THE INFLUENCE OF THE COVID-19 PANDEMIC ON SAFE HAVEN ASSETS

Course: Impact of COVID-19 to financial markets

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The COVID-19 pandemic has severely impacted the financial markets, which has triggered a flight from risky assets to safe haven assets. This column compares the performance of the safe havens across the world's ten largest economies during COVID-19 and the 2008 Global Financial Crisis. The findings suggest that the character of safe haven assets has changed since the 2008 crisis. Gold, the traditional safe haven asset, has lost its glitter. However, the Swiss franc, the US dollar and US Treasuries retained their safe haven status, and Tether, a cryptocurrency, shows some promise.

The COVID-19 pandemic has evolved from a health crisis into a severe economic crisis as countries around the world closed their economies and prevented the movement of, and interaction between, people as a means to slow the spread of the virus. The economic crisis initially led to a massive selloff in the financial markets as investors transferred risky assets into safe haven assets to protect their wealth (Bofinger et al. 2020, Wyplosz 2020). Consequently, COVID-19 has struck the stock markets more severely than any previous infectious disease outbreak, including the 1918 Spanish Flu (Baker et al. 2020).

The pace and severity of investors fleeing from risky assets to safe havens raises the question: How safe are the safe haven assets? Traditionally, precious metals (gold and silver), currencies (US dollar and Swiss franc), and US Treasuries (T-bill and T-bond) are regarded as safe havens during times of crises. Moreover, a few researchers claim that cryptocurrencies such as Bitcoin have also joined the rank of safe haven assets (e.g. Urquhart and Zhang 2019). However, others view cryptocurrencies as a risky asset instead of a safe haven (e.g. Cheema et al. 2020). Therefore, Baur and Hoang (2020) suggest using asset-backed cryptocurrencies, such as Tether, as a safe haven against Bitcoin during extreme market movements. Tether is the first and largest asset-backed cryptocurrency (i.e. a stablecoin). Stablecoins are cryptocurrencies that are pegged to other stable assets such as gold and traditional currencies. Therefore, stablecoins, in theory, would become as stable as the pegged assets.

In Cheema et al. (2020), we examine the efficacy of safe haven assets during the COVID-19 pandemic and compare their performance during the 2008 Global Financial Crisis (GFC). More specifically, we ask the question: Have traditional assets that were safe havens during the GFC (e.g. Baur & McDermott 2010; Low, Yao & Faff 2016) maintained their safe haven status during the COVID-19 pandemic, since times have changed substantially (for example, investors now also have the opportunity to use cryptocurrencies as a safe haven asset in place of traditional safe haven assets such as gold)?

- Our analysis includes the ten largest economies – the US, China, Japan, Germany, the UK, France, India, Italy, Brazil and Canada – since investors prefer to invest in these markets. Safe haven assets should earn positive or, at worst, close to zero returns during financial market turmoil if they possess the qualities of a safe haven. We use descriptive statistics and regression with a GJR-GARCH correction to examine the performance of safe haven assets. Both methods yield similar results.

- Our first finding is that gold has lost its glitter during the COVID-19 pandemic even though it was a safe haven during the GFC. Table 1 shows gold's poor performance. The table lists the returns of safe haven assets on the days of the ten largest losses in the S&P 500 during the COVID-19 pandemic. Clearly, gold returns generally moved in tandem with the ten extreme stock market losses in the S&P 500 during the pandemic, with seven out of the ten negative gold returns. For instance, gold lost 4.90% of its value on 12 March 2020 while the S&P500 index incurred a 10% loss. The obvious question is what has happened to gold as a safe haven asset during COVID-19, when investors regarded gold as a safe haven during the GFC? We suggest that investors might have altered their views about gold as a stable asset since they were mentally scarred by gold investments between 2011 and 2015 when gold lost 45% of its value. The usual counterpart precious metal, silver, has not functioned as a safe haven in either crisis. Investors should be careful using silver as a safe haven during market turmoil.

Table 1 Extreme losses during the 2008 GFC and COVID-19 pandemic

Panel A: Extreme losses of SP500 Index during COVID-19 Pandemic (20 February - 19 May 2020)									
Date	SP500	Gold	Silver	Dollar	Franc	T-bill	T-bond	Bitcoin	Tether
16/03/2020	-12.7650	-1.8930	-12.3410	-0.6706	0.6740	0.0182	1.5490	-7.2650	-0.4986
12/03/2020	-9.9940	-4.8790	-4.7040	0.9898	0.5230	0.0182	-0.2671	-46.4730	5.3393
09/03/2020	-7.9010	-0.1390	-1.2090	-1.1003	0.7900	0.0219	0.7507	-2.3010	-1.0680
18/03/2020	-5.3220	-3.2240	-5.9590	1.5742	0.0010	0.0309	-1.0611	0.2450	-0.1945
11/03/2020	-5.0100	-0.3120	-1.0590	0.1037	-0.2030	0.0129	-0.2964	0.0210	-0.2914
27/02/2020	-4.5170	0.5210	-0.9990	-0.5673	0.0780	0.0216	0.3753	-0.4090	-0.4327
01/04/2020	-4.5150	-1.5180	-1.2220	0.7250	0.1800	0.0035	0.3195	2.5780	0.1712
20/03/2020	-4.4330	0.7770	2.0490	0.0584	-0.8110	0.0037	1.7885	0.1220	-0.5635
05/03/2020	-3.4510	1.1760	0.8520	-0.5356	0.0460	0.0358	0.6556	3.6280	0.1897
27/03/2020	-3.4270	-0.2470	-0.9710	-1.0617	0.3530	-0.0037	0.6890	-3.7410	1.4748

Panel B: Extreme losses of SP500 Index during 2008 GFC (12 September 2008 – 30 June 2009)							
Date	SP500	Gold	Silver	Dollar	Franc	T-bill	T-bond
15/10/2008	-9.4700	0.9800	-8.2920	0.8445	-0.0750	0.0286	0.1385
01/12/2008	-9.3540	-4.9180	-8.6740	1.2182	0.6250	0.0206	1.0559
29/09/2008	-9.2000	1.0180	-3.5920	0.6735	-0.0860	0.0383	1.0870
09/10/2008	-7.9220	-1.7390	0.8720	0.3085	0.0830	-0.0022	-0.5695
20/11/2008	-6.9480	0.1400	-3.1430	0.7531	0.2270	0.0220	0.9694
19/11/2008	-6.3110	1.3450	-2.5470	-0.0687	-0.5900	0.0149	0.5528
22/10/2008	-6.2950	-3.3520	-6.2930	1.6297	1.1680	0.0144	0.2707
07/10/2008	-5.9110	1.6080	0.8400	-0.8730	0.3810	-0.0311	-0.3689
20/01/2009	-5.4260	3.1880	-0.3580	2.3589	-0.2510	0.0024	-0.1339
05/11/2008	-5.4120	-1.3490	3.1590	-0.2007	-0.5410	0.0212	0.2961

Our second finding is that the Swiss franc has served as a better safe haven asset than the US dollar during COVID-19 even though they were both safe havens during the GFC. As shown in Table 1, five out of the ten US dollar returns were negative, but only two Swiss franc returns were negative during the days of the ten largest losses of the S&P500 index. However, the daily returns of both the Swiss franc and US dollar varied between -1.10% and 1.58% per day during the ten extreme stock market losses, which are small variations. Therefore, they have helped protect investors' wealth and maintained their safe haven status during COVID-19.

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Cryptocurrencies comprise less than 0.7% of the world's investments, although they attract a disproportionate amount of attention from traditional and social media. The largest cryptocurrency, Bitcoin, is even labelled as the 'new gold' by some media outlets. However, our findings show that investment in Bitcoin has proved to be a high-risk strategy during COVID-19. Its losses exceeded stock market losses across all of the ten largest economies in the world. As shown in Table 1, Bitcoin dropped 46.5% in value on 12 March 2020, when the S&P500 index suffered a 10% loss. Therefore, Bitcoin failed miserably in its first real test as a safe haven asset and has proved to be a highly speculative asset during COVID-19. In stark contrast, the largest asset-backed cryptocurrency, Tether, has served as a safe haven for all ten economies against stock market losses during COVID-19. Our findings on cryptocurrencies suggest that investors should prefer asset-backed cryptocurrencies over cryptocurrencies not backed by any assets.

We conclude that traditional assets such as gold and silver failed to protect investors' wealth during days when they needed it the most. All safe haven assets are not necessarily safe by default during a stock market crisis. Therefore, investors should exercise due diligence when investing in potential safe haven assets during such a crisis. Our findings also suggest that investors prefer liquid and stable assets such as Treasuries and the Swiss franc over precious metals (i.e. gold and silver). Also, investors are willing to adopt new safe havens like Tether – probably because it is pegged to other financial assets. Finally, our findings suggest that media outlets, policymakers and regulatory authorities should exercise caution in classifying Bitcoin as an alternative to traditional investments. Clearly Bitcoin is not the 'new gold', since it lost almost half of its value in one trading day during a COVID-19 market selloff.

- The circumstances surrounding the outbreak of the COVID-19 pandemic have generated substantial international political strain as governments attempt to mitigate the widespread associated social and economic repercussions. One theory has focused on the potential for Chinese informational asymmetry. Using Chinese financial market data, we attempt to establish the scale and direction of information flows during multiple distinct phases of the development of the pandemic. Two specific results are identified. Firstly, the majority of domestically-traded Chinese stocks present evidence of significant information flows at a far earlier stage than internationally-traded comparatives, suggesting that domestic investors recognised the dangers associated with COVID-19 far in advance of the rest of the world. One potential explanation surrounds the view that the severity of domestically-reported Chinese news was not appropriately recognised by international investors. Secondly, while evidence of safe-haven and flight-to-safety behaviour is evident throughout traditional energy and precious metal markets, cryptocurrencies became informationally-synchronised with Chinese equity markets, indicating their use as an investor safe-haven. This is a particularly concerning outcome for international policy-maker and regulatory authorities due to the fragility of these developing markets.

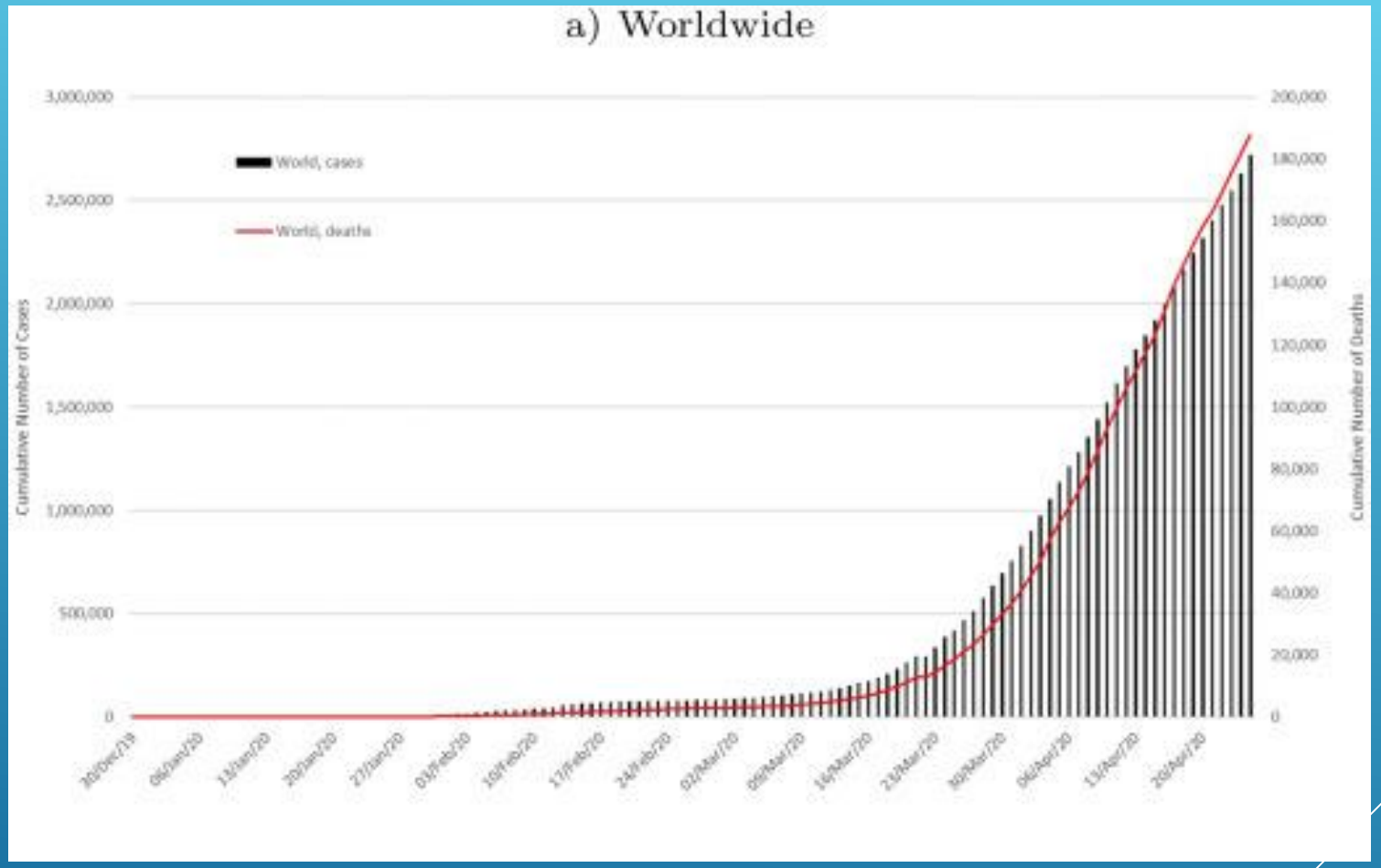
- The identification of COVID-19 instigated a transformational process of news dissemination throughout traditional financial markets. Investors and governments were tasked with a quite unique reactionary spectrum when attempting to quantify the potential implications of the growing pandemic. Should governments under-react, they risked exposing vulnerable populations to the harshest exposure to an unknown entity. Should they over-react, such governments faced an unfortunate backlash in the form of a political response from unappeased voters.

- Investors faced a similar dilemma when attempting to quantify portfolio risk. What has transpired is a multi-directional and multi-faceted international response that takes the shape of cultural tolerances to exceptional risks, ranging from entire nations entering a phase of 'lock-down,' while some countries decided to 'proceed with caution' and minimise disruption. The economic consequences of the former are far more perilous than that of the latter (Alvarez, Argente, & Lippi, 2020). However, one of the key concerns during a period of growing attribution of responsibility in the post-containment phase, is quite simply who knew what, and when?

- Growing concern has surrounded the role of Chinese authorities in the potential 'shrouding' of important information, although to date, no evidence of such behaviour has been presented. Two distinct accusations have transpired: 1) COVID-19 was a man-made phenomenon, initially transmitted from a lab in Wuhan; and 2) Chinese government officials did not transmit information to the outside world in a timely manner. Politically-driven motivations are quite possibly one reason for such inflammatory accusations, however, financial market data can help to either support or refute the latter accusation in particular.

- Chinese investors, observing the growth of the severity of COVID-19 prior to the international outbreak of the pandemic, would most likely have possessed substantive information in comparison to international investors (Chan, Lien, & Weng, 2008; Chan, Menkveld, & Yang, 2007), even considering the role of social media in today's society (Chen, De, Hu, & Hwang, 2014; Luo, Zhang, & Duan, 2013; Yu, Duan, & Cao, 2013). The first case of someone suffering from COVID-19 can be traced back to 17 November according to media reports on unpublished Chinese government data.

- It was stated that Chinese authorities had identified at least 266 people who had contracted the virus, and the earliest case was identified weeks before authorities announced the emergence of the new virus. Further, the identification of a number of substantiated ‘rumours’ presents evidence that Chinese citizens were potentially aware of this forthcoming threat, but not of the forthcoming international contagion. The first official identification by international organisations such as the World Heath Organisation (WHO), was on the 31 December 2019, with the BBC reporting on 3 January 2020 of a pneumonia-like ‘mystery virus’ with characteristics similar to the SARs (severe acute respiratory syndrome) pandemic of, 2002 through 2003. Fig. 1 present evidence of the number of countries which have been affected to date and the sharp growth in the number of confirmed cases and deaths as reported by the World Health Organisation (WHO). News dissemination was further muddied through the identification on 20 February of an aggressive strain of H5N1 bird flu has been discovered in Hunan Province.


a) Worldwide
World, cases
World, deaths
Cumulative Number of Cases
Cumulative Number of Deaths
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
31/Dec/19
06/Jan/20
13/Jan/20
20/Jan/20
27/Jan/20
03/Feb/20
10/Feb/20
17/Feb/20
24/Feb/20
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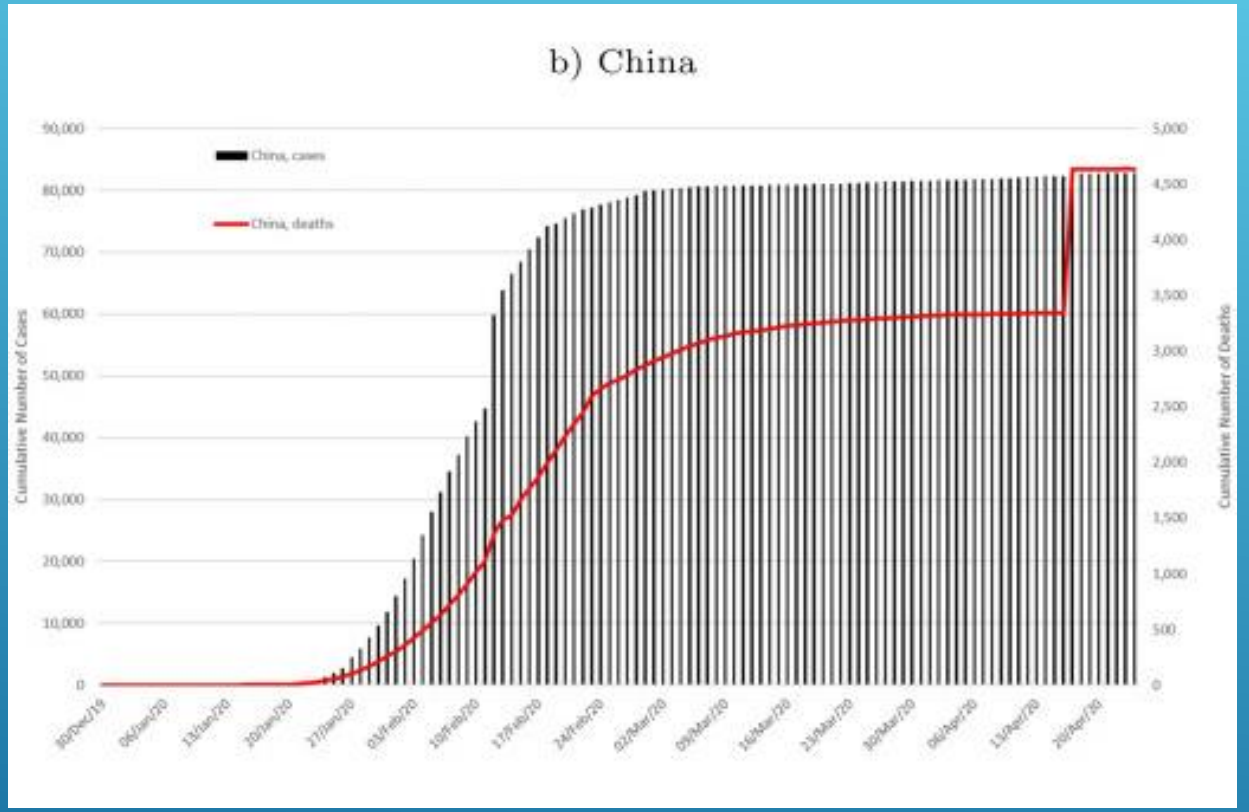
16/Mar/20
23/Mar/20
30/Mar/20
06/April/20
13/Apr/20
20/Apr/20


b) China
China, cases
China, deaths
Cumulative Number of Cases
Cumulative Number of Deaths
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
31/Dec/19
06/Jan/20
13/Jan/20
20/Jan/20
27/Jan/20
03/Feb/20
10/Feb/20
17/Feb/20
24/Feb/20
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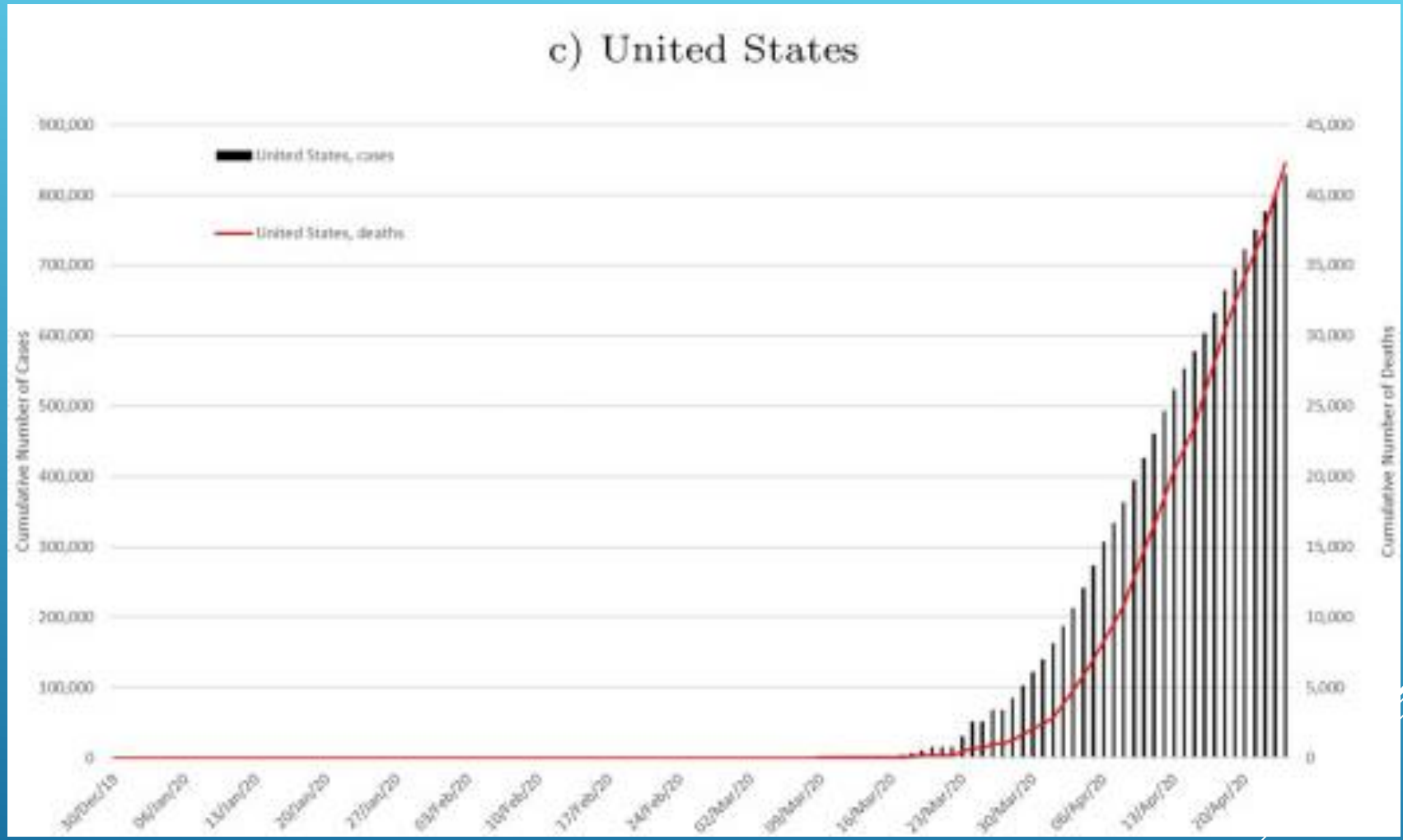
16/Mar/20
23/Mar/20
30/Mar/20
06/Apr/20
13/Apr/20
20/Apr/20


c) United States
United States, cases
United States, deaths
Cumulative Number of Cases
Cumulative Number of Deaths
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
30/Dec/19
06/Jan/20
13/Jan/20
20/Jan/20
27/Jan/20
03/Feb/20
10/Feb/20
17/Feb/20
24/Feb/20
02/Mar/20
09/Mar/20
16/Mar/20
23/Mar/20
30/Mar/20
06/Apr/20
13/Apr/20
20/Apr/20

- There are a number of avenues through which evidence sourced in financial markets can help to eradicate such concerns and opaque rumours. To date a number of substantial effects have been identified with regards to the contagion effects of COVID-19, particularly those evident in gold and cryptocurrency markets (Corbet, Larkin, & Lucey, 2020); and side-effects relating to name association (Corbet, Hou, Hu, Lucey, & Oxley, 2020).

- Further, a quite unique characteristic of Chinese financial markets allows us to provide robustness of such a methodological structure through the comparison and contrasting of not only when investors first realised the substantive and inherent dangers within the outbreak of the COVID-19 pandemic, but further, the direct differentials through the segregation of investors by type. This is completed through the division of investors into ‘domestic’ (that is Chinese) and ‘foreign’ investor-groupings, made possible through the use of Chinese B-shares listings, that are best described as equity share investments in companies based in China that trade in foreign currency on two different Chinese exchanges. On the Shanghai Exchange,

- B-shares trade in US dollars, while on the Shenzhen Exchange, B-shares trade in Hong Kong dollars. B-shares were initially offered to target investment from foreign investors and are considered an alternative to A-shares which are the standard equity market offering from Chinese corporations. A-shares trade in China's local currency the Renminbi, and are used by domestic Chinese investors. The proper name of B-shares is 'Domestically Listed Foreign Investment Shares', which used to be referred to as 'Renminbi Special Shares.' B-shares were only accessible to foreign investors until February 19, 2001 when the China Securities Regulatory Commission ('CSRC') decided to allow domestic residents to buy and sell B shares on the secondary market. While international investors can trade B-shares, there exists a strict, official foreign ownership limit for China A-shares of 30%, however once foreign ownership holding reaches 28%, no further foreign purchases are permitted.

- As a result and in accordance with the ‘Foreign Ownership Restrictions and Minimum Foreign Headroom Requirement rule, ‘foreigners' cannot invest thereafter. The analysis of A-share and B-share interactions provides an opportunity to separate behavioural transmission and price discovery by domestic and foreign investment interactions.

- To date, to the best of the authors knowledge, no research has focused on such specific questions, through which both the timing and evidence provided could be quite useful in mitigating some of the strained rhetoric that has developed as both economic and social social conditions are strained due to COVID-19. The political and cultural undertones of multifaceted response are also evident in the extensive attribution of blame that has subsequently followed.

- The transmission of blame to China demonstrated quite an alarming tactical selection by an international superpower. In one of the most incredible cases observed on 22 April, and widely considered to be a publicity stunt, the US state of Missouri attempted to sue the Chinese government over its handling of the coronavirus which it says has led to severe economic losses.

While the benefits of this research not only attempt to somewhat dispel substantial rumour and sources of geopolitical tensions sourced in political rhetoric, the identification of information flows and channels of price discovery sourced within Chinese financial markets are particularly important during periods of extreme financial stress. This is particularly important due to the rather opaque nature of news dissemination through social media buffers and controls. Further considering the economic challenges through which COVID-19 presents for the worldwide economy, there are also a number of specific lessons through which we can learn from recent international crises.

- It is hoped that the sudden shock sourced in the spread of the coronavirus pandemic could manifest in a particularly severe economic trough, but subsequent U-shaped recovery. However, we must monitor certain aspects of our economy with particular care such as deterioration of liquidity and asset quality, both of which are conducive to further economic deterioration (Cavallo & Valenzuela, 2010; Corbet, 2016; Corbet & Larkin, 2017; Donaldson, 1992), deterioration of financial institutions (Allen & Gale, 1998; Chang & Velasco, 2001; Meegan, Corbet, & Larkin, 2018), systemic risk (Allen & Carletti, 2013; Chang & Chen, 2014; Covitz, Liang, & Suarez, 2013; Gorton & Metrick, 2012), and the maintenance of regulation in the face of financial desperation (Kroszner, 1999; Ahuja, Barrett, Corbet, and Larkin (2019); Barrett, Corbet, & Larkin, 2019; Barrett, Corbet, & Larkin, 2020).

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Thank you!