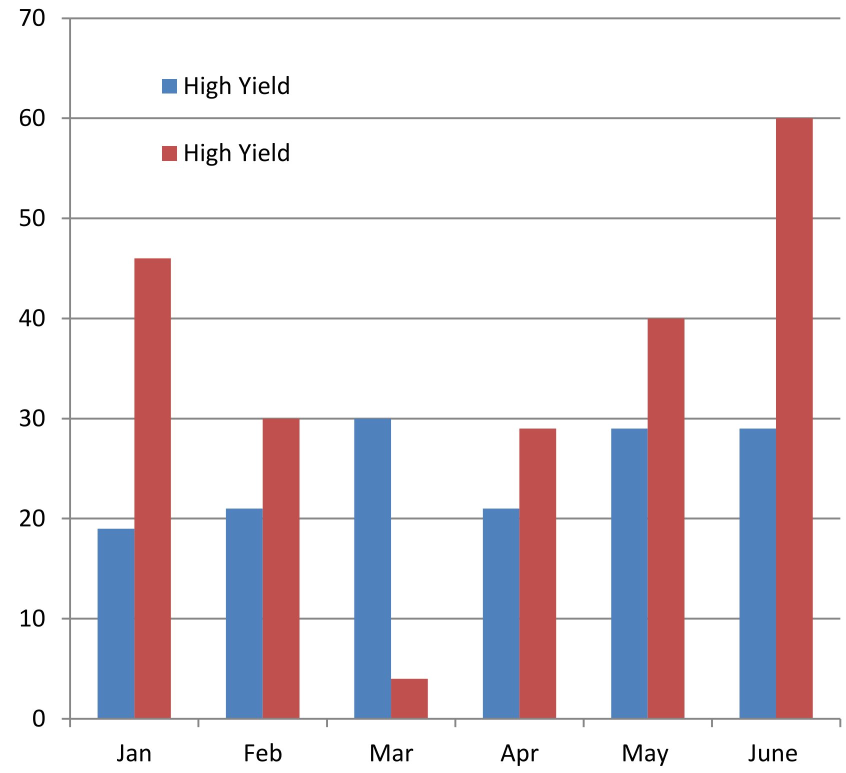


Source Fred Data, data as of 30 June 2020

US IG and HY Corporate bond issuance YTD (in billions)

1H 2020, US$ 1.28 trillion IG bond issuance (+99.66% YoY), US$ 211 Billion HY bond issuance (+37.46% YoY), Euro 1.57 trillion issuance (+43.3% YoY)





Source Bloomberg: Data as of June 30

The largest USD IG corporate bond EFT in the world

March 09 thru March 19 debacle, and spectacular recovery (Fed Purchase)

The largest USD HY Corporate Bond ETF in the World

Early March thru March 23 debacle & recover. **(Fed to purchase BB- rated HY)**

Leveraged Loan Index: Bank loans to highly leveraged, low rating, or unrated corporates (late Fed thru March 23 debacle)

China bond inclusion in global bond indices
(Domestic, RMB Denominated)

- Three major global indices:
  - Bloomberg Barclays Global Aggregate Index (formerly known as Lehman Index)
  - JP Morgan Government Bond Index-Emerging Markets
  - FTSE World Market Government Bond Index (formerly known as Citi Index)
- Starting in April 2019, Bloomberg included Chinese government bonds and policy bank bonds in the Bloomberg Barclays Global Aggregate Index.
  - The inclusion would be completed in 10 months.
  - As of Jan 31. 2019, a total number of 364 bonds would be included and would make up 6.06% of the index's market value of US$ 54.9 trillion once being fully included.
- Start from Feb 2020, JP Morgan will include Chinese government bonds in its Government Bond Index-Emerging Markets series (GBI-EM), including GBI-EM Global, GBI-EM (Narrow) and GMI-EM (Narrow) Diversified.
  - The inclusion process will be completed in 10 months step by step.
  - By breaking down the estimated size of GBI-EM (US$ 226bn), the size of GBI-EM Global accounts for US $202bn. Chinese government bonds will reach the 10% weighting limit of the index when fully included.
- In September 2019, FTSE Russell stated it would not include China in its flagship government bond index, citing market liquidity and foreign exchange concerns in the country's US$ 5 trillion government debt market. But it acknowledged China has made significant progress towards achieving inclusion in FTSE Russell's flagship World Government Bond Index
- China bond market: a total size of RMB 75.8 trillion (US $ 12.4 trillion), as the world's third largest bond market (US : US $ 40.7 trillion, Japan: US $ 12.6 trillion); foreign investors currently hold RMB bond worth of RMB 1.5 trillion, making up 2% of the total *1
- Expected to have US$ 2 trillion capital inflow towards China

*1 Source: BIS

Emerging Markets

JPM EM Currency Index

EM: Equity vs Bond vs Currencies: Cumulative Return 2007-2020 (Pre GFC thru 2020)

For Emerging Markets, 2020 will be a challenging year:
The imminent emerging market debt crisis?

a) In 2020, the Covid-19 epidemic have serious impact on EM countries

b) Difficult choices:

- a) Lock-down economy, b) Spend on Covid-19 health care
- c) Repayment of external debt, d) Ensure adequate food supply?

c) 102 countries have turned to the IMF for help

d) Emerging market countries' foreign debt exceeds US$ 8.4 trillion

e) US $ 730 billion coming due from May – Dec 2020

f) Countries already in trouble: Venezuela, Lebanon, Argentina

Who else will be after the Covid-19 pandemic??

G) 15 emerging country bonds have trading difficulties: Ecuador, Zambia, Suriname, Angola, Sri Lanka, Iraq, Tajikistan, Cameroon ...

H) Is temporary debt extension possible?

I) Can Argentina avoid the 9th sovereign debt default in 2020?

Argentina defaulted on US$ 95 billion foreign debt on December 23, 2001
(the largest sovereign default in history, the most egregious treatment of creditors)

15 years later: returned to international capital markets in 2016, issuing $16 billion in bonds

On June 19, 2017, Argentina issued a $ 2.75 billion 100-year bond

In April 2020, Argentina requested international investors to restructure USD 65 billion debt.

Interest discount: 62%,

Principal discount: 5.4%

3-year payment suspension

Cash flow discount = 70%

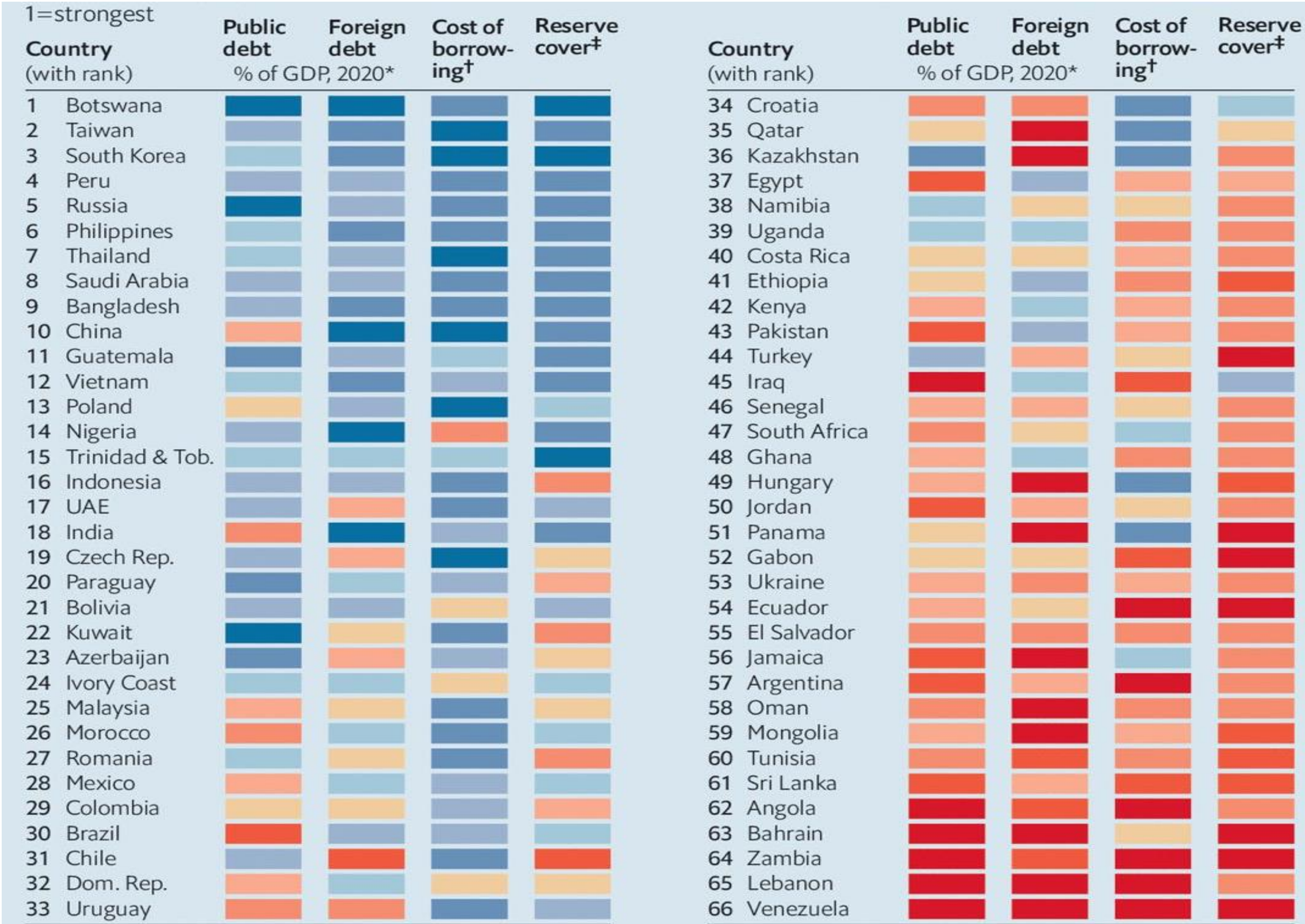
Acceptance deadline: May 8

Otherwise: default on May 22

Result: Argentina defaulted on May 22
The 9th foreign debt default in history
(domestic debt: 5 times)

Why investors continue to invest Argentina?
Answer: Market game rules

Emerging Market Economies: Financial Strengths



Source: EIU, IMF

Crude Oil Market

Breakeven Equilibrium Oil price:
Budget vs Balance of Payment

(U.S. dollars per barrel)

	Average 2000–2016	2017	2018	2019	2020 (Projections)	2021 (Projections)
Fiscal Breakeven Oil Price[3]						
MENAP oil exporters						
Algeria	...	91.4	101.4	104.6	157.2	109.3
Bahrain	76.0	112.6	118.4	106.3	95.6	84.4
Iran, I.R. of	56.1	64.8	67.8	244.3	389.4	319.5
Iraq	...	42.3	45.4	55.7	60.4	54.0
Kuwait[1]	...	45.7	53.6	**52.6**	61.1	60.3
Libya	80.7	102.8	68.6	48.5	57.9	70.3
Oman	...	96.9	96.7	**92.8**	86.8	79.8
Qatar	45.5	51.3	48.0	**44.9**	39.9	36.5
Saudi Arabia	...	83.7	88.6	**82.6**	76.1	66.0
United Arab Emirates	48.0	62.0	64.1	**67.1**	69.1	60.6
Yemen[2]	...	125.0	...	...	...	...
CCA oil and gas exporters						
Azerbaijan	51.6	60.9	56.3	44.6	78.5	68.4
Kazakhstan	...	105.2	37.9	68.4	88.5	65.7
Turkmenistan	...	55.9	60.9	55.2	42.0	40.5
Uzbekistan	...	...	...	...	...	...

	Average 2000–2016	2017	2018	2019	2020 (Projections)	2021 (Projections)
External Breakeven Oil Price[4]						
MENAP oil exporters						
Algeria	81.4	90.1	101.7	96.0	112.2	91.1
Bahrain	47.2	73.1	98.1	76.5	80.8	74.3
Iran, I.R. of	40.7	33.5	42.4	44.7	79.3	84.1
Iraq	67.4	45.4	53.0	60.7	59.1	52.7
Kuwait	35.3	43.1	48.6	50.5	**50.6**	50.3
Libya	54.6	43.5	65.8	57.4	59.1	70.4
Oman	45.5	85.8	78.3	74.5	**62.1**	56.3
Qatar	50.2	45.7	52.0	56.4	**37.6**	40.0
Saudi Arabia	57.2	49.9	47.2	50.1	**44.2**	45.3
United Arab Emirates	52.2	28.7	27.3	31.0	**32.0**	25.7
Yemen[2]	145.0	...	...	...	...	...
CCA oil and gas exporters						
Azerbaijan	56.5	59.3	75.9	83.6	80.7	72.7
Kazakhstan	86.0	82.7	81.5	81.5	77.1	78.1
Turkmenistan	77.0	54.0	22.8	26.0	27.9	22.3
Uzbekistan	...	...	...	...	...	...

Sources: National authorities; and IMF staff estimates and projections.
[1]Kuwait's fiscal breakeven oil price is before the compulsory 10 percent revenue transfer to the Future Generations Fund including investment income.

Brent (June Futures): Feb 17 thru May 01

(Monday March 6: futures price dropped unprecedented 30%)

WTI: May contract vs June contract

(On April 20: May futures price plunged to: -$40.32, settlement price: -$37.63)

(June contract on May 19 last traded at $32.50)

WTI: May contract: April 20 = last roll-over date, April 21 = last trade date)

(On April 20: May futures price plunged to: -$40.32, settlement price: -$37.63)

Oil Exporting Countries US bond issuance: (since Covid-19)

US$ 40.3 billion bond issuance from April 06 thru 22

Date	Country	Rating	Maturity	Coupon	Spread	Amount
2020 04-06	Republic of Indonesia	Baa2/BBB/BBB	10.5-year	3.85%	T+ 323.2bp	US$ 1.65 Bil
			30.5-year	4.20%	T+ 296.8bp	US$ 1.65 Bil
			50-year	4.45%	T+321.8bp	US$ 1.00 Bil
2020 04-07	Qatar (Min of Finance)	Aa3/AA-/AA-	5-year	3.40%	T+300bp	US$ 2.00 Bil
			10-year	3.75%	T+305bp	US$ 3.00 Bil
			30-year	4.40%	T+ 307.9bp	US$ 5.00 bil
2020 04-08	Emirate of Abu Dhabi	Aa/AA/AA	5-year	2.50%	T+220bp	US$ 2.00 Bil
			10-year	3.125%	T+240bp	US$ 2.00 Bil
			30-year	3.875%	T+271bp	US$ 3.00 Bil
2020 04-14	Patronas (Malaysia)	A2/A/A-	10-year	3.50%	T+290bp	US$ 2.25 Bil
			30-year	4.55%	T+314.2bp	US$ 2.75 Bil
			40-year	4.80%	T+339.2bp	US$ 1.00 Bil
2020 04-15	Kingdom of Saudi Arabia	A1/A/A	5.5-year	2.90%	T+260bp	US$ 2.50 Bil
			10.5-year	3.25%	T+270bp	US$ 1.50 Bil
			40-year	4.50%	T+327bp	US$ 3.00 Bil
2020 04-22	Mexico (UMS)	Baa1/BBB/BBB-	5-year	3.90%	T+375.9bp	US$ 1.00 Bil
			12-year	4.75%	T+437.8bp	US$ 2.50 Bil
			31-year	5.00%	T+427.2bp	US$ 2.50 Bil

The World Post Covid-19 Pandemic

The World Post Covid-19 Pandemic:

- The 2020 Pandemic will no doubt be a catalyst for geopolitical resets, including the undermining of international institutions (WHO) and reinforcing nationalism. Putting politics aside, the two major post pandemic themes likely to evolve are:

  a) Deglobalization and b) Supply chain resiliency. (A) and (B) are intertwined.

- The past decades with the advancement in information technology and logistics, low cost production and profit margin maximization took center stage. Global corporations moved or outsourced manufacturing to the lowest cost producer region/ countries; with efficient manufacturing and well developed supply chains. No country captured this shift more than China. With the supply chain disruption during the Covid-19 lock-downs, the deficiency became acutely painful. Post pandemic, corporations will no doubt re-think their supply chain diversification, logistics, and resiliency. Already, there are many speculations about relocating manufacturing away from China. Is this likely?
- Moving supply chains out of China is not a new subject, but it is easier said than done. In many instances, shifting production from China could actually result in a net increase in costs given China's well-developed logistics infrastructure, relatively complete supply chain, and competitive exporting capability. It is equally important to note that China has a huge domestic consumer market. Foreign companies targeting Chinese consumers have a very good reason to keep their production in China.
- **Industries and sectors deemed "strategic" or "sensitive" from a national security perspective will no doubt keep their supply chains domestic.** For the non-strategic industry/sector, profit margin maximization shall prevail. There will be changes to industrial policies as governments awaken to the need to prioritize sectors (such as medical supplies) to reduce dependence on imports and to meet domestic needs in time of crisis. With the likely rise of nationalism post Covid-19 pandemic, there is risk that politicians may use this an excuse to introduce protectionist measures.
- Relocation of global supply chain will take time and cost. When benefit is larger than cost, it may happen. In fact, it has happened in the past decade. China's demographic changes have increased labor cost and pushed economic transition towards the consumption and service driven. Some enterprises in labor-intensive manufacturing sectors have already moved from China to Vietnam, Malaysia, India, and other countries in recent years.

The World Post Covid-19 Pandemic:

What are the likely scenarios and what could be the likely impact on China?

- The number of foreign enterprises (including Hong Kong, Macau & Taiwan enterprises) declined from 76,250 in 2010 to 43,510 in Feb 2020. Their operating income peaked at RMB 25.3 trillion in 2014 and mildly declined to RMB 24.5 trillion 2018. However, those enterprises in the capital or technology intensive sectors, or those targeting the Chinese consumers have stayed and continued to grow.
- China has two competitive advantages for foreign companies. 1) China has the most comprehensive industrial system in the world. Most enterprises can find almost any kind of suppliers in the country except in some high-end materials or equipment such as advanced semiconductors and aircraft & auto parts. 2) China is the second largest economy, with a huge consumer market, and continues to grow faster than most matured economies.
- Lastly, it takes time and cost for foreign companies to cultivate a new supplier system outside China. The Covid-19 pandemic and supply chain disruption makes some companies to re-think their supply chain diversification and resiliency; but it entails cash flow drain. With diminished cash flow resulting from Covid-19 economic disruption, it is expected that many enterprises are likely to postpone their supply chain resiliency plans, at least in the short term.
- **With or without the Covid-19 pandemic, multinational corporations are continually evaluating the next cheaper options. The Covid-19 adds another element of supply chain resiliency, and may accelerate the movement. It should slow China's potential growth mildly but not significantly. China's economy will continue to transit towards the consumption and service sector. The manufacturing sector will continue to move up the curve towards the capital and technology intensive sectors.**

What can be the Unknown Unknowns ?

Known Knowns: things we know we know

Known Unknowns: things we know we don’t know

Unknown Unknowns: things we do not know we don't know

Donald Rumsfeld

Former United States Secretary of Defense

Alvin Chua bio

Alvin Chua is a Managing Director at BOC International (BOCI); Global Head of Sales, Trading, and Research Division, for Equity and Fixed Income. Alvin is also an Adjunct Professor at Lingnan College/ Sun Yat-Sen University (Guangzhou, China); and a Senior Advisor at the Center for Financial Stability (a New York based think tank focused on financial markets).

Alvin's career in financial services industry spans over three decades, and across continents. He started his career on Wall Street in 1987 with Merrill Lynch in New York, and joined Lehman Brothers in 1991. In 1997, Alvin relocated to HongKong with Lehman Brothers. In 1999, Alvin joined JP Morgan Chase in HongKong, and in 2001 joined Bank of America Securities in HongKong. From 2009 through 2011, Alvin was a Senior Managing Director at Cantor Fitzgerald in HongKong. Prior to BOCI, Alvin was Head of Asia for F&C Asset Management, a UK headquartered asset management firm (founded in 1868, acquired by BMO Financial Group in 2014). Alvin joined BOCI in 2014, and is based in Hong Kong.

Alvin received his undergraduate degree from the University of Texas at Austin, and his MBA from the University of Chicago Booth School of Business. He was a US registered Certified Public Accountant (CPA) and Certified Management Accountant (CMA).

In addition to Adjunct Professor at Lingnan College/ Sun Yat-Sen University, Alvin has also guest lectured at: Institute of Global Economics and Finance (Chinese University of HongKong), Centre for Asset Management Research & Investments (National University of Singapore), Taiwan Academy of Banking and Finance (Taipei), National Taiwan University (Taipei), Tsinghua University (Beijing), Jiao Tong University (Shanghai); and guest speaker at various seminars & events in Asia.