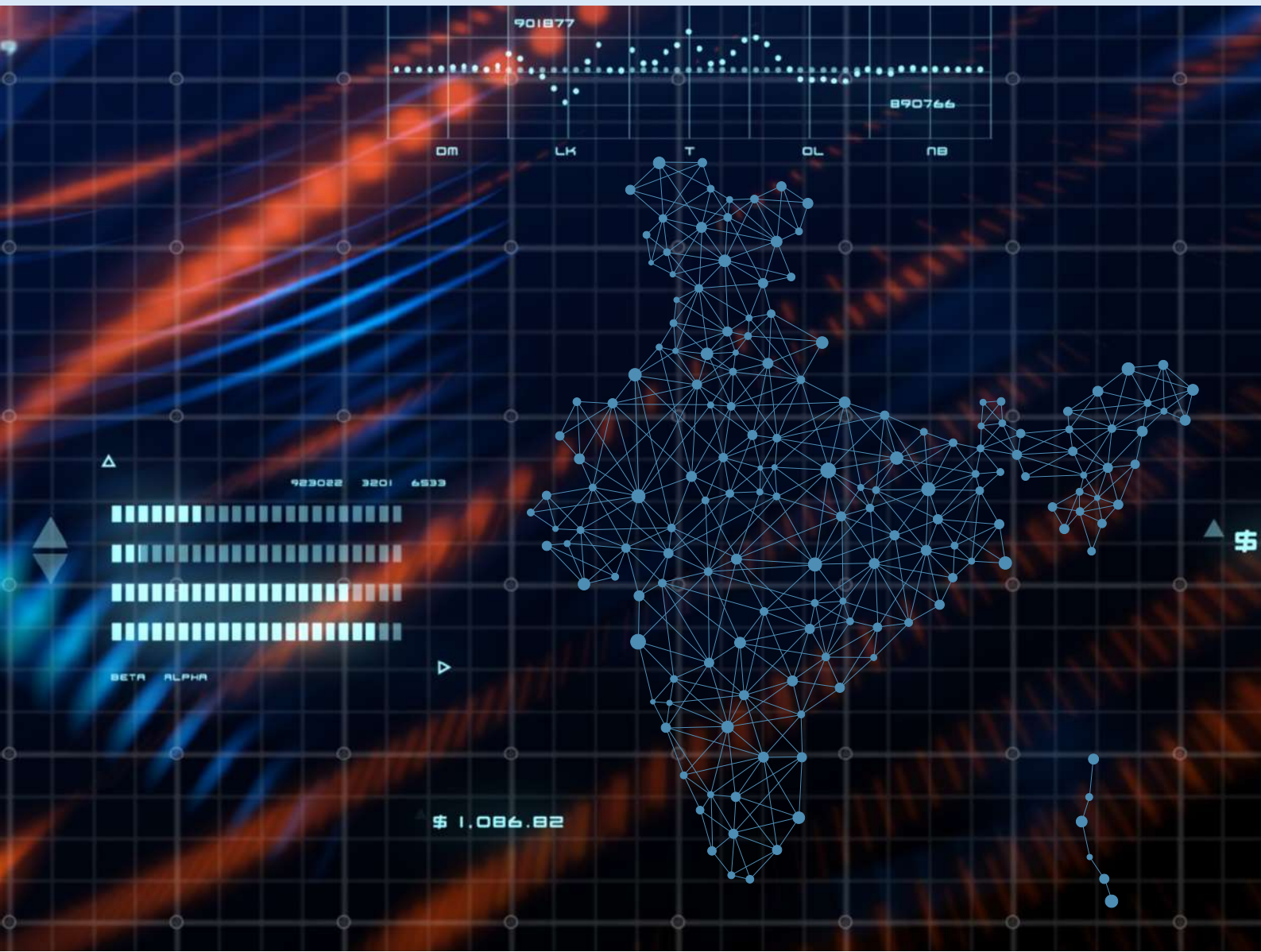




IMPACT ASSESSMENT OF TAX DEDUCTED AT SOURCE ON THE INDIAN VIRTUAL DIGITAL ASSET MARKET

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EXECUTIVE SUMMARY

This paper is an updated analysis of the impact of the 1% tax deducted at source (TDS) on trading in crypto assets (referred to as VDAs – virtual digital assets – in the Indian Income Tax Act 1961) introduced in India in 2022. The 1% TDS levy seems intended to discourage speculative activity and increase traceability in the VDA ecosystem. Our empirical analysis suggests these goals remain unmet.

In particular, the 1% TDS has led Indian users to trade on offshore VDA exchange platforms and other untraceable channels. This, in turn, results in lost revenue for the exchequer and lost opportunities in the form of foregone positive externalities for the digital economy in India.

We use a four-step approach to evaluate the impact of the 1% TDS levy on the Indian VDA market:

- 1 Data analysis of Indian and global VDA user activity and the reach of prominent VDA exchanges on mobile apps and web platforms
- 2 Causal analysis (using the change-in-change or CIC methodology) of the impact of the announcement of the 1% TDS levy in February 2022 and its subsequent implementation in July 2022
- 3 Analysis of transaction volumes and fund flow data from a sample of over 13,000 peer-to-peer (P2P) traders (INR based P2P escrow trades) on major international VDA exchanges
- 4 An in-depth survey of executives at India's leading VDA exchanges for industry perspectives on the domestic impact of the TDS levy, the shift to offshore platforms, and potential mitigation measures.

We observe four important results from these data-driven exercises:

- 1 Analysis of VDA user activity and reach suggests millions of Indian users have shifted to offshore platforms since the TDS was levied, with a single offshore exchange reporting it received over 450,000 signups in the month following its introduction. Web traffic, active users, and downloads by Indians on offshore platforms have increased secularly since July 2022, in tandem with a secular decline on Indian VDA exchanges in the same period. Between 3 and 5 million Indian users have moved to offshore platforms since the TDS was announced in February 2022.
- 2 Causal analysis (using the change-in-change or CIC method) of data on weekly active users (WAUs), downloads and web traffic shows the TDS provision (from July 1, 2022) and the lack of government respite from this regressive tax regime (February 1, 2023) have had the greatest impact on users. This indicates that users strongly prefer suspension of the 1% TDS.
- 3 A deep dive into the INR-P2P data collected from leading offshore exchanges suggests over INR 350,000 crores worth of VDAs were traded by Indians on offshore platforms between July 2022

(the date of implementation of the 1% TDS) and July 2023, accounting for more than 90% of the total VDA trade volume by Indians.

- 4 More importantly, **the total offshore P2P trading volume would have raised INR 3,500 crores in TDS if it had been traded through the legalised domestic route.** If the global VDA market regains the size and volume of 2021 and early 2022 (roughly twice the size it is now) we expect this number to balloon to over INR 10,000 crores in the next two years.
- 5 **However, according to government reports, only a sum of INR 258 crore was collected in TDS in this period. This represents a loss of about 93% to the exchequer, compared with a scenario in which all P2P trades were TDS compliant.**
- 6 A survey of executives at 7 leading Indian VDA exchanges finds that the 1% TDS is the most important reason for high offshore P2P trading by Indians. Lowering the TDS (to say -- 0.01%) would be the most important corrective measure to motivate these offshore P2P traders to trade on domestic exchanges. Respondents believe that lowering the TDS is urgently needed because (a) most offshore P2P trading is done by high-value traders, and (b) every rupee lost in offshore P2P trading has an impact on value creation in the domestic economy.

No VDA regulation can exist in a vacuum, but requires a comprehensive regulatory framework and policy infrastructure to enable enforcement and align the interests of investors, businesses and regulators. We find that most of the leading countries in terms of VDA adoption have some type of prohibitive policy in place, whether a ban on banking, a penal tax, or a ban on payments.

Based on this context, we propose that India:

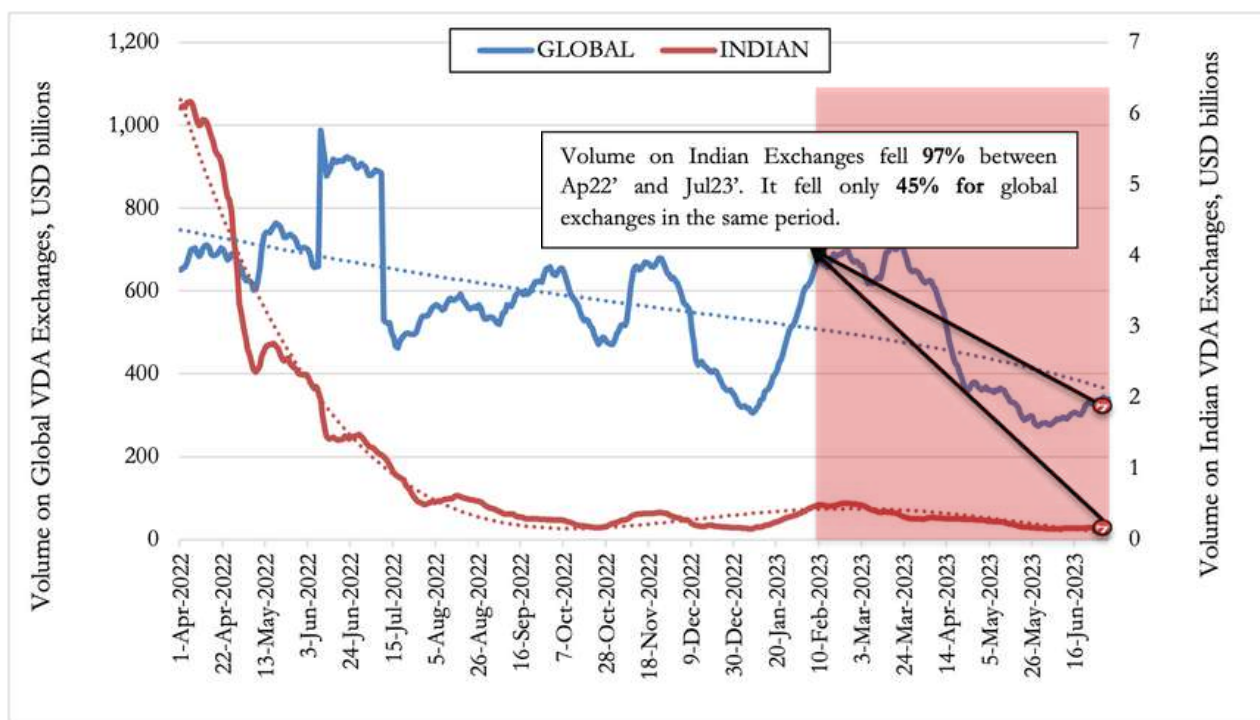
- 1 Clarify the applicability of TDS to offshore platforms.
- 2 Lower the TDS to 0.01% or implement an alternative reporting mechanism, such as the submission of an Annual Information Report (AIR), to fulfil the purpose of data collection. Together with obligations of the Prevention of Money Laundering Act, 2002, this will give regulators sufficient insight into fund flows in the Indian VDA ecosystem.
- 3 Registration with the Financial Intelligence Unit–India (FIU-IND) may act as an ‘official’ ad hoc license to differentiate between ‘Onshore’ and ‘Offshore’ platforms.
- 4 Authorize a government authority to blacklist and block offshore Virtual Asset Service Providers (VASPs) and specific VDAs for non-compliant platforms.

INTRODUCTION

The Indian government introduced a 1% TDS on VDA transfers from July 1, 2022 along with a 30% capital gains tax on the profits earned from April 1, 2022, with three important features. First, ‘VDAs’ (virtual digital assets) are now mentioned in the Indian Income Tax Act – marking the first official definition and recognition of crypto assets or the industry in Indian law. Second, the 1% TDS would potentially be levied on every VDA transaction! Third, profits in one VDA cannot be offset against other VDAs, significantly increasing the effective risk faced by traders and the potential tax burden over other industries.

The legislature’s purpose in enacting the 1% TDS was presumably to capture all VDA transactions and sources of income of Indian residents. Indian exchanges have seen volumes fall over 95% in the immediate aftermath (Figure 1).

Figure 1: Comparison of Volumes: Indian and Global Exchange Platforms



Source: Nomics.com, 1 April 2022, (CoinDCX, WazirX, CoinSwitch, Coinbase, Kraken, Binance, Huobi, OKX)

Conversely, the tax changes did not have a corresponding impact on foreign VDA focused platforms. Given the borderless nature of VDAs and the ease with which anyone can set up a simple trading platform in any jurisdiction, the 1% TDS levy was bound to have distributional repercussions. That is, the 1% TDS on VDA trades led to an exodus of users, funds and trades to offshore VDA platforms. Meanwhile, Indian virtual asset service providers (VASPs) are now included as reporting entities in the PMLA, with a penalty of up to 7 years imprisonment introduced for evading the TDS levy. The move to offshore trading has come to the forefront of policy discussions on Indian VDAs. This paper aims to contribute to public discourse, with relevant evidence of offshoring and the unintended consequences of non-calibrated tax policy.

DATA AND VARIABLES

For our empirical exercise, we use information on five categories of variables, as presented below.²

- 1 **Usage & In-Platform Activity:** This category focuses on metrics such as active users (AUs) and website traffic, which can be used to estimate the number of Indians and the intensity of activity by Indians on both offshore and Indian VDA platforms.
- 2 **Reach & Growth:** This category focuses on estimating new user growth and interest in specific platforms. It is used in combination with usage metrics to assess the growth of Indian users on offshore platforms and their accessibility.³
- 3 **Aggregate Volume Data:** This data is collected for both Indian VDA exchanges and offshore platforms, with no distinction made by user geography.
- 4 **INR P2P Escrow Data:** We collect P2P escrow data from several leading offshore exchanges to support our volume estimates. Unfortunately, while the data is unavailable from the first half of 2022, when TDS was launched, the existence of a large INR P2P escrow market is sufficient to prove that P2P escrow as an alternative onboarding mechanism could drive a large shift in users and volume.
- 5 **Survey of VDA Exchange Executives:** A focused survey was conducted with executives of India's 7 largest VDA exchanges to provide valuable insights into the industry – such as to establish a quantifiable relationship between INR P2P Escrow volume (which is closer to deposits and withdrawals) and actual trading volume.

Table 1 provides a breakdown of the data sources (except for the survey, discussed separately), as well as a brief description and other relevant information such as the frequency and sample period for each.

Table 1: Data Sources and Description

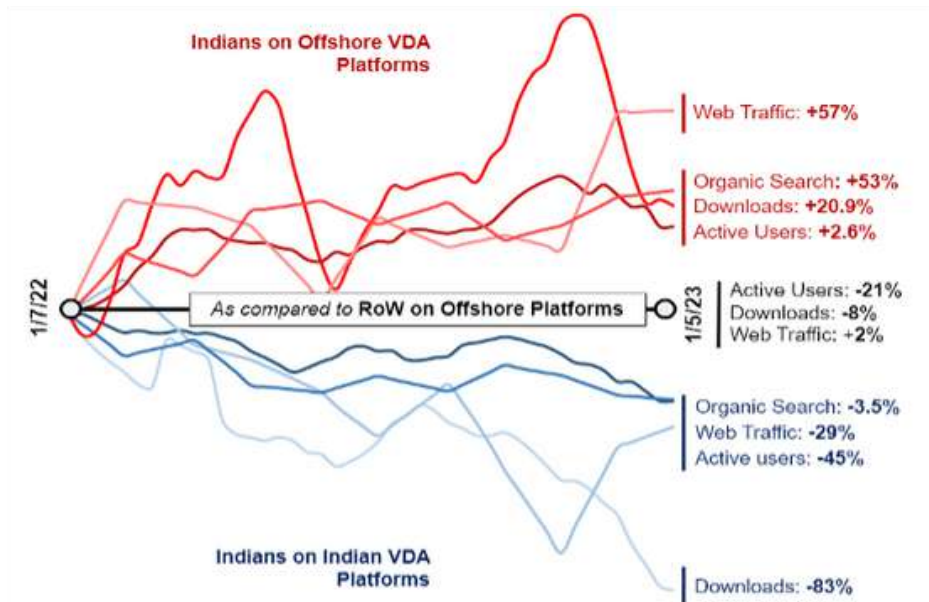
Usage & In-Platform Activity					
Description	Frequency	Period	Users	Platforms	Source
Unique Visitors (Organic)	Monthly	Jan17-Sep23	India, RoW	Binance, Bybit, Huobi, Kucoin, Gate, Metamask, Bitget, OKX, CoinDCX, WazirX, CoinSwitch, Zebpay	Semrush, Oct 2023

Monthly Active Users (MAUs)	Monthly	Aug22-Jul23'	India	Binance, Bybit, Huobi, Kucoin, Gate, Metamask, Bitget, OKX, Trust Wallet, CoinDCX, WazirX, CoinSwitch, Zebpay, Giottus	Data.ai Aug23'
Weekly Active Users (WAUs)	Weekly	Sep19-Apr23	India, RoW, 54 countries	Binance, Bybit, Huobi, Kucoin, OKX, CoinDCX, WazirX, CoinSwitch, Zebpay	Data.ai May23'
Reach & Growth					
Description	Interval	Period	Users	Platforms	Source
Cumulative Downloads	Monthly	Aug22-Jul23	India	Binance, Bybit, Huobi, Kucoin, Gate, Metamask, Bitget, OKX, Trust Wallet, CoinDCX, WazirX, CoinSwitch, Zebpay, Giottus	Data.ai Aug23'
Weekly Downloads	Weekly	Sep19-Apr23	India, RoW, 54 countries	Binance, Bybit, Huobi, Kucoin, OKX, CoinDCX, WazirX, CoinSwitch, Zebpay	Data.ai May23'
Organic Search Engine Traffic	Monthly	Febr19-Sep23	India	Bybit, Binance, Kucoin, Paxful, Gate, Bitget, Huobi, OKX, CoinDCX, WazirX, CoinSwitch, Zebpay	SE Rankings Sep23'
Trade Related Data					
Description	Interval	Period	Users	Platforms	Source
Trade Volume Data	Daily	4/1/22 – 2/10/23'	Not Specified	CoinDCX, WazirX, CoinSwitch, Binance, Kucoin, Huobi	Public API
P2P Data	30D running	5/11/23 – 2/10/23'	India	Binance, Kucoin, Huobi	Web Scraping

Figure 2 shows a snapshot of Indians on onshore and offshore VDA platforms compared to the rest of the world (RoW). We note that in the post-TDS period, the averages for the RoW declined in the active users and downloads parameters. However, the decline in these parameters, as well as web traffic and organic search, was much greater for Indians on onshore platforms. In contrast, there was

an increase in these parameters for Indians on offshore platforms. The data also reveals that Indians make up to 15-20% of Active Users on offshore platforms, and a little under 10% of website traffic to the same; illustrating the size and importance of the Indian offshore market.

Figure 2: Indians on Onshore and Offshore VDA Platforms



Notes: The statistics are constructed using weekly-frequency data. Data sources are discussed in Table 1

If we assume that aside from the introduction of TDS, Indian VDA users would continue to follow global trends, we estimate that between three and five million Indian users migrated to offshore platforms from Indian platforms. This is based on a Change-in-Change model, looking at the differences in weekly unique visitors to Indian platforms, to offshore platforms, and by Indians to offshore platforms.

This initial descriptive evidence supports our hypothesis about the negative effects of 1% TDS and provides ground to warrant a more rigorous analysis, presented in the following sections.

TDS COLLECTION: REVENUE GAIN OR OPPORTUNITY LOST?

According to government data, approximately INR 257.6 crores was collected as TDS between July 1, 2022 and October 1, 2023.⁴ This provides a basis for evaluating the effectiveness of the 1% TDS by comparing the TDS collected with the potential TDS that could have been generated from India's total VDA volume. The latter is the sum of trading volume on the Indian VDA platforms and trading volume by Indians on offshore platforms.

The data on trading volume on Indian VDA platforms are estimated using a two-step procedure. First, we retrieve the trading volumes of the three largest Indian exchanges - CoinDCX, WazirX, and CoinSwitch - via their public APIs. Second, we estimate the share of trading volume of these exchanges in the total volume of all domestic exchanges using data from coingecko.com, which is about 75%. This means that the trading volume of all Indian exchanges is 1.33 times the trading volume on these three leading exchanges.

Similarly, we estimate data on the trade volume of Indians on offshore platforms using a two-step procedure. First, we use data on the trading volume of Indians on the largest platform, Binance, from its web interface. Second, we estimate Binance's share of Indian web traffic relative to all offshore platforms using data from semrush.com, which is in the neighbourhood of 54%-60%. We take a conservative stance by using 60% for further calculations. This means that the trading volume of Indians on offshore platforms is 1.67 times of that on Binance.

Table 2: TDS collection: Potential versus actual

Particular	Estimates	Source
Indian exchanges		
Applicable value for TDS from CoinDCX, WazirX and CoinSwitch (INR crore)	18,743.44	Public API
Applicable value for TDS from all Indian exchanges (using multiplier value of 1.33 on previous step estimate) (INR crore)	24,928.78	Computed
TDS collected from all Indian exchanges (1%) (INR crore)	249.29	Computed
Indian trades on offshore platforms		
Daily trade volume by Indians on Binance (USD million)	52.11	Binance
Total daily trade volume by Indians on offshore platforms (applied 1.67 as weight on trade volume by Indians on Binance) (USD million)	86.86	Computed
Annualised trade volume by Indians on offshore platforms (USD billion)	31.70	Computed

Annualised trade volume by Indians on offshore platforms (using INR 88 = 1 USD) (INR crore)	278,982	Computed
Estimated trade volume by Indians on offshore platforms from 1 July 2022 to 2 Oct 2023 (458 days) (INR crore)	350,065	Computed
Estimated TDS to be collected from trades on offshore platforms from July 2022 to 2 Oct 2023 (at 1%) (INR crore)	3,501	Computed
TDS appraisal		
Total TDS collected by the Government (INR crore)	257.6	Government
TDS collected from all Indian exchanges, as percentage of Total TDS collected by the Government	96.77%	Computed
TDS collected from Indian traders on offshore platforms, as percentage of Total TDS collected by the Government	3.23%	Computed
TDS collected from Indian traders on offshore platforms (INR crore)	8.31	Computed
TDS collected from Indian traders on offshore platforms, as percentage of Total potential TDS from Indian traders on offshore platforms	0.24%	Computed
TDS collected as percentage of total potential TDS on Indian exchanges and by Indians of foreign platforms	6.87%	
TDS foregone from Indian traders on offshore platforms (INR crore)	3,492.7	Computed
TDS foregone from Indian traders on offshore platforms, as multiple of Total TDS collected by the Government	13.6X	Computed

Table 2 provides an assessment of the TDS collection using estimates of the trade volume on Indian exchanges, trade volume of Indians on offshore exchanges, and the total TDS collected. We make three important observations:

- 1 The 1% TDS levy has not made the Indian VDA market transparent, as most of the business that should be covered by TDS is conducted on offshore platforms.
- 2 We estimate that less than 7% of total VDA trading volume, including volume from Indian exchanges and Indians on offshore platforms (which handle over 90% of total VDA trading volume), complies with the existing TDS architecture. Moreover, only 0.24% of trades executed by Indians on offshore exchanges subscribed to the TDS architecture.
- 3 We estimate that INR 3,493 crores in TDS on VDA transactions went uncollected, representing a lost opportunity for the treasury that is 13.6 times the pool of TDS collected. It is worth noting

that individuals using offshore platforms will face further difficulties in paying capital gains as they cannot currently pay 1% TDS on their trades even if they wanted to. Given the estimated trade volumes, we can safely assume that this would amount to billions of dollars of assets on which capital gains will not be collected in the coming years.

CAUSAL ANALYSIS OF IMPACT OF 1% TDS ON REACH, ACTIVITY, AND WEB TRAFFIC

We analyse data on reach, activity, and web traffic using the change-in-change (CIC) estimation method of Athey and Imbens (2006). CIC uses both temporal (the patterns before and after an event) and cross-sectional (the actions of Indian users on Indian exchanges compared with the actions of Indian users on foreign exchanges) shifts in the behaviour of these parameters to allow for causal inference.

The two main assumptions of the change-in-change model are: (a) VDA market reach, activity and web traffic follow their previous trajectory in the absence of a new policy shock, and (b) purely market-specific disturbances (rather than those related to national policy) play out alike on domestic and foreign exchanges. Under these assumptions, the basic algorithm of the CIC model is as follows:

- 1 Calculate the before-after difference in outcome (reach, activity and web traffic) for the treatment group (Indian users on domestic VDA platforms)
- 2 Calculate the before-after difference in outcome (reach, activity and web traffic) for the control group (Indian users on foreign VDA platforms)
- 3 Calculate the difference between the difference in outcomes for the treatment group and the comparison group. This CIC can be represented as:

$$CIC = (Outcome_{post-event}^{Treatment}) - (Outcome_{pre-event}^{Treatment}) - (Outcome_{post-event}^{Control}) - (Outcome_{pre-event}^{Control})$$

For robust results, we use median estimates from the CIC model along with a bootstrapped standard error. This is particularly important given the nature of the data and its source, as also the fact that the VDA market operates in different phases (bull market, bear market, winter, etc.) which can undermine the robustness of the results when using a mean-based estimate and/or without a bootstrapped standard error.

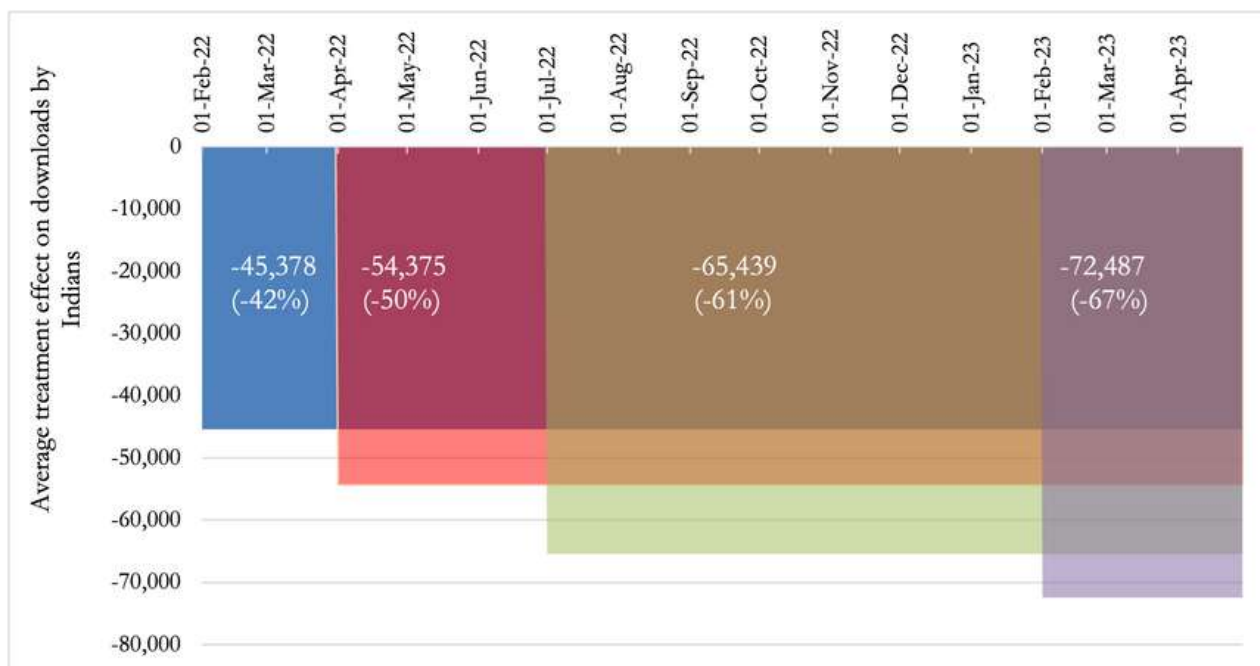
The definitions and data sources of the variables used for this exercise are as follows:

- **Reach:** The number of weekly app downloads by Indians from a set of four domestic exchanges (CoinDCX, WazirX, CoinSwitch, Zebpay) and five foreign exchanges (Binance, Bybit, Huobi, Kucoin, OKX). This data was taken from data.ai for the period April 13, 2019 to April 29, 2023.
- **Activity:** The weekly active users (WAUs) as number of counts of opening an app in a week's time by Indians, from, as above, a set of four domestic exchanges (CoinDCX, WazirX, CoinSwitch, Zebpay) and five foreign exchanges (Binance, Bybit, Huobi, Kucoin, OKX). This data was also taken from data.ai for the period April 13, 2019 to April 29, 2023.

- **Web traffic:** Organic search engine traffic, taken at a monthly frequency from the SE Rankings intelligence platform. The sample period was from January 2017 to October 2023, and covers 12 exchanges or platforms (Bybit, Binance, Kucoin, Paxful, Gate, Bitget, Huobi, OKX, CoinDCX, WazirX, CoinSwitch, Zebpay).
- **P2P trade:** The 30-day running trade volume by Indians on three exchanges (Binance, Kucoin, Huobi) using public API and web scraping. The sample period was from May 12, 2023 to August 11, 2023.
- **Treatment group:** The number of Indian exchange app downloads, activity and web traffic by Indians.
- **Control group:** The number of foreign exchange app downloads, activity and web traffic by Indians.

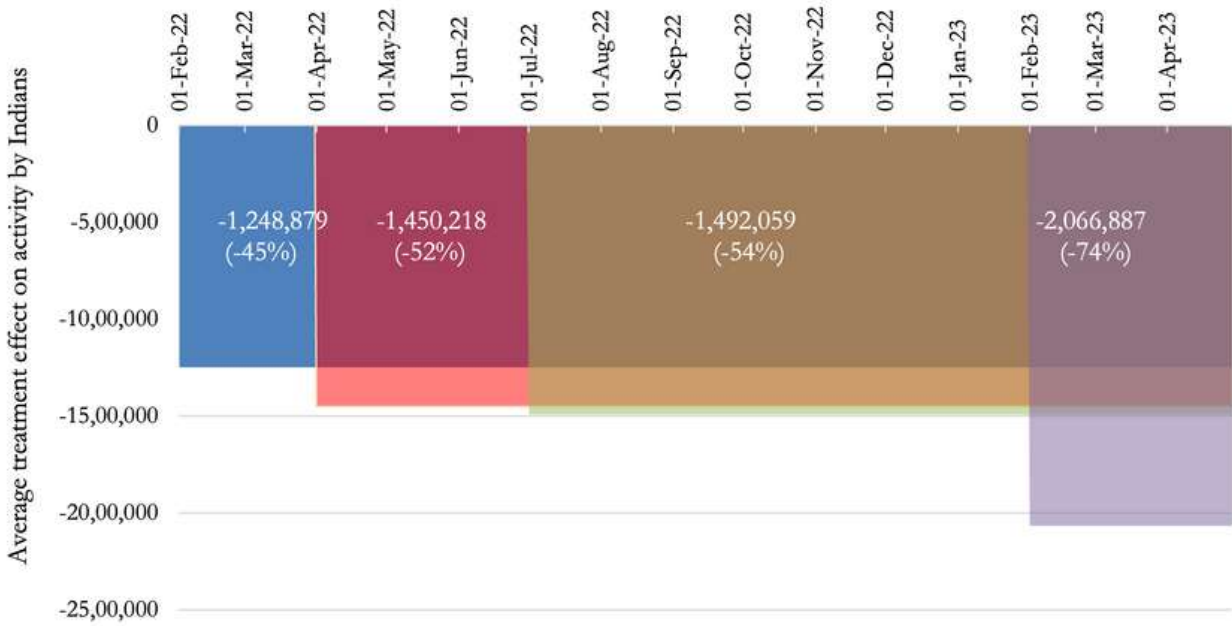
An important caveat to the data is that they are smoothed/ projected by the respective source platforms based on market insights and limited surveys and consultations. However, they are the best possible alternative given the unavailability of actual data on the parameters. As tax collection data based on activity in the VDA ecosystem is not available, we try to overcome some of the discrepancies by imposing strict conditions on our analysis methods, as discussed above.

Figure 3: Impact of VDA Tax Architectural Changes on Reach



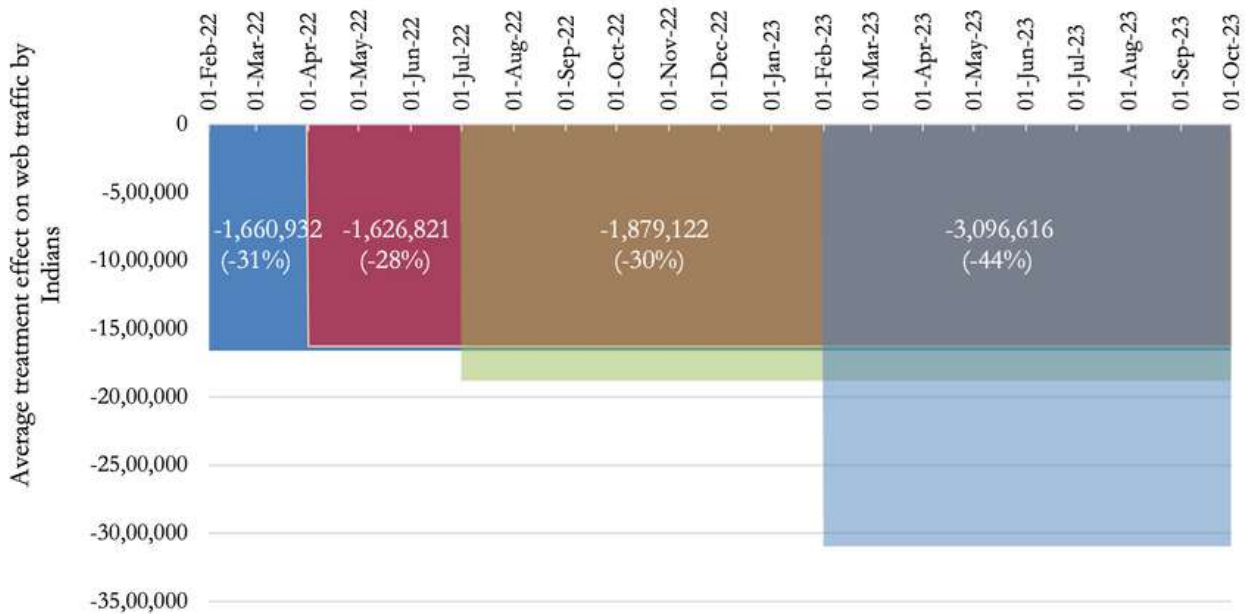
Note: We use the change-in-change (CIC) method to estimate the impact of events. The treatment group is represented by downloads of domestic VDA exchange apps by Indians, while downloads of foreign VDA exchange apps by Indians represent the control group. Percentages are computed relative to the average weekly downloads before the respective event dates. The sample consists of weekly downloads data from 13 April 2019 to 29 April 2023

Figure 4: Impact of VDA Tax Architectural Changes on Activity



Note: We use the change-in-change (CIC) method to estimate the impact of events. The treatment group is represented by app activity on domestic VDA exchanges by Indians, while app activity on foreign VDA exchanges by Indians represents the control group. Percentages are computed relative to the average weekly activity before the respective event dates. The sample consists of weekly activity data from 13 April 2019 to 29 April 2023

Figure 5: Impact of VDA tax Architectural Changes on Web Traffic



Note: We use the change-in-change (CIC) method to estimate the impact of events. The treatment group is represented by onshore web traffic by Indians, while offshore web traffic by Indians represents the control group. Percentages are computed relative to the average monthly web traffic before the respective event dates. The sample consists of monthly web traffic data from January 2017 to October 2023

Figures 3-5 depict the CIC results. We note the following:

- There was a large decline (42% in reach, 45% in activity, and 3.1% in web traffic) in the use of domestic exchanges by Indians compared to their use of foreign exchanges, immediately after the budget announcements of February 1, 2022 – even though the executive actions associated with the announcements occurred later.
- Moreover, there was a corresponding decline in the three parameters over the following one-year period ranging from 44% to 74%. This suggests a significant number of Indian VDA users are forward-looking and able to adjust their exposure within the pool of investment opportunities available to them. These users now find foreign VDA exchanges more lucrative given domestic tax events.
- The negative effects of tax architecture changes increase with each subsequent event. The TDS provision (from 1 July 2022) and the lack of any respite from the government from this regressive tax regime (1 February 2023) had the greatest impact on users. This indicates that VDA users would strongly prefer a respite from the 1% TDS.
- VDA users are likely to weigh the benefits of not reporting their VDA income to the tax authorities against the costs of detection and punishment to take their position. The strong negative effects in Figures 3-5 suggest a large and growing number of users consider not reporting their VDA income (through foreign exchanges) a more lucrative option given the costs of detection and punishment.

EXPERT SURVEY ANALYSIS OF P2P TRADE BY INDIANS

This section provides added evidence of the offshoring of Indian users on foreign VDA exchanges through P2P escrow (a method of trading and onboarding users). It complements findings from the previous section, as the available data on website traffic and mobile app use may be prone to bias due to smoothing by data providing platforms.

The P2P ‘escrow’ services offered by offshore VDA exchanges are a convenient, low-cost way for customers to move in and out of jurisdictions. Users transfer INR directly to each other’s bank accounts, while the platform provides escrow services only for the custody and transfer of the VDA portion of each transaction.⁵ P2P escrow is inexpensive and quick to set up, allowing platforms to offer their services within a few months at minimal cost. As of September 2023, seven of the top ten VDA exchanges by revenue were offering P2P escrow services,⁶ with India ranking in the top five WAUs and MAUs for most of these (Table 2).

Table 2: Top 10 VDA Exchanges by Revenue and P2P Service Availability

Exchange	Does it serve Indians	Does it have a P2P service
BINANCE	YES	YES
COINBASE	NO	NO
KRAKEN	YES	NO
KUCOIN	YES	YES
BYBIT	YES	YES
OKX	YES	YES
BITSTAMP	YES	NO
BITFINEX	YES	NO
GATE.IO	YES	YES
GEMINI	NO	NO
HUOBI	YES	YES

Source: Respective exchange websites

A similar pattern is seen in Chainalysis’ latest Crypto Adoption Ranking Index (measured from July 2022 to July 2023), where India jumped 77 places to rank fifth in terms of P2P exchange volume. India ranked first in the crypto / VDA adoption rankings and in the value sent to centralised exchanges (the same as those discussed in this paper). The large jump is evidence that there has been an offshore shift in terms of users and in trading and transaction volumes.

Table 3: India in the Chainalysis Crypto Adoption Rankings

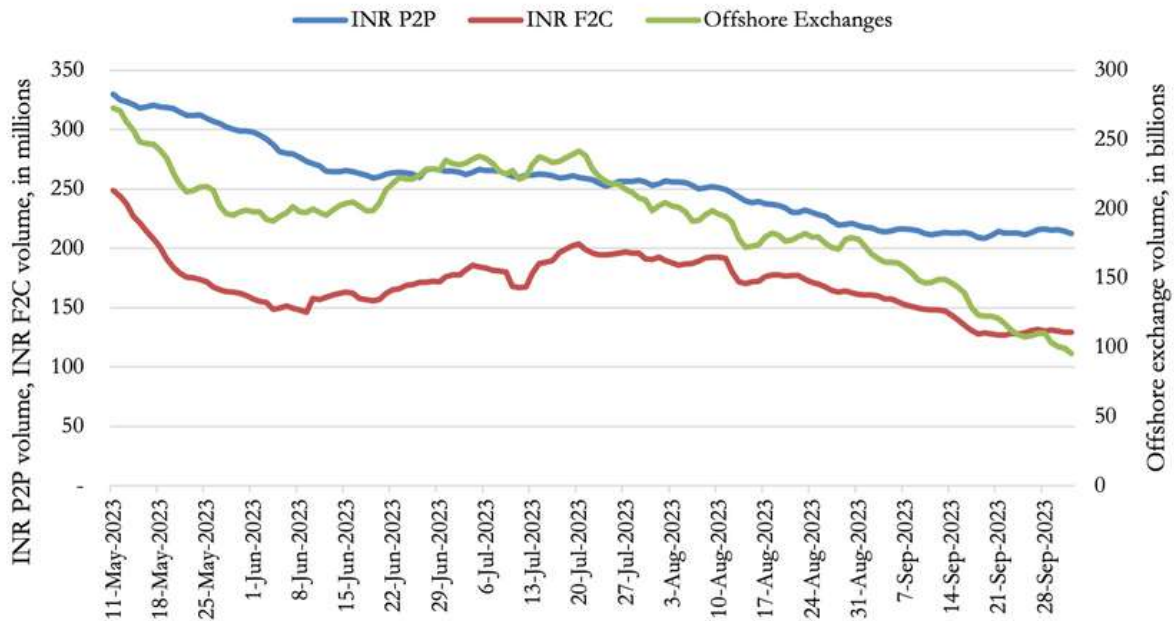
	Ranking						Estimated value received (USD)
	Overall Index	Centralised service received	Retail centralised service received	P2P exchange trade	DeFi received	Retail DeFi received	
2021	2	2	3	72	N/A	N/A	N/A
2022	4	1	1	82	1	1	172bn
2023	1	1	1	5	1	1	270bn (+57%)

Source: <https://www.chainalysis.com/blog/2023-global-crypto-adoption-index/>

To analyse P2P trades, we collected data from three offshore platforms (Binance, Huobi, and Kucoin) for the period 11 May 2023 to 2 October 2023, taking hourly snapshots of the P2P marketplace pages on each platform. Over the course of this exercise, nearly 14,000 P2P advertiser details were collected over 149 days from the three platforms, with data including current ads, completed orders in the last 30 days, order success rate, and 30d volume in Bitcoin. Similar data were collected between October 15 and November 15 2022, and November 19 to December 19 2022. The data were used to estimate the daily INR P2P volume on the three exchanges, as well as liquidity (the order book depth as measured by total ‘available’ funds across all ads in each snapshot). Snapshots were also taken at shorter intervals to capture cross-country data on payment types for INR P2P advertisers, and the number of transactions. These data are useful to investigate whether a large proportion of Indian VDA transactions have moved to offshore platforms.

An exploratory analysis revealed interesting results. The largest platform by volume (Binance) transacted INR 11,113 crore worth of P2P trades between 11 May 2023 and 2 October 2023, or 8% more than the total trading volume of all the Indian exchanges studied in the same period (Figure 6). A previous Esya Centre report estimates P2P trading for an earlier period (between 1 July 2022 and 30 October 2022) at around INR 80,000 crore (USD 9,670 million) by Indians.⁷

Figure 6: Comparison of Binance INR P2P Volume with Indian and Offshore Exchange Volumes



To assess the relevance of these estimates, we use a survey of stakeholders drawn from seven major VDA exchanges in the country. The main results are reported in Figures 7-15, where in quantitative cases we use the median as a measure of central tendency to aggregate responses, and frequency plots for the qualitative cases. The following important inferences emerge:

- Stakeholders believe the 1% TDS is the most important reason for the high offshore P2P trade by Indians. Reducing the TDS to 0.01% would be the most important corrective measure to incentivise these offshore P2P traders to trade through domestic exchanges.
- Lowering the TDS to 0.01% is needed because (a) most offshore P2P trade is performed by high-value traders, and (b) every rupee lost in offshore P2P trading has a large impact on value added. This corrective action will start to have an impact in 1-6 months, especially in terms of global competitiveness.
- Besides reducing the TDS to 0.01%, the majority of stakeholders believe that (a) the tax on profits from VDA trading can be reduced to 10% from the current 30%, and (b) provisions can be made to offset losses for tax purposes. Wash trading, particularly the use of tax losses, is an important aspect of the second corrective measure. It can easily be resolved by imposing a time window for permissible loss offsetting.⁸
- Stakeholders believe these remedies would benefit Web3 innovation, digital record keeping, and digital security.

Figure 7: Importance of VDA tax Architecture for Current Patterns of P2P Outflows

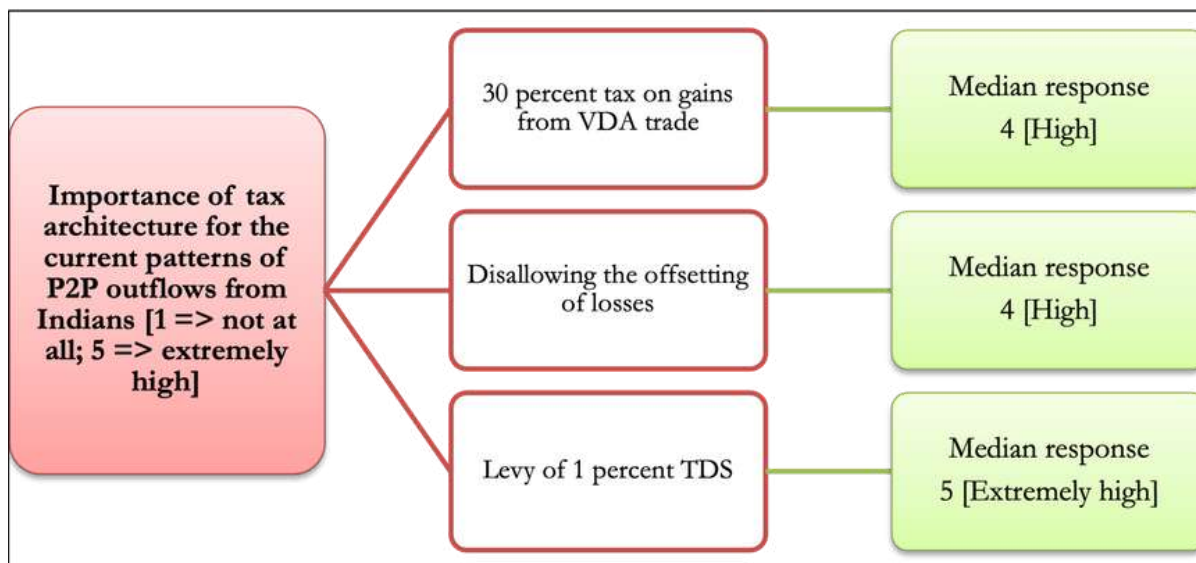


Figure 8: Indian P2P Trader Types on Foreign Platforms

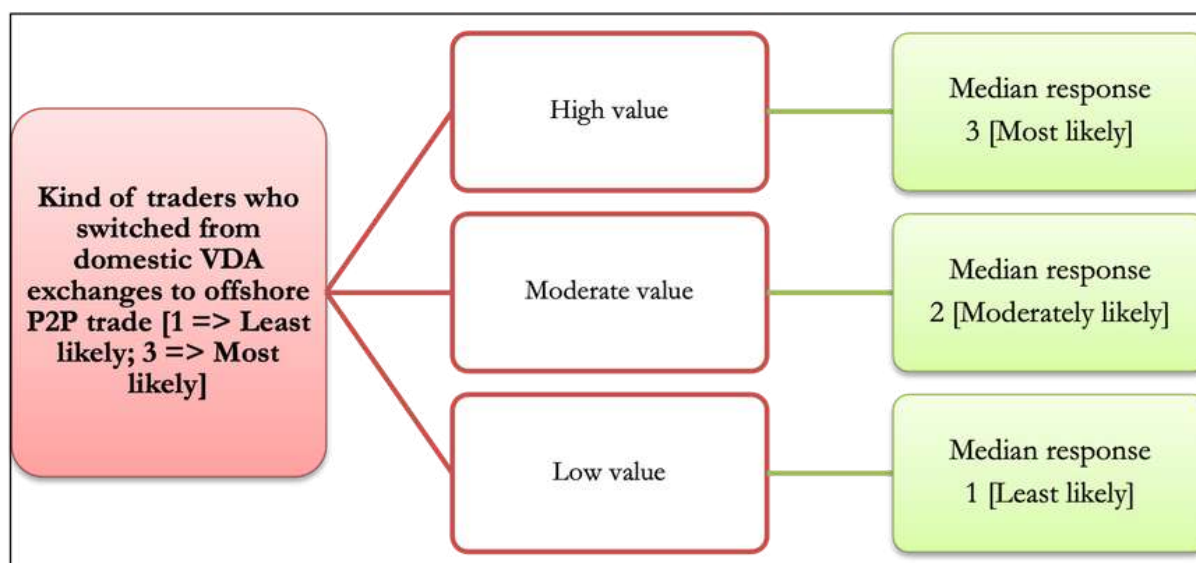


Figure 9: Multiplier Value of P2P Volume

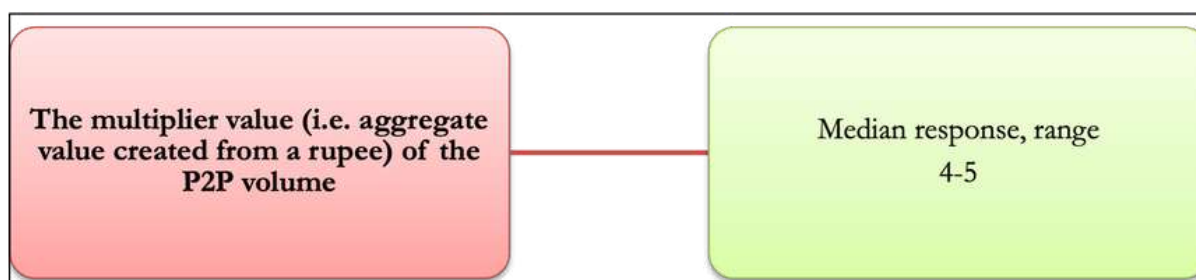


Figure 10: Optimal Corrective Measure for Onshoring P2P Trades

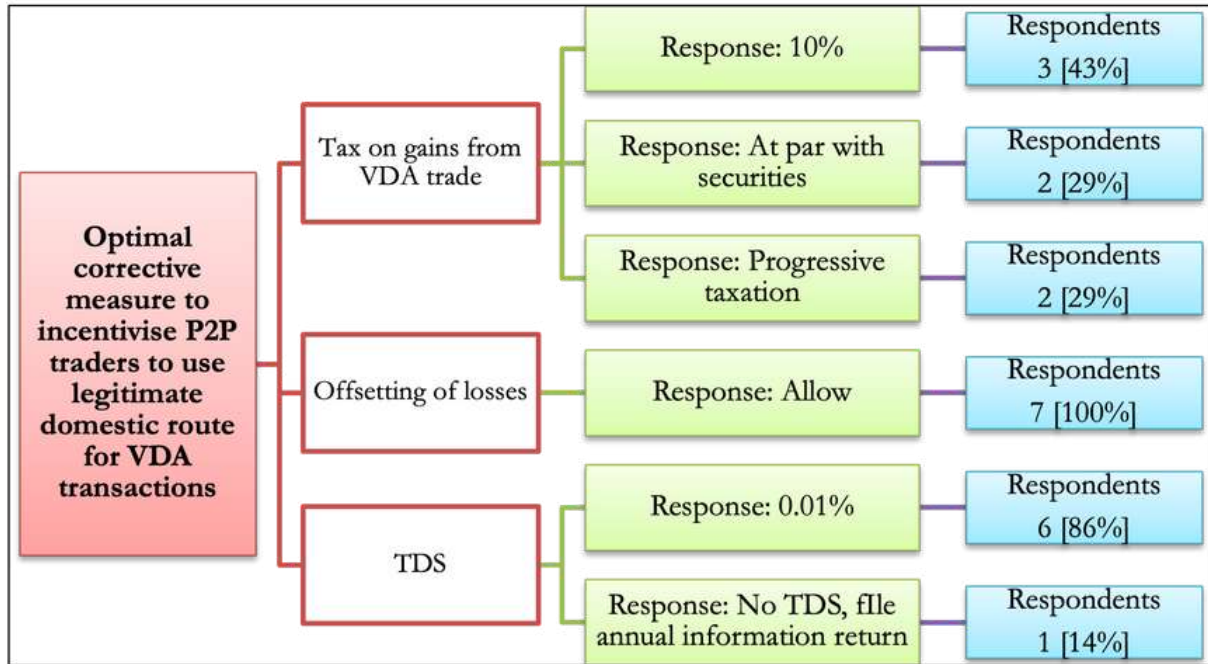


Figure 11: Effectiveness of Corrective Measure for Onshoring P2P Trades

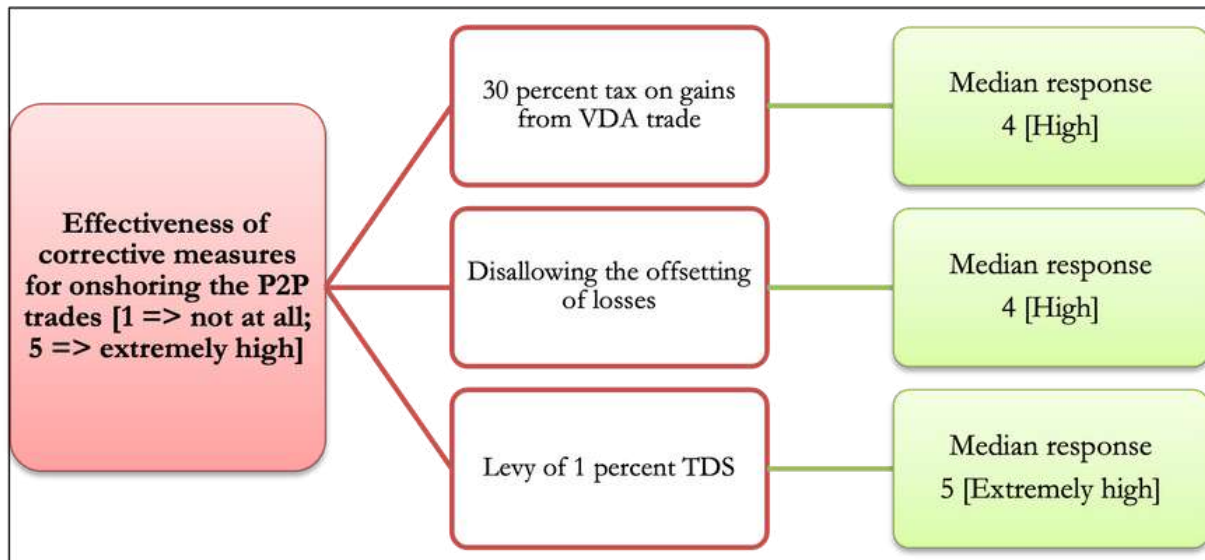


Figure 12: Time Lag for Corrective Measures to be Effective in Onshoring P2P Trades

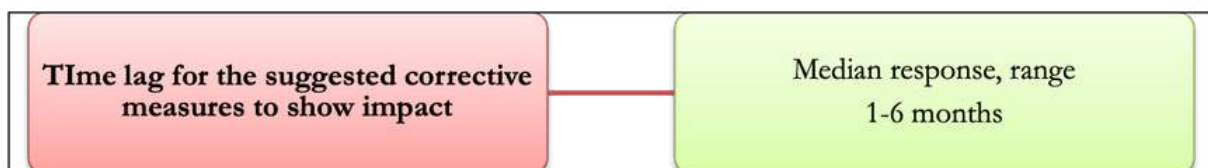


Figure 13: Impact of P2P on Emerging Tech Ecosystems

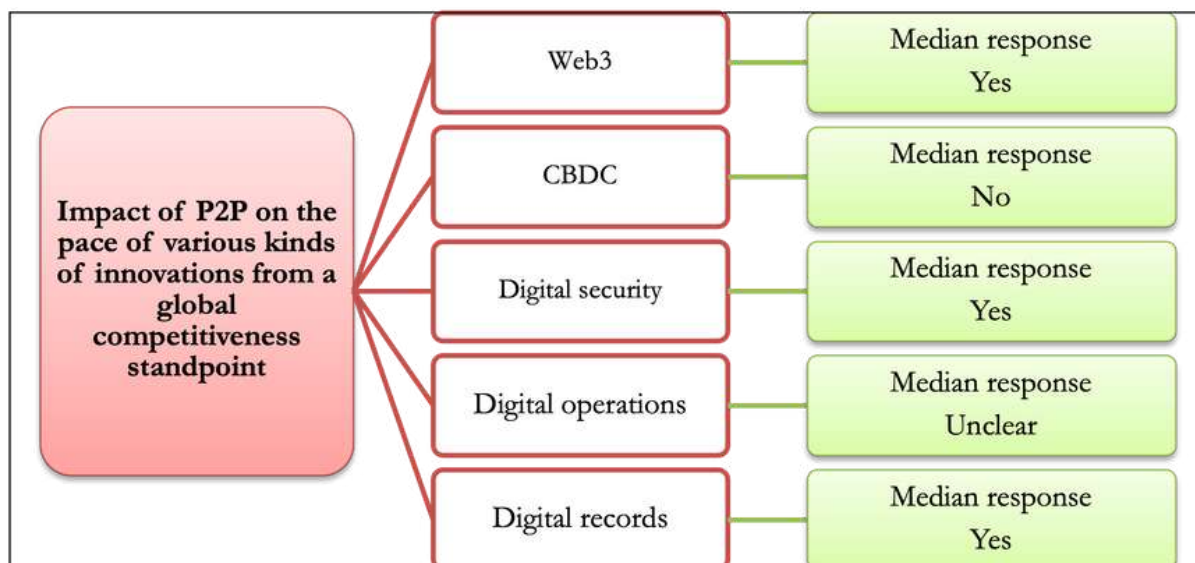


Figure 14: Maintaining Banking Relationships for VDA Exchanges

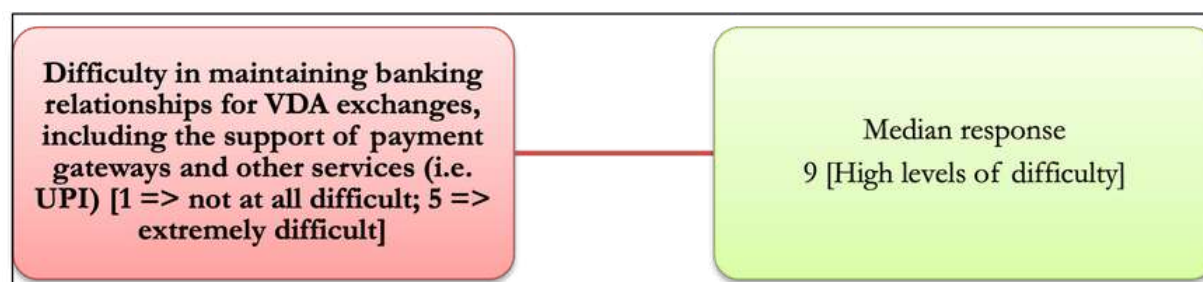
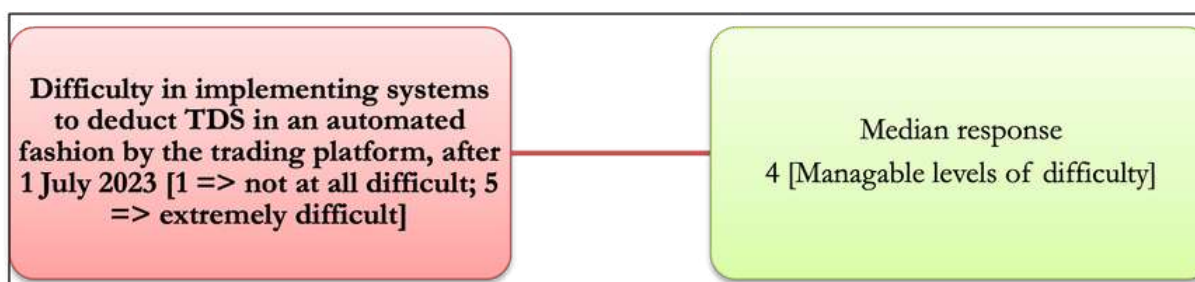


Figure 15: Implementation of Automatic TDS Deduction by VDA Exchanges



CONCLUSIONS & RECOMMENDATIONS

Millions of Indian users shifted to offshore platforms after the TDS was introduced, with a single offshore platform reporting over 450,000 user signups in the month following the introduction. We also find web traffic, active users, and downloads by Indians on offshore platforms increased after July 2022, and decreased on Indian VDA exchanges in the same period.

A causal analysis of average weekly user numbers, downloads and web traffic confirms these findings. Specifically, the TDS provision (effective from 1 July 2022) and the lack of any government respite from this tax regime (1 February 2023) had the maximum impact on users. This indicates users' strong preference for respite from the 1% TDS.

Based on INR P2P data collected from leading offshore exchanges, we estimate that over INR 3,50,000 crore was traded by Indians on offshore platforms since the 1% TDS was introduced in July 2023 – the figure amounts to over 90% of total VDAs traded by Indians. This means that only 0.2% of trading (by value) on offshore VDA exchanges, on which TDS should be deducted, is indeed TDS compliant. Our conservative estimate does not include private transactions or larger over-the-counter (OTC) trades.

A cross-country analysis of 16 countries' experiences shows that a penal policy stance is often ineffective. Further, our expert survey suggests the imposition of the 1% TDS was the most important factor in shifting users from Indian to offshore VDA platforms.

In this context, we recommend that India:

- 1 Clarify the applicability of TDS to offshore platforms.
- 2 Lower the TDS to 0.01% or implement an alternative reporting mechanism, such as the submission of an Annual Information Report (AIR), to fulfil the purpose of data collection. Together with obligations of the Prevention of Money Laundering Act, 2002, this will give regulators sufficient insight into fund flows in the Indian VDA ecosystem.
- 3 Registration with the Financial Intelligence Unit–India (FIU-IND) may act as an 'official' ad hoc license to differentiate between 'Onshore' and 'Offshore' platforms.
- 4 Authorize a government authority to blacklist and block offshore Virtual Asset Service Providers (VASPs) and specific VDAs for non-compliant platforms.

Building upon our previously released research on the subject in December 2022, this paper provides the first attempt at estimating the efficacy of the 1% TDS introduced on VDA transactions by comparing the TDS collected by the government with the estimated trade volumes contributed by Indians on Indian and Offshore Platforms. We find evidence that almost all TDS collected has come from Indian VDA exchanges. However, while data has been presented on trade volume and fund flows, the Indian capital currently in custody of offshore VDA platforms is as yet unknown. Given that only an estimated 0.2% of offshore trades are under the TDS net, the loss to the exchequer by way of capital gains would also be significant. This is an important area for future research.

Along the same lines, while the data presented in this paper is indicative of a shift of users and business, deeper statistical analyses to establish the relationship between global trends in active users, web traffic, and Indian platforms, as well as Indian P2P volumes on offshore platforms would enable more accurate estimates of Indian trade activity on offshore VDA platforms. This would also provide a basis for more detailed projections of uncollected TDS on VDA trades as well as opportunity cost lost to the larger Indian economy. Another caveat is that our model assumes that VDA users / investors are homogenous – and that user behavior on Indian VDA exchanges would mirror user behavior of Indians on offshore platforms. However, given that high-frequency traders may be the worst affected by TDS, they might be more likely to have migrated.

ANNEXURE: CROSS-COUNTRY CRYPTO ADOPTION TRENDS AND REGULATORY STANCES⁹

Country	Chainalysis Ranking 21/22/23	Existing Ban?	Existing Regulator?	Type of Ban?
India	2,4,1	YES	NO	1% TDS , Shadow Banking Ban
Nigeria	6,15,2	YES	NO	Central Bank Ban
Vietnam	1,1,3	YES	NO	Payments Ban, Shadow Banking Ban
US	8,5,4	NO	YES	NO BAN
Ukraine	4,3,5	YES	NO	Central Bank Ban (Local Currency)
Philippines	15,2,6	NO	YES	NO BAN
Indonesia	20+,20,7	YES	YES	Payments Ban, Spot Trading Ban
Pakistan	3,6,8	YES	NO	FULL BAN
Brazil	14,7,9	NO	YES	NO BAN
Thailand	12,8,10	YES	YES	Payments Ban
China	13,10,11	YES	NO	FULL BAN
Turkey	20+,20,12	YES	YES	Payments Ban
Russia	18,9,13	YES	NO	Payments Ban
Argentina	10,13,15	YES	NO	Central Bank Ban, 0.6% tax
Bangladesh	20+,20,17	YES	NO	FULL BAN
Nepal	20+,18,16	YES	NO	FULL BAN (IP Address Block)

ENDNOTES

- 1 While it does apply to trading, i.e. when either INR or other assets are exchanged for crypto assets, when the purpose of a transaction is not specified, i.e. when it is received as a gift, both the 1% TDS and the 30% capital gains tax apply to the entire value of the VDA.
- 2 As the various offshore platforms referenced in this report do not provide user-level or personal data (which would often violate privacy laws in the countries where they were established), it is not possible to determine how many users and how many trades were moved to offshore exchanges. Our next-best solution is to collect publicly available data (or via a third-party data aggregator) on Indian user activity on both Indian and offshore exchanges, and link it to the limited actual trading data that can be collected, to estimate the trading volume (or transactions that should fall under the 1% TDS) of Indians.
- 3 An important caveat to using mobile app or website traffic analytics (or on-chain data such as Chainalysis) is that local blocks to accessing websites and mobile apps from VDA exchanges are easily circumvented using privacy-enhancing technology such as a VPN. The results may be skewed by such a possibility.
- 4 https://www.business-standard.com/economy/news/rs-158-cr-direct-tax-collected-in-current-fiscal-via-tds-on-crypto-assets-123032801166_1.html
<https://www.hindustantimes.com/business/it-dept-collects-over-rs-700-crore-in-tds-from-online-gaming-crypto-trade-101696943092590.html>
- 5 P2P escrow services for the custody and transfer of the VDA leg of transactions share similarities with darknet markets, and with more conventional e-commerce platforms such as eBay that allow direct bank account transfers between users. As such, P2P escrow has proven incredibly useful for onboarding users from various countries without needing a local presence or any bank account.
- 6 Binance, Kucoin, Huobi, OKX, Gate.io, Bybit and Bitfinex have a cumulative daily trade volume of ~USD 10 billion.
- 7 Gautam, V. (2023), 'Virtual Digital Asset Tax Architecture in India: A Critical Examination.' Special Issue No. 208, Esya Centre
- 8 Cong, L. W., Landsman, W., Maydew, E., & Rabetti, D. (2023). 'Tax-loss harvesting with cryptocurrencies.' *Journal of Accounting and Economics*, 101607
- 9 Data Sources: <https://www.chainalysis.com/blog/2021-global-crypto-adoption-index/>, <https://www.chainalysis.com/blog/2022-global-crypto-adoption-index/>, <https://www.chainalysis.com/blog/2023-global-crypto-adoption-index/>, <https://databank.worldbank.org/source/world-development-indicators>, <https://www.statista.com/statistics/1391056/mobile-wallet-penetration-worldwide-by-country/#:-:text=Indeed%2C%20online%20of%20the%2010,list%2C%20found%20in%20position%20online.>



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