

# REPORT ON INTERNATIONAL BITCOIN FLOWS 2013 – 2019

September 2019



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## Introduction

In its recent report, “Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers,” the Financial Action Task Force (FATF) recommended the implementation of a global “travel rule” that would require virtual asset service providers (VASPs) like cryptocurrency exchanges to share customer information with one another when processing transactions.

Highlighting the “threat of criminal and terrorist misuse of virtual assets” as a “serious and urgent” issue, **the FATF said** it will give its 37 member countries one year to adopt these new guidelines, with a review planned for June 2020. The G20 has also announced its support for this rule.

To elucidate both the basis of this regulatory guidance as well as the extent virtual asset service providers will be subject to it, the **Crystal™ blockchain analytics** team has compiled a report of the historical international flow of bitcoin between cryptocurrency exchanges.

We show the total amount of currency (in US dollars) that has been transferred between the G20 countries since 2013 and the accompanying transaction trends, as well as predictions for how the FATF guidelines will affect these dynamics.

## Definitions

**Asia-Pacific:** This term is used to refer to countries surveyed from the Asia-Pacific zone. Not all countries from this region were included in this study. The countries included in this study are Hong Kong, Singapore, China, South Korea, Thailand, Taiwan, Vietnam, Indonesia, New Zealand, India, Samoa, Vanuatu, Mongolia, and the Philippines.

**Cryptocurrency Exchange:** A cryptocurrency exchange is an entity that accepts deposits (in fiat and other forms) from users and enables them to trade and transfer their cryptocurrency funds via blockchain to other entities, including to other users and exchanges. A full list of the cryptocurrency exchanges we analyzed can be found in the Appendix.

**G20:** The G20 countries are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, the United States and the European Union. The only G20 countries not reviewed in this study were Saudi Arabia and South Africa (due to the lack of registered exchanges).

## Understanding the Operations of Cryptocurrency Exchanges

One key advantage of cryptocurrencies, compared to fiat currencies, is that transfers are effectively borderless. It is much easier and cheaper to transfer funds across borders via cryptocurrency using an exchange than it is with a normal SWIFT transfer and fiat.

In this report, we examine only the transfer patterns of exchanges. These transfers could

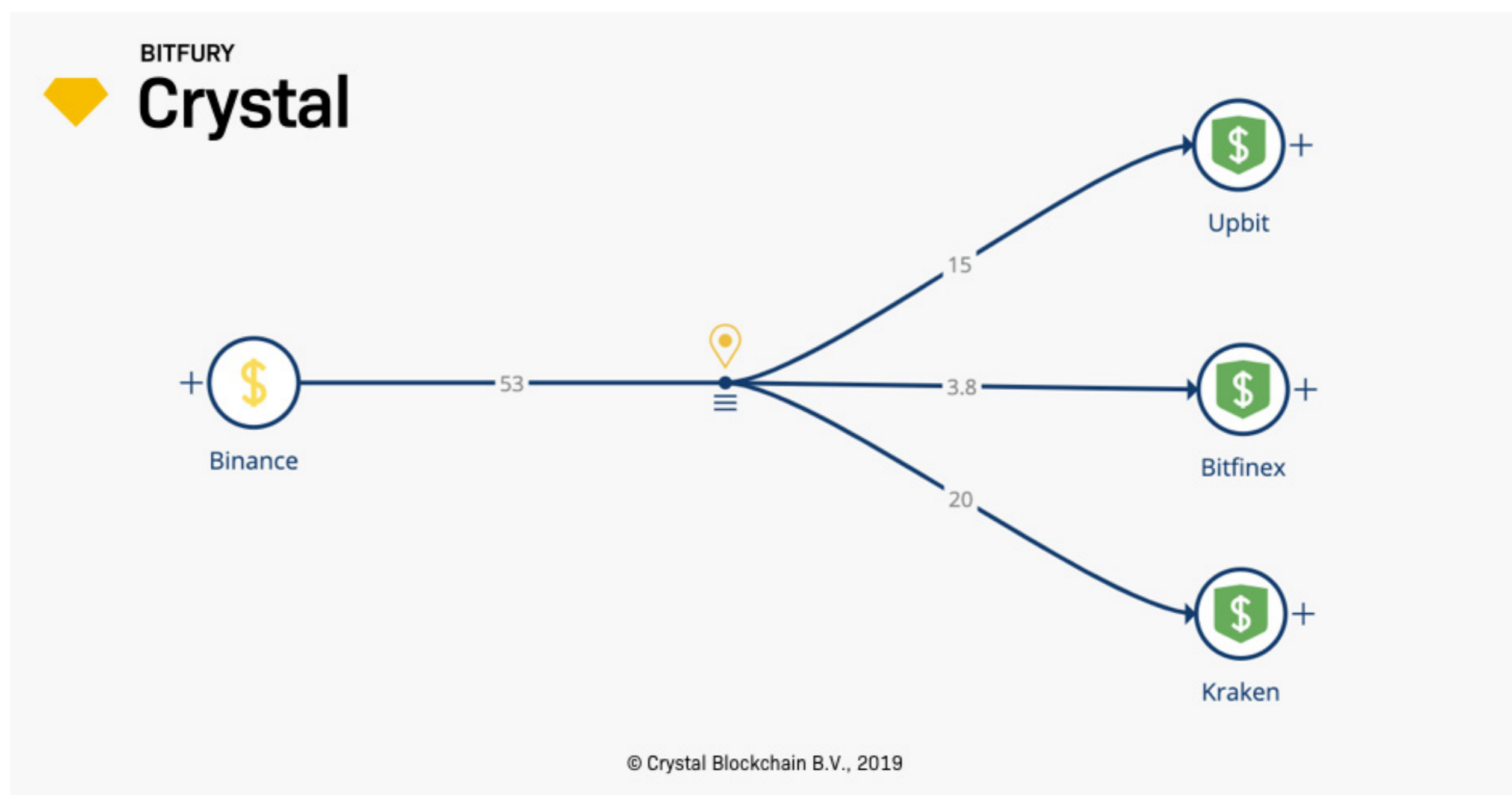
indicate several activities, including exchange users (people or entities) sending funds to users registered at a different exchange, a user transferring funds to an account of theirs at another exchange, or a number of other possibilities.

Our goal is to demonstrate the international scope of these activities, not individual activity patterns.

The following examples show how easily bitcoin can be sent to different countries via cryptocurrency exchanges.

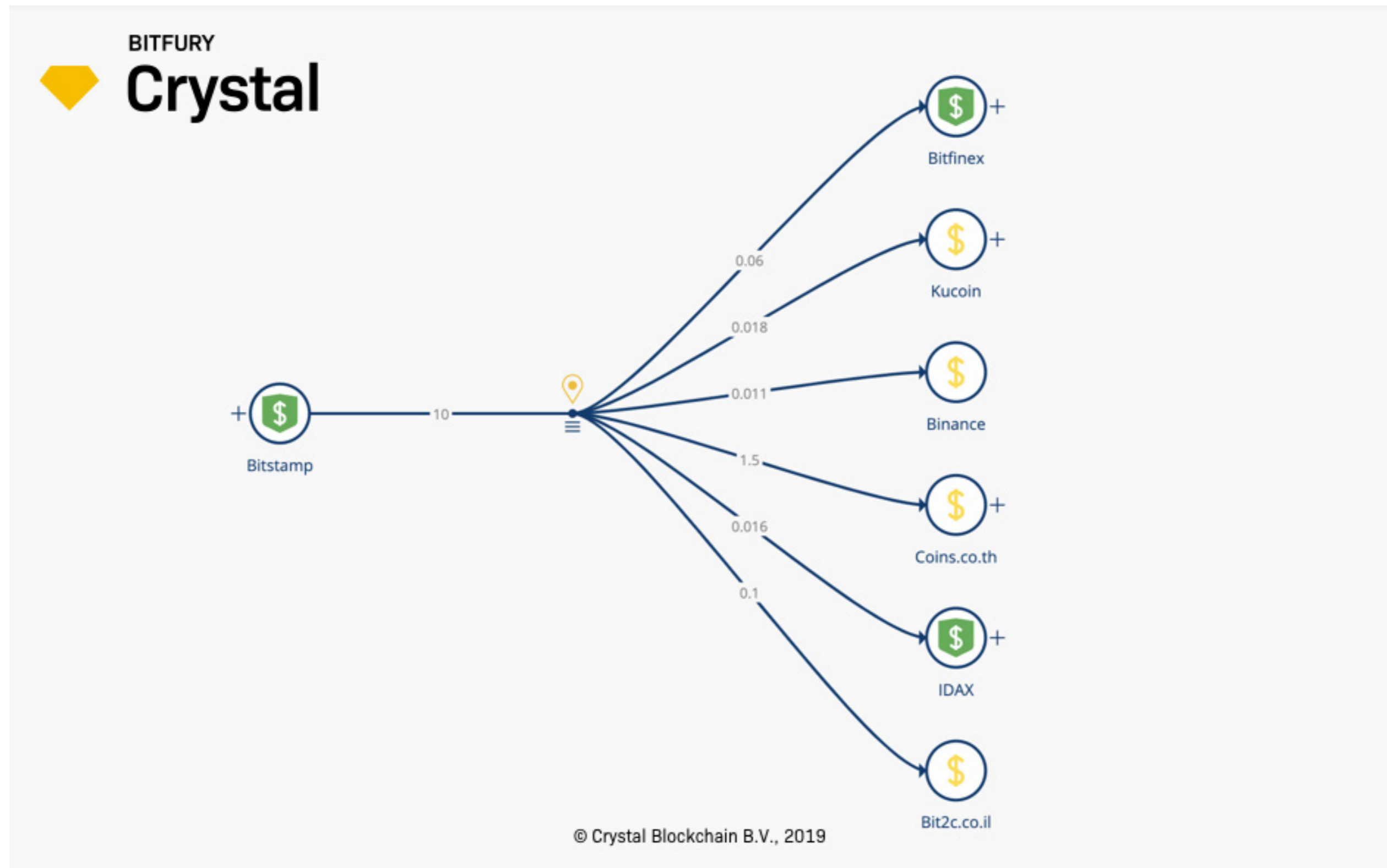
### Example #1

The picture below shows a cross-border fund transaction that involves four exchanges incorporated in four different countries. A Binance account (Singapore) sent bitcoin to accounts at Upbit (South Korea), Bitfinex (Hong Kong) and Kraken (USA).



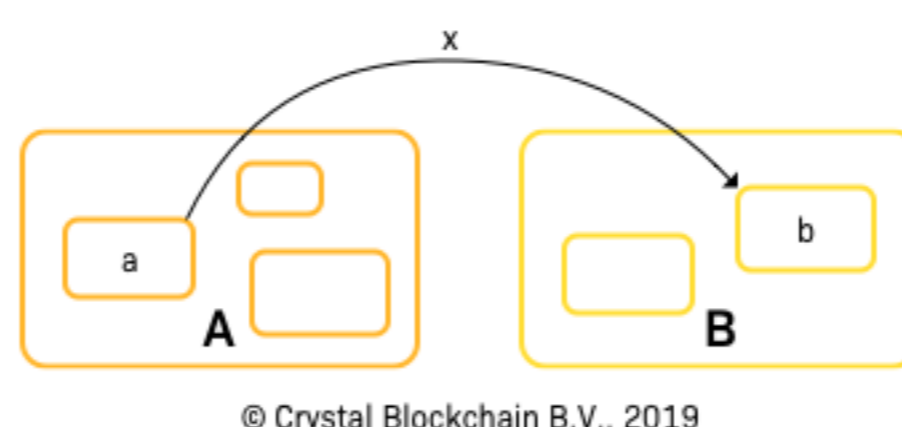
## Example #2

The picture below shows an even more dispersed transaction involving seven different exchanges. A Bitstamp (UK) account sent funds to accounts at Bitfinex (Hong Kong), Kucoin (Hong Kong), Binance (Singapore), Coins.co.th (Thailand), IDAX (Mongolia), and Bit2c.co.il (Israel).



## Limitations of the Study

- We only considered direct bitcoin transactions between exchanges. We did not include any transactions between exchanges if there was an intermediate entity.
- Our study reports these flows in USD (to better reflect the volumes of transactions, given the variable price of bitcoin year over year). We computed each bitcoin transaction's amount in USD according to the price of bitcoin on the day of the transaction.
- If an exchange **a** from country **A** sent **x** amount of bitcoin to exchange **b** from country **B**, we report this as country **A** sent to country **B** that **x** amount of bitcoin. While in reality, it is accounts between exchanges registered in those countries sending bitcoin, we analyzed it in this way because cryptocurrency exchanges are overwhelmingly subject to the laws of the country they are registered in as well as the countries they send funds to.



- We reviewed nearly 300 exchanges from 63 countries, with special attention paid to exchanges based in G20 countries and Asia-Pacific countries.
- Countries excluded from our study were those without a major exchange operating/being registered.
- Exchanges included in this study must have had a good level of activity (completed at least 1,000 transactions to date). We predominantly focused on exchanges from the “G20 & Other” group (listed in the Appendix). This is due to the large number of exchanges registered in these countries, as well as the recent G20 announcement of its **support** for the FATF customer data-sharing recommendation.
- All of the exchanges with an undefined country registration were placed into one group under the term “Unknown.”
- At the time of this writing, the UK is still a member of the EU – however, we considered it on its own due to the significant number of exchanges registered in the UK.
- The scope of the research is between January 1, 2013 and June 30, 2019. As a result, the 2019 dynamics are not complete.

## Exchange Distribution by Country

The following is a complete list of exchanges by country considered in this study:


















**BITFURY**  
**Crystal**

Country of Registration	Number of Exchanges	Country of Registration	Number of Exchanges	Country of Registration	Number of Exchanges
UK	43	British Virgin Islands	3	Chile	1
Unknown	33	Czech Republic	3	Costa Rica	1
USA	27	India	3	Croatia	1
Hong Kong	22	Mexico	3	Finland	1
Singapore	19	New Zealand	3	Germany	1
Australia	9	Russia	3	Hungary	1
China	9	Switzerland	3	Indonesia	1
Estonia	8	Thailand	3	Iran	1
Brazil	7	Austria	2	Ireland	1
South Korea	7	Cyprus	2	Isle of Man	1
Japan	6	France	2	Israel	1
Canada	6	Lithuania	2	Italy	1
Denmark	5	Norway	2	Mongolia	1
Malta	5	Panama	2	Pakistan	1
The Netherlands	5	Portugal	2	Romania	1
Cayman Islands	4	Saint Kitts and Nevis	2	Saint Vincent en de Grenadines	1
Poland	4	Samoa	2	The Philippines	1
Seychelles	4	Sweden	2	UAE	1
Turkey	4	Taiwan	2	Vanuatu	1
Argentina	3	Ukraine	2	Venezuela	1
Belize	3	Vietnam	2	Zimbabwe	1

## Exchange Distribution by G20 Country

For the purposes of this research, we restricted our observations to exchanges listed in the following countries (G20 & Other\*):

**BITFURY**  
**Crystal**

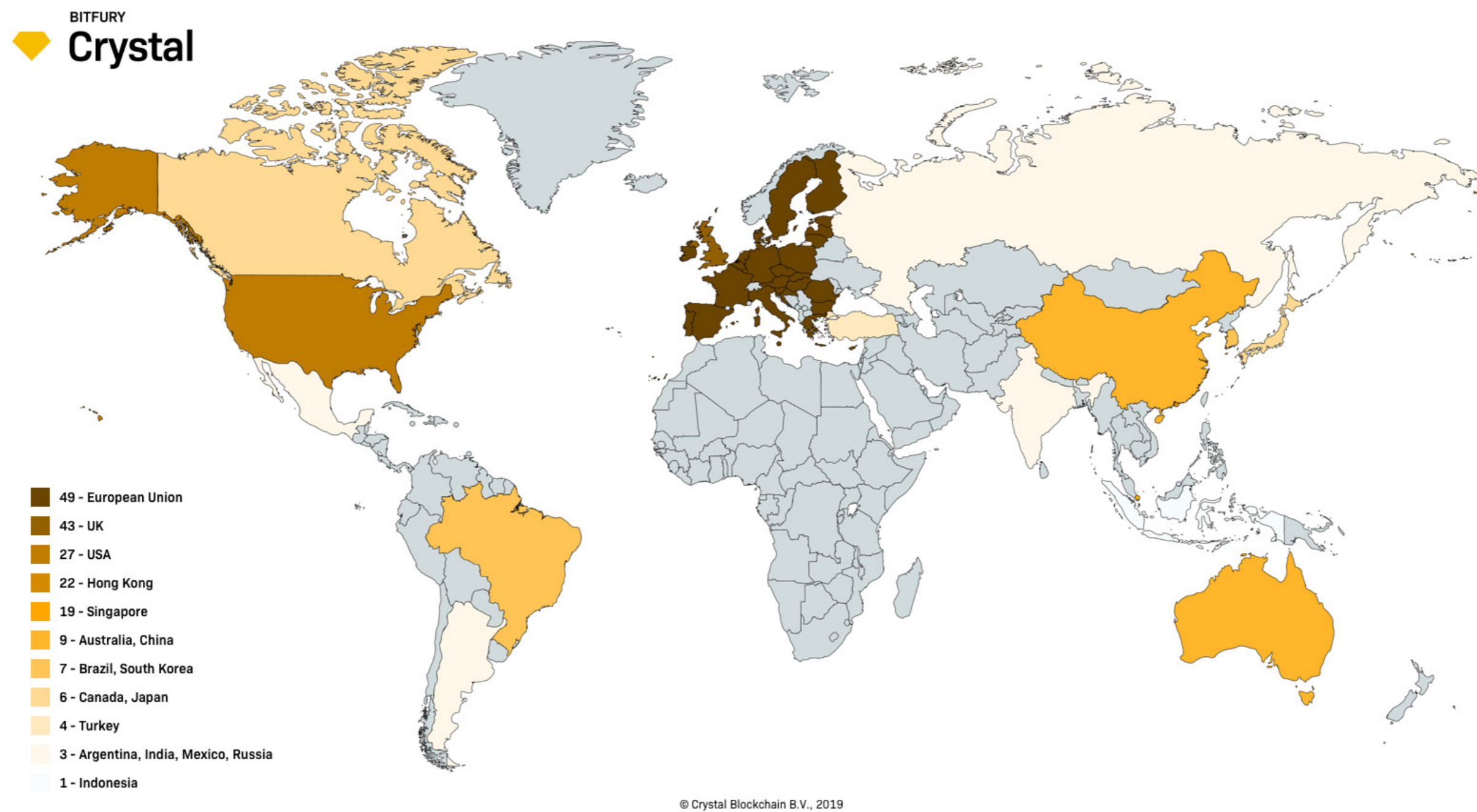
Country of Registration	Number of Exchanges
 European Union	49
 UK	43
Unknown	33
 USA	27
 Hong Kong	22
 Singapore	19
 Australia	9
 China	9
 Brazil	7
 South Korea	7
 Japan	6
 Canada	6
 Turkey	4
 Argentina	3
 India	3
 Mexico	3
 Russia	3
 Indonesia	1

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In the table above we excluded those G20 countries that do not have significant exchanges.

Other\* refers to the following countries/regions: Hong Kong, Singapore, and the Unknown group in which we put all exchanges with an unknown location visible on their website.

## Geographic Distribution of Exchanges:



## Bitcoin Transfers Between Exchanges

Please note: In the tables below, we use the following legend.



### Reading the Chart

Each chart box shows the total amount of bitcoin transferred (in USD) between countries.

Country	Recipient	
	Recipient 1	Recipient 2
Sender 1	\$0.5K	\$15K
Sender 2	\$1K	\$0.4K

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**Example #3. In the 2013 chart below, we see that:**

- Australian exchanges sent \$0.5K to other Australian exchanges
- Australian exchanges sent \$78.8K to Brazilian exchanges
- Australian exchanges sent \$66.2K to Canadian exchanges



# Total Amount of Bitcoin Transactions (in USD) Between Cryptocurrency Exchanges (Sorted by Country), 2013



	Argentina	Australia	Brazil	Canada	China	Hong Kong	India	Indonesia	Japan	Mexico	Russia	South Korea	Turkey	UK	USA	Singapore	EU	Unknown
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Australia	0	\$0.5K	\$78.8K	\$66.2K	\$22.7K	\$150.7K	0	0	\$454.0K	0	0	0	0	\$1M	\$1M	\$6.4K	\$3M	\$38.3K
Brazil	0	\$49.9K	0	0	\$0.0K	\$53.5K	0	0	\$46.5K	0	0	0	0	\$88.8K	\$26.7K	0	\$594.9K	\$1.2K
Canada	0	\$24.1K	0	0	\$19.0K	\$131.6K	0	0	\$1M	0	0	0	0	\$2M	\$787.8K	\$4.5K	\$2M	\$0.8K
China	0	\$6.1K	\$1.3K	0	0	\$64.8K	0	0	\$813.9K	0	0	\$17.3K	0	\$222.6K	\$74.9K	0	\$428.8K	\$0.4K
Hong Kong	0	\$94.7K	\$6.8K	\$2.2K	\$16.7K	\$24.4K	0	0	\$1M	\$8.4K	0	\$1.5K	0	\$20M	\$503.2K	\$0.5K	\$2M	\$27.3K
India	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indonesia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Japan	0	\$526.3K	\$112.4K	\$687.3K	\$2M	\$5M	0	0	0	\$7.2K	0	\$126.2K	0	\$42M	\$22M	\$147.2K	\$38M	\$503.0K
Mexico	0	0	0	0	0	0	0	0	\$6.0K	0	0	0	0	\$8.6K	\$9.3K	0	\$12.6K	0
Russia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Korea	0	0	0	0	0	0	0	0	\$212.3K	0	0	0	0	0	\$0.1K	0	0	0
Turkey	0	0	0	0	\$0.1K	0	0	0	\$5.4K	0	0	0	0	0	\$0.1K	0	\$1.6K	0
UK	0	\$1M	\$353.9K	\$285.4K	\$649.1K	\$37M	0	0	\$20M	\$30.2K	0	\$446.6K	0	\$5M	\$63M	\$412.5K	\$37M	\$2M
USA	0	\$2M	\$170.2K	\$282.4K	\$409.5K	\$3M	0	0	\$10M	\$246.8K	0	\$359.2K	\$2.0K	\$16M	\$12M	\$139.7K	\$55M	\$526.3K
Singapore	0	\$2.3K	0	0	\$8.3K	\$7.1K	0	0	\$39.9K	0	0	0	0	\$144.8K	\$139.2K	0	\$346.1K	\$1.3K
EU	0	\$2M	\$199.1K	\$294.4K	\$1M	\$2M	0	0	\$15M	\$2.7K	0	\$81.4K	0	\$17M	\$8M	\$86.8K	\$10M	\$637.4K
Unknown	0	\$15.2K	\$4.2K	\$1.3K	0	\$669.6K	0	0	\$165.2K	0	0	\$7.1K	0	\$1M	\$954.4K	\$10.2K	\$779.1K	0

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# Total Amount of Bitcoin Transactions (in USD) Between Cryptocurrency Exchanges (Sorted by Country), 2014



	Argentina	Australia	Brazil	Canada	China	Hong Kong	India	Indonesia	Japan	Mexico	Russia	South Korea	Turkey	UK	USA	Singapore	EU	Unknown
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Australia	0	\$47.5K	\$44.8K	\$31.4K	\$191.5K	\$188.9K	0	\$0.6K	0	\$4.0K	\$14.4K	\$93.4K	0	\$2M	\$3M	\$9.4K	\$2M	\$7.6K
Brazil	0	\$71.8K	\$1.0K	\$0.0K	\$24.7K	\$187.9K	0	0	0	\$1.2K	\$0.3K	\$3.9K	0	\$493.5K	\$546.7K	\$0.7K	\$343.5K	0
Canada	0	\$78.3K	\$1.8K	\$380.2K	\$67.2K	\$896.6K	0	0	\$1.3K	\$163.7K	\$6.4K	0	0	\$2M	\$1M	\$0.1K	\$1M	\$14.9K
China	0	\$44.9K	\$2.4K	\$20.5K	\$589.0K	\$342.8K	0	\$10.6K	\$0.2K	\$3.4K	\$23.3K	\$4.8K	\$0.5K	\$613.0K	\$4M	\$1.4K	\$675.6K	\$162.2K
Hong Kong	0	\$2M	\$245.4K	\$294.6K	\$2M	\$5M	0	\$112.2K	\$147.9K	\$34.8K	\$51.8K	\$360.8K	\$0.4K	\$100M	\$25M	\$109.5K	\$14M	\$8M
India	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indonesia	0	\$24.3K	0	0	\$10.5K	\$72.9K	0	0	0	0	\$11.3K	\$0.0K	0	\$253.8K	\$212.7K	\$3.0K	\$235.8K	\$24.5K
Japan	0	0	\$1.6K	0	\$5.5K	\$126.1K	0	\$0.1K	\$2.9K	0	\$0.3K	0	0	\$19.0K	\$34.9K	0	\$10.3K	\$93.3K
Mexico	0	\$9.6K	0	\$16.4K	\$48.0K	\$68.3K	0	0	0	\$33.0K	\$0.1K	0	0	\$132.7K	\$536.2K	\$2.7K	\$86.4K	\$16.6K
Russia	0	\$6.7K	\$2.3K	\$2.9K	\$93.2K	\$80.2K	0	\$9.0K	\$1.6K	\$0.3K	0	\$0.1K	\$0.0K	\$176.5K	\$872.6K	\$3.0K	\$171.6K	\$23.0K
South Korea	0	0	0	\$2.8K	\$1.0K	\$72.4K	0	0	0	0	0	0	0	\$19.0K	\$13.3K	0	\$14.7K	\$6.9K
Turkey	0	0	0	0	\$2.0K	\$2.3K	0	0	0	0	\$1.2K	0	0	\$75.8K	\$23.9K	0	\$30.4K	0
UK	\$0.0K	\$2M	\$2M	\$2M	\$5M	\$56M	0	\$190.2K	\$317.7K	\$531.7K	\$237.0K	\$663.0K	\$75.0K	\$24M	\$279M	\$657.2K	\$56M	\$2M
USA	0	\$6M	\$647.5K	\$1M	\$12M	\$50M	0	\$451.5K	\$125.6K	\$1M	\$1M	\$675.6K	\$55.0K	\$84M	\$67M	\$526.5K	\$86M	\$6M
Singapore	0	\$30.9K	0	\$2.7K	\$27.3K	\$34.1K	0	\$0.0K	0	\$0.8K	0	0	0	\$213.1K	\$365.7K	\$0.4K	\$435.2K	\$6.8K
EU	0	\$1M	\$168.9K	\$284.9K	\$1M	\$5M	0	\$73.0K	\$26.2K	\$58.2K	\$37.3K	\$16.0K	\$1.1K	\$22M	\$17M	\$307.3K	\$10M	\$281.9K
Unknown	0	\$14.3K	\$5.2K	\$0.4K	\$592.7K	\$1M	0	\$16.0K	\$101.8K	0	\$6.1K	\$23.0K	\$0.0K	\$679.6K	\$1M	\$4.3K	\$1M	\$39.8K

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# Total Amount of Bitcoin Transactions (in USD) Between Cryptocurrency Exchanges (Sorted by Country), 2015



	Argentina	Australia	Brazil	Canada	China	Hong Kong	India	Indonesia	Japan	Mexico	Russia	South Korea	Turkey	UK	USA	Singapore	EU	Unknown
Argentina	0	0	0	0	\$0.2K	0	0	\$0.0K	0	0	\$0.0K	0	0	\$2M	\$954.0K	0	\$0.3K	\$0.1K
Australia	0	\$56.0K	\$0.0K	0	\$4.0K	\$1M	\$2.5K	\$0.2K	\$0.1K	0	\$9.6K	\$0.3K	0	\$21.8K	\$449.7K	\$2.8K	\$428.2K	\$0.9K
Brazil	0	\$43.6K	\$209.6K	\$4.5K	\$20.9K	\$754.7K	0	0	\$0.0K	\$0.0K	\$0.8K	0	0	\$135.5K	\$636.9K	\$1.4K	\$455.4K	\$2.2K
Canada	0	0	\$0.7K	\$122.0K	\$4.6K	\$413.9K	0	0	\$0.9K	\$0.4K	\$1.3K	\$6.8K	0	\$2M	\$2M	\$0.1K	\$262.3K	\$0.3K
China	0	\$5.7K	\$0.6K	\$4.5K	\$3M	\$475.4K	0	\$19.9K	\$2.0K	\$0.4K	\$2.9K	\$45.3K	\$0.8K	\$172.3K	\$1M	\$1.2K	\$594.5K	\$332.7K
Hong Kong	\$16.2K	\$835.3K	\$152.0K	\$276.2K	\$12M	\$12M	0	\$180.7K	\$2M	\$97.0K	\$11.7K	\$411.8K	\$5.3K	\$23M	\$102M	\$185.4K	\$19M	\$6M
India	0	\$3.2K	0	0	\$26.6K	0	0	\$2.2K	0	0	0	0	0	0	\$75.1K	\$0.1K	\$190.1K	\$2.6K
Indonesia	0	\$60.5K	0	0	\$1M	\$410.2K	\$33.4K	0	\$97.9K	0	\$2.4K	\$59.9K	\$2.9K	\$70.2K	\$962.1K	\$22.1K	\$277.0K	\$711.9K
Japan	0	\$0.5K	0	\$1.7K	\$18.6K	\$867.0K	0	\$56.7K	\$14M	\$1.4K	\$27.3K	\$63.3K	0	\$1M	\$5M	\$16.5K	\$93.4K	\$4M
Mexico	\$0.0K	0	0	0	\$10.6K	\$112.4K	0	\$0.2K	0	\$126.7K	\$0.7K	0	0	\$72.2K	\$249.2K	\$0.2K	\$168.3K	\$0.0K
Russia	0	\$0.5K	\$2.4K	\$29.1K	\$74.6K	\$17.8K	\$0.0K	\$8.2K	\$9.3K	\$0.5K	\$0.1K	\$21.5K	\$0.1K	\$27.0K	\$516.0K	\$0.8K	\$179.6K	\$287.4K
South Korea	0	0	0	0	\$77.2K	\$70.8K	0	\$0.7K	\$2.4K	\$0.5K	\$0.3K	\$126.1K	0	\$7.7K	\$35.8K	\$0.5K	\$2.9K	\$12.4K
Turkey	0	0	0	0	\$0.1K	\$1.5K	0	0	0	0	\$0.0K	0	\$18.2K	\$3.1K	\$12.8K	0	\$19.0K	\$0.0K
UK	\$253.9K	\$150.8K	\$890.9K	\$690.0K	\$5M	\$43M	\$0.2K	\$111.5K	\$3M	\$108.0K	\$33.0K	\$206.0K	\$88.9K	\$15M	\$79M	\$1M	\$24M	\$867.1K
USA	\$120.8K	\$2M	\$2M	\$1M	\$22M	\$45M	\$280.2K	\$2M	\$4M	\$345.2K	\$539.9K	\$1M	\$102.6K	\$36M	\$93M	\$690.9K	\$58M	\$15M
Singapore	0	\$17.0K	\$0.0K	\$0.0K	\$383.5K	\$70.0K	\$5.2K	\$114.8K	\$31.7K	\$4.9K	\$1.2K	\$0.5K	0	\$165.0K	\$661.6K	\$0.1K	\$1M	\$59.6K
EU	\$0.1K	\$451.1K	\$30.6K	\$37.0K	\$431.8K	\$3M	\$0.2K	\$37.0K	\$24.6K	\$19.6K	\$32.1K	\$2.2K	\$4.3K	\$7M	\$6M	\$21.5K	\$4M	\$119.5K
Unknown	\$0.0K	\$12.9K	\$3.8K	\$0.7K	\$14M	\$335.7K	\$94.3K	\$492.4K	\$2M	0	\$45.4K	\$41.2K	\$21.1K	\$155.9K	\$2M	\$51.3K	\$4M	\$339.0K

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# Total Amount of Bitcoin Transactions (in USD) Between Cryptocurrency Exchanges (Sorted by Country), 2016



	Argentina	Australia	Brazil	Canada	China	Hong Kong	India	Indonesia	Japan	Mexico	Russia	South Korea	Turkey	UK	USA	Singapore	EU	Unknown
Argentina	0	0	0	0	\$0.1K	\$523.1K	\$1.9K	\$0.6K	0	\$2.3K	\$2.4K	0	0	\$2M	\$2M	\$1.2K	\$482.2K	\$6.6K
Australia	\$1.5K	\$278.0K	0	\$0.0K	\$47.6K	\$64.4K	\$15.5K	\$7.5K	\$1.3K	\$0.0K	\$3.3K	\$50.7K	0	\$13.8K	\$1M	\$1.8K	\$1M	\$2.3K
Brazil	\$0.0K	\$9.5K	\$3M	\$6.1K	\$48.8K	\$474.1K	\$1.5K	\$1.2K	\$6.2K	\$17.7K	\$50.1K	\$5.7K	\$0.3K	\$324.4K	\$3M	\$17.4K	\$2M	\$239.2K
Canada	0	\$5.8K	\$12.9K	\$2.8K	\$26.6K	\$226.5K	\$1.7K	\$3.1K	\$97.8K	\$0.2K	\$2.2K	\$0.7K	0	\$130.2K	\$2M	\$5.3K	\$604.7K	\$2.4K
China	\$0.2K	\$4.2K	\$1.1K	\$0.1K	\$20M	\$984.9K	\$0.3K	\$15.7K	\$39.1K	0	\$252.7K	\$24.5K	\$5.6K	\$886.1K	\$35M	\$3.2K	\$2M	\$1M
Hong Kong	\$494.6K	\$58.4K	\$86.4K	\$167.0K	\$21M	\$7M	\$4.8K	\$269.4K	\$23M	\$91.0K	\$24.1K	\$442.8K	\$483.7K	\$12M	\$207M	\$296.5K	\$19M	\$6M
India	\$3.8K	\$0.0K	0	0	\$4.1K	\$8.3K	0	\$0.0K	0	0	\$1.0K	0	0	0	\$12.2K	0	\$11.3K	\$1.4K
Indonesia	\$0.0K	\$12.3K	\$0.7K	\$0.4K	\$1M	\$647.6K	\$17.2K	0	\$201.0K	0	\$9.6K	\$138.4K	\$6.7K	\$131.0K	\$3M	\$329.1K	\$1M	\$1M
Japan	\$0.0K	\$10.5K	\$15.8K	\$2.5K	\$508.0K	\$9M	\$1.4K	\$235.9K	\$242M	\$3.9K	\$91.4K	\$3M	\$28.4K	\$2M	\$43M	\$252.5K	\$995.9K	\$7M
Mexico	\$12.3K	0	\$98.8K	\$5.5K	\$12.7K	\$154.1K	\$1.6K	\$0.3K	\$0.3K	\$95.0K	\$0.2K	\$0.0K	\$0.0K	\$484.7K	\$2M	\$0.4K	\$942.3K	\$4.0K
Russia	\$0.2K	0	\$11.6K	\$1.5K	\$250.6K	\$139.3K	\$347.8K	\$71.7K	\$41.1K	\$0.2K	\$10.2K	\$5M	\$65.7K	\$368.1K	\$2M	\$7.1K	\$2M	\$1M
South Korea	0	0	0	0	\$90.6K	\$318.7K	\$0.0K	\$4.3K	\$79.4K	0	\$87.3K	\$6M	\$8.4K	\$70.6K	\$15M	0	\$36.6K	\$133.4K
Turkey	0	\$0.1K	0	0	\$12.6K	\$116.7K	\$0.6K	\$0.6K	\$137.5K	0	\$2.1K	\$34.5K	\$795.0K	\$601.5K	\$2M	\$3.4K	\$739.0K	\$52.1K
UK	\$1M	\$2M	\$458.6K	\$99.6K	\$13M	\$26M	\$32.9K	\$181.8K	\$20M	\$3M	\$497.4K	\$327.0K	\$5M	\$22M	\$94M	\$4M	\$28M	\$2M
USA	\$160.9K	\$1M	\$2M	\$2M	\$50M	\$67M	\$1M	\$5M	\$30M	\$1M	\$2M	\$8M	\$4M	\$74M	\$327M	\$6M	\$122M	\$12M
Singapore	\$0.0K	\$15.4K	\$4.9K	\$10.8K	\$263.7K	\$410.6K	\$181.5K	\$721.5K	\$152.6K	\$7.8K	\$27.4K	\$31.2K	\$2.4K	\$928.0K	\$7M	\$339.2K	\$5M	\$1M
EU	\$0.2K	\$0.1K	\$19.1K	\$2.0K	\$94.4K	\$840.8K	\$8.4K	\$25.1K	\$12.8K	\$1.5K	\$46.5K	\$13.1K	\$554.8K	\$5M	\$18M	\$36.9K	\$1M	\$69.8K
Unknown	\$1.0K	\$0.4K	\$70.2K	\$21.5K	\$8M	\$3M	\$52.1K	\$621.1K	\$12M	\$2.0K	\$874.0K	\$256.6K	\$20.3K	\$492.0K	\$14M	\$445.2K	\$6M	\$862.3K

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# Total Amount of Bitcoin Transactions (in USD) Between Cryptocurrency Exchanges (Sorted by Country), 2017



	Argentina	Australia	Brazil	Canada	China	Hong Kong	India	Indonesia	Japan	Mexico	Russia	South Korea	Turkey	UK	USA	Singapore	EU	Unknown
Argentina	0	0	\$6.1K	0	\$0.2K	\$296.0K	\$0.3K	\$4.1K	\$4.0K	\$5.5K	\$1.9K	\$2.2K	\$0.4K	\$3M	\$753.0K	\$64.6K	\$2M	\$12.8K
Australia	\$0.0K	\$66M	\$190.5K	\$88.2K	\$77.7K	\$16M	\$164.9K	\$338.3K	\$963.1K	\$242.9K	\$91.1K	\$5M	\$14.9K	\$5M	\$99M	\$11M	\$5M	\$261.5K
Brazil	\$7.7K	\$293.2K	\$74M	\$187.1K	\$72.2K	\$42M	\$13.4K	\$16.9K	\$225.9K	\$2M	\$37.0K	\$1M	\$10.7K	\$9M	\$78M	\$9M	\$35M	\$793.7K
Canada	\$1.7K	\$98.7K	\$163.7K	\$2M	\$31.0K	\$19M	\$22.3K	\$186.3K	\$2M	\$14.1K	\$72.9K	\$3M	\$40.6K	\$12M	\$62M	\$13M	\$5M	\$398.5K
China	0	\$385.7K	\$34.4K	\$33.1K	\$4M	\$13M	\$14.9K	\$21.5K	\$935.5K	\$15.1K	\$132.5K	\$5M	\$138.5K	\$8M	\$50M	\$3M	\$15M	\$2M
Hong Kong	\$266.8K	\$14M	\$21M	\$10M	\$12M	\$21M	\$1M	\$10M	\$153M	\$5M	\$1M	\$589M	\$16M	\$624M	\$3,343M	\$311M	\$400M	\$37M
India	0	\$16.2K	0	0	0	\$4M	\$943.6K	\$3.6K	\$46.4K	\$3.9K	\$31.5K	\$31.2K	0	\$15M	\$38M	\$9M	\$7M	\$124.6K
Indonesia	0	\$325.6K	\$38.3K	\$31.3K	\$27.3K	\$7M	\$12.1K	0	\$3M	\$0.0K	\$99.7K	\$9M	\$58.4K	\$4M	\$53M	\$4M	\$2M	\$7M
Japan	\$0.9K	\$8M	\$1M	\$2M	\$920.3K	\$159M	\$411.7K	\$4M	\$1,648M	\$2M	\$5M	\$236M	\$428.5K	\$112M	\$2,106M	\$298M	\$78M	\$37M
Mexico	\$42.1K	\$131.7K	\$2M	\$96.0K	\$4.4K	\$7M	\$45.6K	\$1.8K	\$2M	0	\$50.0K	\$349.0K	0	\$15M	\$39M	\$3M	\$7M	\$218.3K
Russia	\$9.9K	\$91.8K	\$55.1K	\$26.5K	\$215.1K	\$3M	\$548.0K	\$303.8K	\$2M	\$13.6K	\$0.0K	\$8M	\$67.5K	\$3M	\$15M	\$3M	\$14M	\$2M
South Korea	0	\$129.0K	\$153.4K	\$87.8K	\$2M	\$14M	\$6.5K	\$182.0K	\$1M	\$0.1K	\$686.7K	\$82M	\$0.3K	\$6M	\$450M	\$88M	\$3M	\$5M
Turkey	0	\$33.9K	\$65.0K	\$3.5K	\$75.5K	\$27M	\$0.1K	\$102.1K	\$66.6K	0	\$96.9K	\$120.5K	\$32M	\$12M	\$102M	\$69M	\$3M	\$2M
UK	\$6M	\$60M	\$37M	\$6M	\$57M	\$896M	\$6M	\$27M	\$536M	\$20M	\$3M	\$152M	\$110M	\$159M	\$2,598M	\$334M	\$369M	\$36M
USA	\$1M	\$185M	\$97M	\$65M	\$114M	\$3,982M	\$27M	\$90M	\$1,581M	\$44M	\$22M	\$1,607M	\$116M	\$2,600M	\$7,980M	\$2,035M	\$1,648M	\$229M
Singapore	\$10.4K	\$20M	\$4M	\$6M	\$11M	\$428M	\$4M	\$11M	\$118M	\$886.3K	\$2M	\$86M	\$25M	\$235M	\$2,634M	\$91M	\$193M	\$119M
EU	\$114.2K	\$8M	\$1M	\$816.5K	\$16M	\$301M	\$606.6K	\$3M	\$71M	\$630.8K	\$2M	\$104M	\$3M	\$290M	\$578M	\$158M	\$89M	\$44M
Unknown	\$2.6K	\$598.5K	\$736.2K	\$682.0K	\$2M	\$78M	\$399.9K	\$12M	\$42M	\$242.6K	\$2M	\$96M	\$1M	\$29M	\$129M	\$165M	\$59M	\$2M

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# Total Amount of Bitcoin Transactions (in USD) Between Cryptocurrency Exchanges (Sorted by Country), 2018



	Argentina	Australia	Brazil	Canada	China	Hong Kong	India	Indonesia	Japan	Mexico	Russia	South Korea	Turkey	UK	USA	Singapore	EU	Unknown
Argentina	\$0.0K	\$41.0K	\$103.7K	\$37.7K	0	\$833.3K	\$3.5K	\$97.8K	\$103.3K	\$105.4K	\$1M	\$60.9K	\$19.9K	\$2M	\$3M	\$2M	\$2M	\$319.0K
Australia	\$19.5K	\$12M	\$20.3K	\$214.4K	0	\$16M	\$18.7K	\$224.3K	\$782.4K	\$521.6K	0	\$1M	\$0.7K	\$4M	\$31M	\$32M	\$3M	\$140.5K
Brazil	\$92.0K	\$274.4K	\$49M	\$226.1K	\$0.0K	\$38M	\$5.3K	\$549.9K	\$2M	\$28.7K	\$77.8K	\$16M	\$172.2K	\$15M	\$42M	\$86M	\$56M	\$6M
Canada	\$98.1K	\$709.4K	\$183.8K	\$11M	0	\$34M	\$24.5K	\$492.0K	\$781.4K	\$17.6K	\$26.9K	\$2M	\$58.5K	\$18M	\$49M	\$59M	\$9M	\$898.2K
China	0	\$0.2K	\$7.6K	\$44.3K	0	\$107.2K	\$0.3K	\$0.0K	\$7.6K	0	\$8.3K	\$32.9K	\$1.5K	\$233.2K	\$372.7K	\$1M	\$1M	\$37.3K
Hong Kong	\$1M	\$30M	\$43M	\$40M	0	\$194M	\$2M	\$15M	\$368M	\$3M	\$1M	\$611M	\$22M	\$1,305M	\$3,838M	\$1,703M	\$673M	\$81M
India	\$3.3K	\$68.7K	\$0.7K	\$25.6K	0	\$3M	\$501.3K	\$3.0K	\$268.7K	\$0.3K	\$20.0K	\$5.1K	\$1.0K	\$3M	\$14M	\$34M	\$9M	\$206.7K
Indonesia	\$6.2K	\$79.7K	\$876.0K	\$132.6K	0	\$8M	\$7.4K	0	\$589.3K	\$0.2K	\$20.3K	\$9M	\$32.5K	\$9M	\$33M	\$43M	\$4M	\$9M
Japan	\$129.9K	\$8M	\$2M	\$1M	0	\$328M	\$243.1K	\$8M	\$1,394M	\$3M	\$247.3K	\$595M	\$623.4K	\$208M	\$1,480M	\$1,386M	\$172M	\$41M
Mexico	\$582.1K	\$369.0K	\$202.1K	\$120.3K	0	\$5M	\$16.6K	\$15.0K	\$109.8K	0	\$169.3K	\$453.5K	\$1.3K	\$16M	\$15M	\$13M	\$10M	\$315.3K
Russia	\$491.0K	\$70.8K	\$55.3K	\$7.6K	0	\$2M	\$163.9K	\$99.0K	\$115.9K	\$19.8K	0	\$2M	\$45.2K	\$745.0K	\$3M	\$5M	\$4M	\$639.9K
South Korea	\$41.6K	\$107.1K	\$7M	\$106.4K	0	\$121M	\$6.9K	\$356.4K	\$12M	\$1.1K	\$923.2K	\$120M	\$88.6K	\$86M	\$77M	\$650M	\$35M	\$17M
Turkey	\$29.0K	\$12.9K	\$105.0K	\$98.6K	0	\$31M	\$24.3K	\$122.1K	\$588.0K	\$3.2K	\$16.3K	\$2M	\$33M	\$35M	\$92M	\$273M	\$13M	\$2M
UK	\$6M	\$77M	\$102M	\$14M	0	\$1,320M	\$6M	\$23M	\$656M	\$27M	\$875.0K	\$192M	\$158M	\$277M	\$2,959M	\$1,296M	\$530M	\$82M
USA	\$4M	\$74M	\$101M	\$84M	\$12.7K	\$4,410M	\$14M	\$71M	\$1,969M	\$16M	\$4M	\$342M	\$191M	\$3,695M	\$5,778M	\$4,416M	\$1,602M	\$149M
Singapore	\$3M	\$78M	\$48M	\$44M	\$16.4K	\$2,493M	\$17M	\$64M	\$732M	\$7M	\$3M	\$559M	\$158M	\$1,531M	\$5,774M	\$927M	\$1,176M	\$434M
EU	\$2M	\$5M	\$9M	\$3M	\$0.5K	\$768M	\$123.2K	\$10M	\$60M	\$411.8K	\$478.0K	\$139M	\$3M	\$429M	\$830M	\$922M	\$132M	\$79M
Unknown	\$252.4K	\$2M	\$5M	\$899.6K	\$0.5K	\$115M	\$685.4K	\$23M	\$29M	\$243.1K	\$483.8K	\$72M	\$2M	\$64M	\$136M	\$453M	\$168M	\$19M

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# Total Amount of Bitcoin Transactions (in USD) Between Cryptocurrency Exchanges (Sorted by Country), 2019 (January 1st – June 30th)



	Argentina	Australia	Brazil	Canada	China	Hong Kong	India	Indonesia	Japan	Mexico	Russia	South Korea	Turkey	UK	USA	Singapore	EU	Unknown
Argentina	0	\$0.2K	\$12.6K	\$0.0K	0	\$19.8K	\$0.0K	\$5.6K	\$2.4K	\$17.5K	\$0.1K	\$0.3K	\$4.6K	\$4M	\$4M	\$2M	\$177.9K	\$35.0K
Australia	0	\$368.7K	\$0.3K	\$65.0K	0	\$3M	0	\$653.1K	\$38.0K	0	0	\$15.6K	\$21.2K	\$559.9K	\$3M	\$6M	\$562.8K	\$4.6K
Brazil	\$1.7K	\$10.9K	\$722.3K	\$3.0K	0	\$6M	\$2.5K	\$352.7K	\$2M	\$108.1K	\$3.5K	\$2M	\$90.2K	\$8M	\$4M	\$28M	\$10M	\$594.8K
Canada	\$172.5K	\$18.3K	\$59.7K	\$96.7K	0	\$387.9K	0	\$16.3K	\$4.8K	\$0.5K	0	0	\$1.9K	\$103.5K	\$1M	\$1M	\$219.2K	\$41.2K
China	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hong Kong	\$72.7K	\$2M	\$5M	\$247.6K	0	\$17M	\$40.8K	\$945.7K	\$54M	\$306.8K	\$1.4K	\$16M	\$1M	\$164M	\$324M	\$324M	\$162M	\$10M
India	0	\$5.3K	\$1.3K	0	0	\$45.9K	\$0.4K	\$5.1K	\$0.7K	0	0	0	0	\$53.4K	\$117.1K	\$1M	\$118.8K	\$5.0K
Indonesia	\$0.2K	\$119.6K	\$48.6K	0	0	\$904.4K	0	0	\$801.8K	\$78.2K	\$0.4K	\$43.2K	\$9.6K	\$475.5K	\$9M	\$11M	\$3M	\$1M
Japan	\$1.4K	\$16.8K	\$858.6K	\$11.1K	0	\$21M	\$0.1K	\$680.8K	\$67M	\$42.5K	\$0.1K	\$15M	\$67.7K	\$25M	\$67M	\$131M	\$29M	\$2M
Mexico	\$60.6K	\$12.0K	\$153.3K	\$1.4K	0	\$755.1K	\$0.0K	\$84.3K	\$43.3K	0	\$0.5K	\$127.5K	\$1.8K	\$2M	\$2M	\$7M	\$2M	\$42.0K
Russia	\$0.2K	0	\$0.3K	0	0	\$1.1K	\$3.5K	\$1.7K	\$0.5K	\$0.2K	0	\$0.5K	\$0.1K	\$7.2K	\$15.5K	\$16.3K	\$7.4K	\$3.2K
South Korea	\$0.1K	\$0.8K	\$2M	0	0	\$5M	0	\$122.9K	\$561.0K	\$55.1K	\$5.1K	\$17M	\$0.8K	\$5M	\$5M	\$108M	\$4M	\$2M
Turkey	\$1.2K	0	\$15.5K	\$0.1K	0	\$1M	\$0.5K	\$140.4K	\$10.6K	\$0.1K	\$0.2K	\$0.4K	\$2M	\$5M	\$7M	\$45M	\$486.2K	\$149.5K
UK	\$2M	\$840.1K	\$16M	\$304.4K	0	\$108M	\$127.8K	\$2M	\$13M	\$3M	\$9.0K	\$3M	\$6M	\$49M	\$543M	\$512M	\$98M	\$101M
USA	\$1M	\$6M	\$32M	\$3M	0	\$270M	\$388.5K	\$19M	\$109M	\$4M	\$7.2K	\$12M	\$41M	\$489M	\$740M	\$939M	\$310M	\$32M
Singapore	\$358.8K	\$8M	\$25M	\$1M	\$17.3K	\$308M	\$1M	\$21M	\$138M	\$8M	\$11.1K	\$53M	\$30M	\$373M	\$1,419M	\$345M	\$511M	\$61M
EU	\$67.0K	\$991.4K	\$10M	\$54.3K	0	\$163M	\$16.8K	\$3M	\$20M	\$86.9K	\$10.1K	\$14M	\$848.9K	\$154M	\$206M	\$630M	\$32M	\$41M
Unknown	\$2.4K	\$30.7K	\$959.3K	\$22.1K	\$3.7K	\$21M	\$1.4K	\$6M	\$2M	\$17.6K	\$3.2K	\$3M	\$141.6K	\$134M	\$20M	\$93M	\$99M	\$4M

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# Total Amount of Bitcoin Transactions (in USD) Between Cryptocurrency Exchanges (Sorted by Country), 2013 – 2019



	Argentina	Australia	Brazil	Canada	China	Hong Kong	India	Indonesia	Japan	Mexico	Russia	South Korea	Turkey	UK	USA	Singapore	EU	Unknown
Argentina	\$0.0K	\$41.3K	\$122.5K	\$37.8K	\$0.6K	\$2M	\$5.7K	\$108.1K	\$109.7K	\$130.6K	\$1M	\$63.4K	\$25.0K	\$13M	\$10M	\$4M	\$5M	\$373.5K
Australia	\$21.0K	\$79M	\$334.8K	\$465.2K	\$343.4K	\$36M	\$201.7K	\$1M	\$2M	\$768.5K	\$118.3K	\$7M	\$36.8K	\$13M	\$139M	\$49M	\$16M	\$455.7K
Brazil	\$101.4K	\$753.3K	\$128M	\$426.8K	\$166.8K	\$87M	\$22.7K	\$920.7K	\$4M	\$2M	\$169.6K	\$19M	\$273.3K	\$32M	\$128M	\$123M	\$104M	\$7M
Canada	\$272.3K	\$934.5K	\$422.7K	\$13M	\$148.4K	\$54M	\$48.6K	\$697.7K	\$4M	\$196.4K	\$109.6K	\$6M	\$101.0K	\$36M	\$119M	\$73M	\$17M	\$1M
China	\$0.2K	\$446.7K	\$47.3K	\$102.6K	\$28M	\$15M	\$15.5K	\$67.8K	\$2M	\$18.9K	\$419.6K	\$5M	\$146.9K	\$11M	\$91M	\$4M	\$20M	\$3M
Hong Kong	\$2M	\$48M	\$69M	\$51M	\$47M	\$255M	\$4M	\$26M	\$602M	\$8M	\$2M	\$1,217M	\$40M	\$2,248M	\$7,840M	\$2,338M	\$1,289M	\$148M
India	\$7.0K	\$93.3K	\$2.0K	\$25.6K	\$30.6K	\$7M	\$1M	\$13.9K	\$315.8K	\$4.3K	\$52.4K	\$36.3K	\$1.0K	\$18M	\$51M	\$44M	\$16M	\$340.3K
Indonesia	\$6.5K	\$622.0K	\$963.6K	\$164.4K	\$3M	\$17M	\$70.2K	\$0.0K	\$4M	\$78.4K	\$143.8K	\$18M	\$110.1K	\$14M	\$99M	\$58M	\$11M	\$19M
Japan	\$132.2K	\$16M	\$4M	\$4M	\$3M	\$523M	\$656.4K	\$13M	\$3,364M	\$5M	\$5M	\$849M	\$1M	\$390M	\$3,723M	\$1,816M	\$318M	\$91M
Mexico	\$697.1K	\$522.4K	\$2M	\$239.6K	\$75.6K	\$13M	\$63.8K	\$101.6K	\$2M	\$254.7K	\$220.9K	\$930.1K	\$3.2K	\$34M	\$59M	\$22M	\$21M	\$596.3K
Russia	\$501.3K	\$169.8K	\$126.9K	\$67.5K	\$633.4K	\$5M	\$1M	\$493.4K	\$2M	\$34.5K	\$10.3K	\$15M	\$178.7K	\$4M	\$22M	\$8M	\$20M	\$4M
South Korea	\$41.7K	\$236.9K	\$9M	\$197.0K	\$2M	\$141M	\$13.4K	\$666.3K	\$15M	\$56.8K	\$2M	\$225M	\$98.2K	\$97M	\$547M	\$845M	\$42M	\$24M
Turkey	\$30.2K	\$47.0K	\$185.5K	\$102.2K	\$90.3K	\$59M	\$25.5K	\$365.2K	\$808.1K	\$3.2K	\$116.8K	\$2M	\$67M	\$53M	\$202M	\$387M	\$16M	\$5M
UK	\$16M	\$143M	\$159M	\$23M	\$81M	\$2,485M	\$11M	\$52M	\$1,248M	\$54M	\$4M	\$349M	\$278M	\$551M	\$6,617M	\$2,148M	\$1,143M	\$226M
USA	\$7M	\$276M	\$234M	\$157M	\$198M	\$8,827M	\$43M	\$187M	\$3,704M	\$66M	\$29M	\$1,971M	\$351M	\$6,994M	\$14,997M	\$7,398M	\$3,880M	\$444M
Singapore	\$3M	\$106M	\$77M	\$51M	\$12M	\$3,229M	\$23M	\$96M	\$989M	\$15M	\$5M	\$698M	\$214M	\$2,140M	\$9,835M	\$1,363M	\$1,887M	\$616M
EU	\$2M	\$17M	\$20M	\$4M	\$19M	\$1,243M	\$755.2K	\$17M	\$166M	\$1M	\$2M	\$257M	\$8M	\$925M	\$1,664M	\$1,710M	\$279M	\$164M
Unknown	\$258.4K	\$2M	\$7M	\$2M	\$24M	\$220M	\$1M	\$42M	\$87M	\$505.3K	\$3M	\$171M	\$3M	\$229M	\$304M	\$711M	\$338M	\$26M

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# Amount of Bitcoin Sent/Received by G20 Countries by Year










Country	2013		2014		2015		2016		2017		2018		2019	
	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received
Argentina	0	0	0	\$0.0K	\$3.4M	\$391.1K	\$5.2M	\$2.0M	\$6.0M	\$8.2M	\$11.6M	\$17.5M	\$9.7M	\$4.3M
Australia	\$6.7M	\$5.5M	\$7.9M	\$10.6M	\$2.0M	\$4.0M	\$3.0M	\$3.9M	\$209.2M	\$362.6M	\$101.2M	\$287.3M	\$14.4M	\$18.6M
Brazil	\$861.5K	\$926.5K	\$1.7M	\$3.3M	\$2.3M	\$2.8M	\$9.2M	\$6.3M	\$252.8M	\$238.2M	\$310.6M	\$367.7M	\$60.6M	\$93.3M
Canada	\$6.2M	\$1.6M	\$6.0M	\$3.6M	\$4.1M	\$2.6M	\$3.6M	\$2.8M	\$118.0M	\$93.7M	\$184.4M	\$197.9M	\$3.8M	\$4.9M
China	\$1.6M	\$3.7M	\$6.2M	\$21.5M	\$5.7M	\$58.0M	\$60.5M	\$115.3M	\$101.9M	\$218.8M	\$3.0M	\$30.1K	0	\$21.0K
Hong Kong	\$23.4M	\$47.4M	\$157.3M	\$118.2M	\$177.8M	\$107.4M	\$296.7M	\$117.4M	\$5,568.9M	\$6,014.7M	\$8,929.7M	\$9,885.6M	\$1,080.8M	\$924.9M
India	0	0	0	0	\$299.8K	\$416.0K	\$42.0K	\$1.9M	\$73.7M	\$41.1M	\$63.4M	\$40.7M	\$1.4M	\$2.0M
Indonesia	0	0	\$848.8K	\$863.3K	\$4.1M	\$2.6M	\$7.6M	\$7.6M	\$89.1M	\$157.2M	\$117.1M	\$215.0M	\$26.2M	\$53.5M
Japan	\$110.8M	\$49.6M	\$294.0K	\$725.4K	\$24.9M	\$25.1M	\$306.8M	\$327.3M	\$4,697.4M	\$4,161.9M	\$5,628.7M	\$5,224.6M	\$358.2M	\$407.5M
Mexico	\$36.6K	\$295.2K	\$949.9K	\$1.9M	\$740.5K	\$704.6K	\$3.3M	\$4.4M	\$75.2M	\$74.0M	\$61.6M	\$57.3M	\$15.0M	\$15.3M
Russia	0	0	\$1.4M	\$1.6M	\$1.2M	\$708.6K	\$11.5M	\$3.8M	\$51.7M	\$36.5M	\$17.8M	\$12.0M	\$57.5K	\$52.0K
South Korea	\$212.4K	\$1.0M	\$130.1K	\$1.8M	\$337.1K	\$2.1M	\$21.5M	\$23.1M	\$653.0M	\$2,984.9M	\$1,126.3M	\$2,661.8M	\$148.3M	\$134.4M
Turkey	\$7.3K	\$2.0K	\$135.6K	\$132.1K	\$54.6K	\$244.2K	\$4.6M	\$10.1M	\$246.6M	\$304.3M	\$481.8M	\$567.8M	\$60.9M	\$81.0M
UK	\$167.6M	\$105.6M	\$430.6M	\$237.9M	\$174.2M	\$86.5M	\$222.4M	\$120.0M	\$5,412.4M	\$4,140.9M	\$7,726.4M	\$7,699.6M	\$1,456.7M	\$1,411.8M
USA	\$99.0M	\$108.8M	\$316.0M	\$401.1M	\$283.9M	\$295.2M	\$716.2M	\$777.3M	\$22,422.0M	\$20,356.5M	\$22,919.2M	\$21,154.2M	\$3,006.3M	\$3,354.6M
Singapore	\$689.1K	\$807.7K	\$1.1M	\$1.6M	\$2.6M	\$2.0M	\$17.2M	\$11.5M	\$3,988.1M	\$3,604.3M	\$14,046.5M	\$12,299.7M	\$3,302.8M	\$3,181.8M
EU	\$56.7M	\$149.0M	\$58.3M	\$172.7M	\$20.8M	\$113.6M	\$25.7M	\$193.6M	\$1,670.6M	\$2,933.1M	\$3,390.7M	\$4,599.7M	\$1,277.3M	\$1,261.9M
Unknown	\$3.8M	\$3.5M	\$5.2M	\$16.4M	\$23.8M	\$27.8M	\$46.7M	\$33.7M	\$618.6M	\$524.2M	\$1,090.3M	\$922.0M	\$382.0M	\$254.6M

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## Country with Largest Amount of Sent Transactions (Reported by Year)








**BITFURY Crystal**

Country	2013	2014	2015	2016	2017	2018	2019 (first half)
Country	 UK	 UK	 USA	 USA	 USA	 USA	 Singapore
Sent amount	\$167.6M	\$430.6M	\$283.9M	\$716.2M	\$22,422M	\$22,919.2M	\$3,302.8M

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## Country with Largest Amount of Received Transactions (Reported by Year)

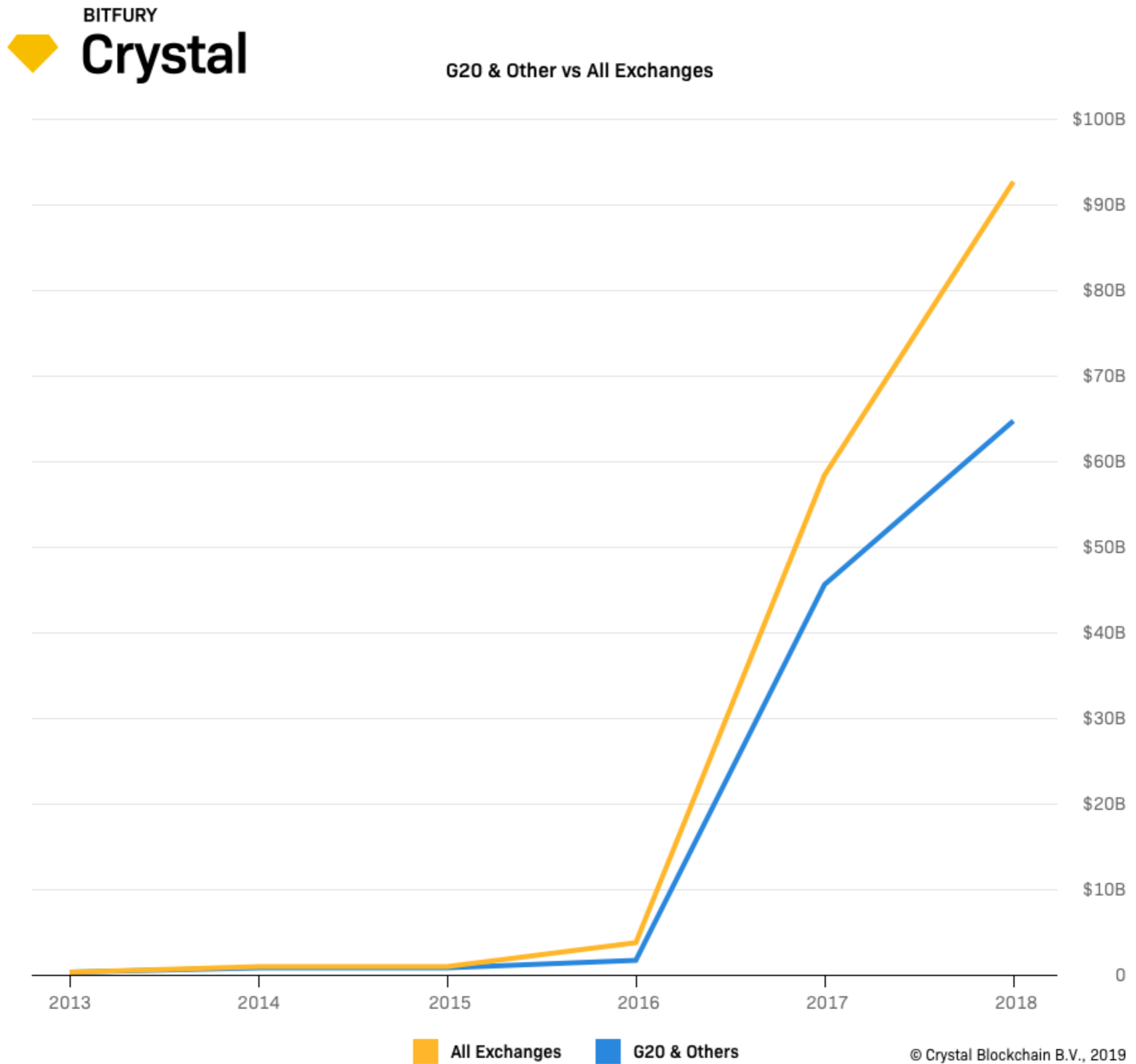
**BITFURY Crystal**

Country	2013	2014	2015	2016	2017	2018	2019 (first half)
Country	 EU	 USA	 USA	 USA	 USA	 USA	 USA
Received amount	\$149.0M	\$401.1M	\$295.2M	\$777.3M	\$20,356.5M	\$21,154.2M	\$3,354.6M

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## Comparison of Sent Amounts by “G20 & Other” Exchanges vs. All Exchanges (Reported by Year)

Please note: These graphs are limited to 2013 – 2018 in order to accurately show the growth in transactions between these exchanges annually. They do not include 2019, as the year is not completed.

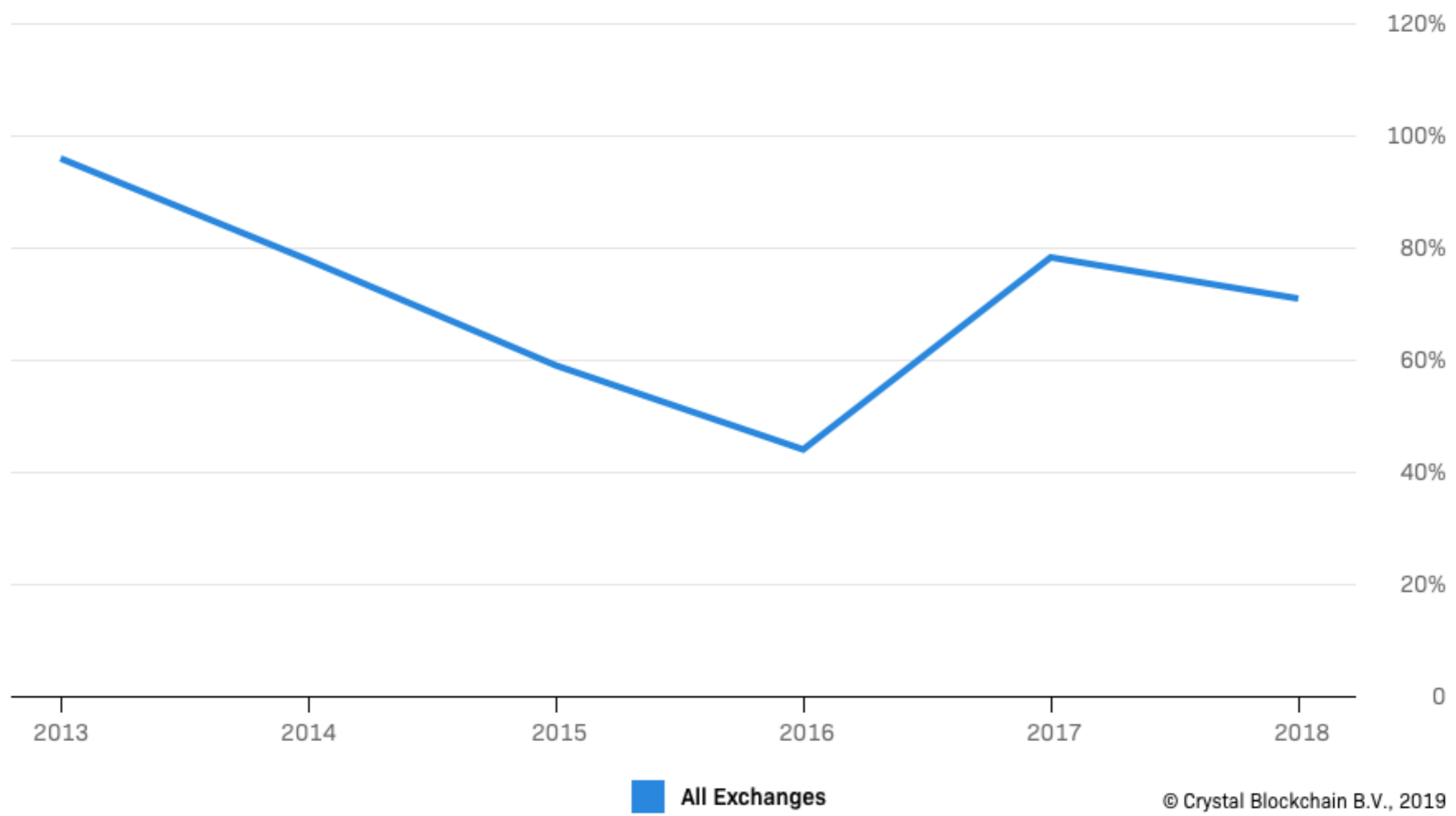


Country	2013	2014	2015	2016	2017	2018	2019 (first half)
G20 Exchanges	\$477.7M	\$988.9M	\$708.3M	\$1,715.2M	\$45,636.5M	\$65,119.9M	\$10,822.4M
All Exchanges	\$498.2M	\$1,299.4M	\$1,237.5M	\$3,709.5M	\$57,760.0M	\$92,648.3M	\$20,447.0M
G20 Exchanges / All Exchanges, %	95.9%	76.1%	57.2%	46.2%	79.0%	70.3%	52.9%

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G20 & Other vs All Exchanges, %



### Comparison of Sent Amounts by “G20 & Other” Exchanges vs. Unknown Exchanges (Reported by Year)



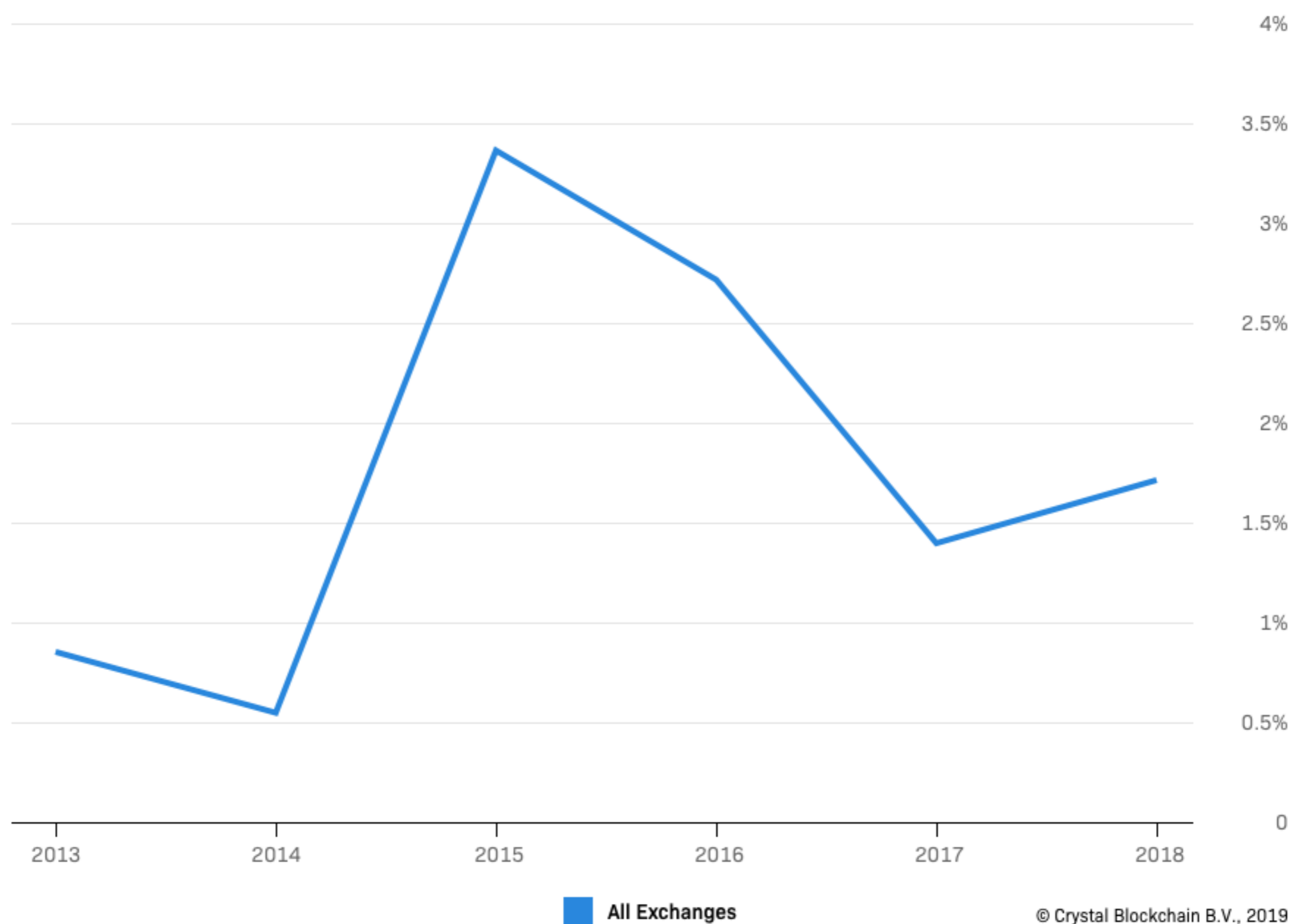
Country	2013	2014	2015	2016	2017	2018	2019 (first half)
G20 Exchanges	\$477.7M	\$988.9M	\$708.3M	\$1,715.2M	\$45,636.5M	\$65,119.9M	\$10,822.4M
Unknown Exchanges	\$3.8M	\$5.2M	\$23.8M	\$46.7M	\$618.6M	\$1,090.3M	\$382.0M
Unknown Exchanges / G20 Exchanges, %	0.8%	0.5%	3.4%	2.7%	1.4%	1.7%	3.5%

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Unknown Exchanges / G20 Exchanges, %



## Key Findings

### Summary of Findings:

- The countries/regions with the largest number of registered exchanges are the UK, USA, Hong Kong, and Singapore.
- Argentina, India, Mexico, Russia, and Indonesia have the fewest exchanges registered.
- Nearly 10 percent of all exchanges surveyed do not have countries of registration.
- In 2013, 96 percent of all bitcoin transferred between exchanges were sent by exchanges from the “G20 & Other” group. In 2018, it decreased to 70 percent.
- In 2018, the total volume of bitcoin directly transferred between exchanges was almost \$92.6 billion. A total of \$65.1 billion was transferred by exchanges from G20 countries, Hong Kong, and Singapore.

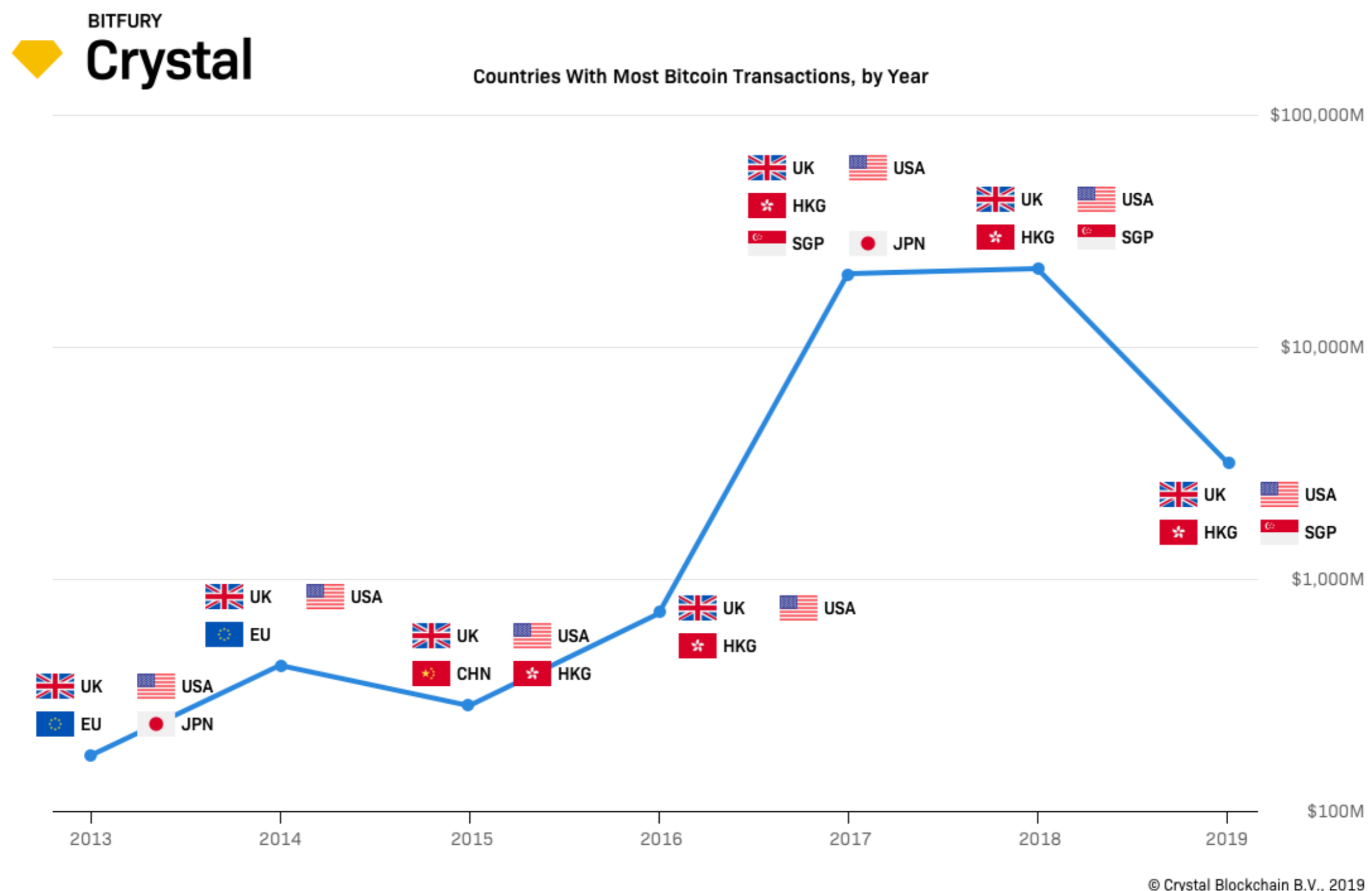
### Geographic Observations:

- The UK has the largest number of registered exchanges (outside of the aggregated European Union), followed by the USA.
- The Asia-Pacific countries with the largest number of exchanges are Hong Kong and Singapore.

- Argentina, India, Mexico, Russia, and Indonesia have the fewest exchanges registered.

## Key Observations on Bitcoin Transfer Amounts per Country

The following graphic lists by year the countries with the largest amount of international bitcoin transfers sent by their exchanges.



- In 2013, the countries/regions with the largest amount of international bitcoin transfers sent by their exchanges were the UK, USA, EU and Japan (the country of registration of Mt. Gox).
- In 2014, the countries/regions with the largest amount of international bitcoin transfers sent by their exchanges were the UK, USA and EU. Japan dropped off the list due to the Mt. Gox hack and its subsequent shutdown.
- In 2015, the countries/regions with the largest amount of international bitcoin transfers sent by their exchanges remained the UK and the USA, with increasing activity seen in Hong Kong and China.
- In 2016, the countries/regions with the largest amount of international bitcoin transfers sent by their exchanges were the USA, the UK and Hong Kong.
- In 2017, the countries/regions with the largest amount of international bitcoin transfers continued to be the USA, the UK and Hong Kong, with growing activity in Singapore and Japan.
- In 2018, the countries/regions with the largest amount of international bitcoin transfers sent by their exchanges were the USA, the UK, Hong Kong and Singapore. As noted above,

China's activities shrunk considerably, likely due to the statement on September 4, 2017 from the People's Bank of China (PBoC) issued a statement prohibiting CNY to cryptocurrency trading in China.

- So far in 2019, the countries/regions with the largest amount of international bitcoin transfers sent by their exchanges are the USA, the UK, Hong Kong, and Singapore. Exchanges registered in China have all but ceased activities.
- The share of transferred funds sent by G20 countries is reducing as exchanges become more evenly distributed around the world.
- Since 2014, the USA is consistently the country with the largest amount of total received transfers per year. This is notable because while the UK has more registered exchanges, it is apparent that the USA registered exchanges are larger and manage more funds.
- With the exception of 2013, exchanges based in the USA received the largest amount of bitcoin transactions (by USD).
- Singapore has the largest amount of bitcoin transactions so far in 2019, despite the USA and UK having more registered exchanges.
- In 2013, 96 percent of all transferred bitcoins between exchanges were sent by exchanges from the G20 & Other group. Exchanges registered in the “G20 and Other” countries dominated the early years of bitcoin transactions but have lessened considerably as exchanges in countries outside the G20 have launched. However, the total transferred amount between all exchanges has continued to increase.

## Predictions

- We expect that the number of exchanges operating with unknown countries of origin will reduce, as under the FATF guidelines they will need both an official registration as well as a license to operate.
- While the “travel rule” will add more complexity to exchange compliance, it could significantly reduce the threat of global criminal misuse of virtual assets.
- The overall percentage of bitcoin transactions sent from “unknown” exchanges has no stable trend, but we estimate that, after the adoption of the FATF guidelines, the share of exchanges that have unknown countries of registration will significantly reduce.

## Final Note and Next Steps

This report was compiled by the Crystal blockchain analytics team using our proprietary Crystal platform. We issued this report to share a more nuanced view of the international flow of bitcoin between cryptocurrency exchanges.

It is clear that bitcoin adoption (and transactions) will only continue to grow, and it is

imperative that anyone involved in compliance and regulation have the tools at hand to visualize and analyze these interactions.

If you are interested in using Crystal blockchain analytics in your organization, please email us at [contact@crystalblockchain.com](mailto:contact@crystalblockchain.com).

We will continue our monitoring of international transfers of cryptocurrencies in order to provide advanced analytics for Crystal analytics clients and will update this report regularly with any important changes.

## Appendix

### FATF Guidance June 2019 Reference:

#### Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers 2019

#### Complete List of Exchanges Studied, Sorted by Number Per Country (Descending):

Country	Exchanges
UK	CoinExchange.io, Bitcoin-24, Livecoin, Exmo, Liqui, Matbea, Mercatox, MintPal, BitBar Gain, Tidex, Bittylicious, Intersango, BitMarket24.pl, CoinEgg, CoinMate, Kuna.io, BTC-Alpha, Vaultoro, CoinFalcon, GLBSE.com, ECoin.eu, BitBays, Bitlish, LakeBTC, Coinomat, Coinfloor.co.uk, Bitok.com, AEX.com, Cryptox.pl, Banx, SpaceBTC.com, Indacoin, localtrade.cc, Cryptonex, Coinrate, Instant Bitex, Mimex, Bitstamp, CEX.io, DSX, ShapeShift, BlockEx, quantum.uk.
Unknown	Yobit, BTCTrade, Seconds Trade, AltCoinTrader.co.za, Hotbit, Cobinhood, CoinSwap, Big.ONE, Nix Money, BitGrail.com, 796.com, DC-Ex.com, CoinPlug, OrderBook, Metaexchange.info, Arbolet, XBTC, TradeOgre, BitMarket.Eu Cold Storage, Exchange-Credit.ru, Bitbank.com, DOBI Trade, UEX, DragonEx, Coinnest, OEX, Neraex, QBTC, Fcoin, Bytex, Rfinex, HADAX, BTCBox.com.
USA	Cryptsy, Paxful, CampBX, Coins-e, BitQuick, itBit, CryptoRush, Coin.mx, SFOX, CoinCafe.com, AllCrypt, Celery, CoinMkt, ButterCoin, Coinsetter, Cryptonit.net, EmpoEX.com, Nanex, CleverCoin, Kraken, Coinbase, OkCoin, Poloniex, Bittrex, Gemini, xcoins.io, Stronghold.
Hong Kong	Kucoin, Changelly, AnxPro, CoinEx, AllCoin, BitForex, CryptoTrade, Lbank, CFINEX (AlcurEX), Coinsuper, BitVC, BitYes, IdsOption.com, Bitcashout, C2CX, KBBEX, Iquant, Bitfinex, Gatecoin.com, Trade Satoshi, Bit-Z, idcm.io.

<b>Singapore</b>	Binance, Luno.com, WEX, Coss, FYB-SG, XMR.to, CoinArch.com, Kryptono, CRXZone, DigiFinex, Tokenomy, TripeDiceExchange, OOOBTC, Coinut, Bitrue, CoinTiger, Upbit, coinhub.io, BiteBTC.
<b>Australia</b>	CoinSpot, BTCMarkets, McxNOW, IndependentReserve, CoinLoft, Bitlio, Cryptoxchange, BitTrade Australia, ACX.
<b>China</b>	Bter, Yunbi, Jubi.com, BTC38, CoinGather.com, CHBTC.com, CoinTrader, BTCChina, BtcTrade.im Baobi.
<b>Estonia</b>	Stocks.Exchange, Bibox, Crex24, B2BX, Comkort, CoinsBank, ChaoEX, Coinbe.
<b>Brazil</b>	MercadoBitcoin, FoxBit, BitcoinToYou, NegocieCoins.com.br, CoinBene, Braziliex, FlowBTC.
<b>Japan</b>	AidosMarket, CoinCheck, Quoine, bitFlyer, Zaif, Liquid.
<b>South Korea</b>	KorBit, Coinone, Coinrail, GOPAX, Yapizon.com, CPDAX, Bithumb.
<b>Canada</b>	QuadrigaCX, Cavirtex, Coinsquare, VaultOfSatoshi, TuxExchange, ezBtc.
<b>Denmark</b>	Cryptobridge, OpenLedger, Coinify, Ccedk.com, WeMoveCoins.com.
<b>Malta</b>	Zebpay, BleuTrade, BitBay, TopBTC, OKEx.
<b>Netherlands</b>	LiteBit, Deribit, BitMyMoney, HappyCoins, AnycoinDirect.eu.
<b>Cayman Islands</b>	Gate.io, BlockTrades, Latoken, BitMart.
<b>Poland</b>	Abucoins, BitCurex, CoinRoom, Askcoin.
<b>Seychelles</b>	Remitano, BitMEX, Bitmarket, Huobi.
<b>Turkey</b>	Koinim, BtcTurk, Paribu, Sistemkoin.
<b>Argentina</b>	SouthXchange, Bitex, C-Patex.

<b>Belize</b>	Vircorex, AlfaCashier, FatBTC.
<b>British Virgin Islands</b>	InfinityCoin, Xzzx.biz, BitOasis.
<b>Czech Republic</b>	Bitcash.cz, SimpleCoin, BtcEur.eu.
<b>India</b>	Unocoin, Bitcoin India Exchange, Koinex.in.
<b>Mexico</b>	MeXBT, MasterXchange, Bitso.
<b>New Zealand</b>	Cryptopia, BitCoinica, BitNZ.
<b>Russia</b>	C-Cex, Xchange.is, CoinChimp.
<b>Switzerland</b>	Waves DEX, SwissCex, Changer.com.
<b>Thailand</b>	Coins.co.th, BX.in.th, BitFlip.li.
<b>Austria</b>	VirWox, Bitpanda.
<b>Cyprus</b>	BTC-e, MBAex.
<b>France</b>	CoinHouse.eu, Europex.eu.
<b>Lithuania</b>	SpectroCoin, Coingate.
<b>Norway</b>	JustCoin, BitcoinsNorway.
<b>Panama</b>	Dgex.com, Coingi.com.
<b>Portugal</b>	UseCryptos.com, Zyado.com.
<b>Saint Kitts and Nevis</b>	XBTC
<b>Samoa</b>	MaiCoin, ZB.com.
<b>Sweden</b>	Novaexchange, Bt.cx.
<b>Taiwan</b>	BitoEX, OTCBtc.
<b>Ukraine</b>	BtcBank.com.ua, Bit-Changer.net.
<b>Vietnam</b>	Vbtc, BitcoinVietnam.com.vn.

<b>Chile</b>	Cryptomarket
<b>Costa Rica</b>	Fairlay
<b>Croatia</b>	BitKonan.com
<b>Finland</b>	LocalBitcoins
<b>Germany</b>	BitcoinDE
<b>Hungary</b>	CoinBroker
<b>Indonesia</b>	Indodax (Bitcoin.co.id)
<b>Iran</b>	Exchanging
<b>Ireland</b>	Bitsane
<b>Isle of Man</b>	CoinCorner
<b>Israel</b>	Bit2c.co.il
<b>Italy</b>	TheRockTrading
<b>Mongolia</b>	IDAX
<b>Pakistan</b>	UrduBit
<b>Romania</b>	BtcExchange.ro
<b>Saint Vincent de Grenadines</b>	SimpleFX
<b>Philippines</b>	Rebit.ph
<b>UAE</b>	RightBTC
<b>Vanuatu</b>	TradebyTrade
<b>Venezuela</b>	SurBitcoin.com
<b>Zimbabwe</b>	Golix



**List of Exchanges Studied in “G20 and Other” Countries, Sorted by Country/Region:**

Country	Exchanges
<b>EU</b>	LocalBitcoins, BTC-e, Zebpay, VirWox, SpectroCoin, Cryptobridge, Stocks.Exchange, LiteBit, BleuTrade, BitBay, Bibox, Novaexchange, Bitpanda, Crex24, TheRockTrading, Deribit, Bitsane, OpenLedger, BitMyMoney, Coingate, HappyCoins, Abucoins, B2BX, Coinify, BitKonan.com, CoinHouse.eu, BitCurex, BtcExchange.ro, Comkort, TopBTC, UseCryptos.com, CoinRoom, Bitcash.cz, Ccedk.com, AnycoinDirect.eu, Zyado.com, Bt.cx, CoinBroker, Askcoin, Europex.eu, WeMoveCoins.com, SimpleCoin, BtcEur.eu, BitcoinDE, CoinsBank, ChaoEX, MBAex, Coinbe, OKEx.
<b>UK</b>	CoinExchange.io, Bitcoin-24, Livecoin, Exmo, Liqui, Matbea, Mercatox, MintPal, BitBar Gain, Tidex, Bittylicious, Intersango, BitMarket24.pl, CoinEgg, CoinMate, Kuna.io, BTC-Alpha, Vaultoro, CoinFalcon, GLBSE.com, ECoin.eu, BitBays, Bitlish, LakeBTC, Coinomat, Coinfloor.co.uk, Bitok.com, AEX.com, Cryptox.pl, Banx, SpaceBTC.com, Indacoin, localtrade.cc, Cryptonex, Coinrate, Instant Bitex, Mimex, Bitstamp, CEX.io, DSX, ShapeShift, BlockEx, quantum.uk.
<b>Unknown</b>	Yobit, BTCTrade, Seconds Trade, AltCoinTrader.co.za, Hotbit, Cobinhood, CoinSwap, Big.ONE, Nix Money, BitGrail.com, 796.com, DC-Ex.com, CoinPlug, OrderBook, Metaexchange.info, Arbolet, XBTC, TradeOgre, BitMarket.Eu Cold Storage, Exchange-Credit.ru, Bitbank.com, DOBI Trade, UEX, DragonEx, Coinnest, OEX, Neraex, QBTC, Fcoin, Bytex, Rfinex, HADAX, BTCBox.com.
<b>USA</b>	Cryptsy, Paxful, CampBX, Coins-e, BitQuick, itBit, CryptoRush, Coin.mx, SFOX, CoinCafe.com, AllCrypt, Celery, CoinMkt, ButterCoin, Coinsetter, Cryptonit.net, EmpoEX.com, Nanex, CleverCoin, Kraken, Coinbase, OkCoin, Poloniex, Bittrex, Gemini, xcoins.io, Stronghold.

<b>Hong Kong</b>	Kucoin, Changelly, AnxPro, CoinEx, AllCoin, BitForex, CryptoTrade, LBank, CFINEX (AlcurEX), Coinsuper, BitVC, BitYes, IdsOption.com, Bitcashout, C2CX, KBBEX, Iquant, Bitfinex, Gatecoin.com, Trade Satoshi, Bit-Z, idcm.io.
<b>Singapore</b>	Binance, Luno.com, WEX, Coss, FYB-SG, XMR.to, CoinArch.com, Kryptono, CRXZone, DigiFinex, Tokenomy, TripeDiceExchange, OOOBTC, Coinut, Bitrue, CoinTiger, Upbit, coinhub.io, BiteBTC.
<b>Australia</b>	CoinSpot, BTCMarkets, McxNOW, IndependentReserve, CoinLoft, Bitlio, Cryptoxchange, BitTrade Australia, ACX.
<b>China</b>	Bter, Yunbi, Jubi.com, BTC38, CoinGather.com, CHBTC.com, CoinTrader, BTCChina, BtcTrade.im Baobi.
<b>Brazil</b>	MercadoBitcoin, FoxBit, BitcoinToYou, NegocieCoins.com.br, CoinBene, Braziliex, FlowBTC.
<b>Japan</b>	AidosMarket, CoinCheck, Quoine, bitFlyer, Zaif, Liquid.
<b>South Korea</b>	KorBit, Coinone, Coinrail, GOPAX, Yapizon.com, CPDAX, Bithumb.
<b>Canada</b>	QuadrigaCX, Cavirtex, Coinsquare, VaultOfSatoshi, TuxExchange, ezBtc.
<b>Turkey</b>	Koinim, BtcTurk, Paribu, Sistemkoin.
<b>Argentina</b>	SouthXchange, Bitex, C-Patex.
<b>India</b>	Unocoin, Bitcoin India Exchange, Koinex.in.
<b>Mexico</b>	MeXBT, MasterXchange, Bitso.
<b>Russia</b>	C-Cex, Xchange.is, CoinChimp.
<b>Indonesia</b>	Indodax (Bitcoin.co.id)



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