

# COMPARATIVE TRADING ACTIVITY AND MARKET RESILIENCE DURING COVID-19: Evidence from the Iraq and Qatar Stock Exchanges

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## ABSTRACT

*This study examines the impact of the COVID-19 pandemic on the trading activities of the Iraq Stock Exchange (ISX) and the Qatar Stock Exchange (QSE), representing a frontier market and an emerging market respectively. Using a comparative descriptive research design, the study analysed monthly secondary data from 2019 to 2020 on traded shares, traded value, and executed transactions. Descriptive statistics, percentage-change analysis, and independent-samples t-tests were employed to assess differences in market performance before and during the pandemic. The findings reveal a marked divergence between the two exchanges. The ISX recorded contractions in traded shares (−12.34%) and executed transactions (−10.59%), indicating liquidity constraints and weaker resilience under crisis conditions. In contrast, the QSE demonstrated stronger performance, with traded shares increasing by 386.65% and executed transactions by 49.61%, reflecting greater market depth and structural resilience. Although both markets experienced gains in traded value, these increases appear to have been driven by different market dynamics. Overall, the results suggest that the effects of pandemic-related shocks are context-dependent and shaped by differences in market structure, institutional capacity, and financial infrastructure. The study highlights the importance of strengthening market transparency, diversifying investment instruments, and*

*modernizing trading systems to enhance resilience against future global disruptions.*

**Keywords:** COVID-19, Stock market resilience, Iraq Stock Exchange (ISX), Qatar Stock Exchange (QSE), Trading Activity

**JEL classification:** G01, G14, G15

## 1. Introduction

The COVID-19 pandemic triggered one of the most abrupt economic crises in modern history. On 11<sup>th</sup> March 2020, the World Health Organization (WHO) declared the outbreak a pandemic, setting the stage for widespread market volatility (WHO, 2020). Within days, major equity indices worldwide plunged as investors responded to rapidly escalating uncertainty (IMF, 2020). Global empirical research confirms that these financial shocks were tied not only to epidemiological trends but also to government policy responses. In a global study, Scherf et al. (2022) reported pronounced negative market reactions to lockdown announcements, followed by phases of overcorrection (Scherf et al., 2022).

Early evidence from international markets showed that pandemic-related uncertainty, rising infection rates, and government containment measures were associated with adverse financial-market reactions, although the magnitude of these effects varied across countries and institutional settings. Ashraf (2020), for example, found that stock markets responded negatively to increases in confirmed COVID-19 cases across a broad sample of countries, while Hale et al. (2021) provided a global framework for systematically tracking government pandemic responses through the Oxford COVID-19 Government Response Tracker. Saif-Alyousfi (2022) found that, globally and regionally, increases in infection rates caused negative returns, though stringency measures had nuanced effects depending on governance contexts (Saif-Alyousfi, 2022).

Shifting focus to the MENA region, the narrative remains underexplored. Alaoui-Mdaghri et al. (2020) found that COVID-19 significantly reduced stock market liquidity across six MENA countries, particularly impacting the depth and tightness of trading conditions. Their results underscore that liquidity disruptions were widespread and particularly severe in smaller or less resilient markets. GCC markets faced sharp declines in returns following pandemic-

related announcements, signalling differentiated effects within the region. Recent work on Qatar further shows that pandemic conditions and government responses were closely associated with stock market outcomes, reinforcing the importance of country-specific institutional and market structures in understanding crisis performance (Al-alawneh et al., 2025).

Despite the growing literature, two important gaps remain. First, much of the COVID-19 finance literature has focused primarily on stock returns and volatility, with less attention given to trading activity indicators such as traded shares, traded value, and number of executed transactions. Second, comparative evidence on Arab stock exchanges remains limited, especially for markets with markedly different structural characteristics. This is particularly relevant for comparing a frontier market such as the Iraq Stock Exchange (ISX) with a more established and institutionally stronger market such as the Qatar Stock Exchange (QSE).

Accordingly, this study examines the impact of the COVID-19 pandemic on the trading activity of the Iraq Stock Exchange and the Qatar Stock Exchange using monthly data from 2019 to 2020. Rather than estimating a causal policy model, the study adopts a comparative descriptive approach based on traded shares, traded value, and executed transactions in order to assess how two structurally distinct Arab exchanges performed under the same global shock. By doing so, the paper provides focused comparative evidence on market resilience in two different financial settings and highlights the role of market depth, institutional capacity, and structural preparedness in shaping crisis outcomes.

## **2. Literature Review**

Stock markets perform core financial functions that are central to economic activity, including price discovery, liquidity provision, risk sharing, and capital mobilization (Al-alawneh et al., 2025). In the broader finance-growth literature, well-functioning stock markets are associated with stronger capital accumulation and productivity because liquid markets lower trading frictions and improve the allocation of resources. This logic is especially relevant in crisis settings, where liquidity conditions and investor participation often become the first channels through which shocks affect market performance

(Chikwira & Mohammed, 2023). The relevance of liquidity is also reinforced by Amihud's illiquidity framework, which shows that illiquidity is not a peripheral market feature but a central determinant of return behaviour and market vulnerability (Amihud, 2002).

The COVID-19 pandemic created a global stress test for these market functions. International evidence shows that stock markets reacted sharply to pandemic-related information, with negative responses linked to rising infections, mortality risk, uncertainty, and containment measures. Ashraf (2020), using data from 64 countries, found that stock returns declined as confirmed COVID-19 cases increased. Scherf et al. (2022) further show that national stock indices reacted negatively to lockdown announcements in the early pandemic period, with patterns of underreaction and overcorrection across countries. In parallel, Hale et al. (2021) provided the Oxford COVID-19 Government Response Tracker, which has become a major empirical basis for studying how containment and support measures interacted with economic and financial outcomes.

A substantial body of literature emphasizes that the pandemic affected not only returns and volatility, but also market liquidity and trading conditions. This distinction is important because crisis-period reductions in liquidity can weaken market depth even when prices later recover. Alaoui-Mdaghri et al. (2020) report that the great lockdown and the broader COVID-19 shock reduced stock market liquidity in MENA markets, particularly in terms of market depth and tightness. Zaremba et al. (2021) similarly show, using data from 49 countries, that pandemic-era policy responses had measurable effects on stock market liquidity, with some interventions deteriorating liquidity in emerging markets. Taken together, these studies suggest that the financial consequences of COVID-19 cannot be understood through returns alone; trading activity and liquidity dynamics are equally important.

For the Middle East and North Africa region, the evidence remains more limited and uneven than for advanced markets. Existing studies suggest that MENA and Gulf markets were exposed to the same global shock but did not respond uniformly, because resilience depended on differences in institutional quality, market depth, reform capacity, and macro-financial buffers. Recent Qatar-specific evidence is particularly relevant here. Al-alawneh et al. (2025), using an ARDL framework, report that COVID-19 conditions and government

responses were significantly associated with stock market behaviour in Qatar. This is useful for the present study because it shows that the Qatari market warrants country-specific analysis rather than being treated as just another generic emerging-market case.

Methodologically, the COVID-19 stock-market literature is dominated by event studies, panel regressions, volatility models, and policy-index analyses. These approaches are valuable for identifying average return effects, reaction windows, and policy-associated shifts, but they also leave an important gap. Much of the literature focuses on market returns, volatility, and abnormal performance (Ashraf, 2020; Scherf et al., 2022; Zaremba et al., 2021), while comparatively less attention is paid to activity-based indicators such as traded shares, traded value, and executed transactions. This matters because returns can recover even when underlying participation, liquidity, or transaction intensity remain weak. In other words, a market may appear resilient in price terms while still showing contraction in breadth and trading dynamism. Sharma et al. (2024) show that a major external geopolitical shock generated abnormal losses across European stock exchanges, reinforcing the broader proposition that financial markets react sharply during distress periods. Onwioduokit and Effiong (2024) argue that post-COVID recovery depends heavily on institutional quality, while Okpala et al. (2024) emphasize that capital inflows can support transformational recovery when aligned with broader development conditions. Nenbee and Denwi (2025) further show that financial development strengthens the economic value of diversification by helping economies absorb external pressures more effectively, and Metu et al. (2025) argue that financial inflows can support inclusive development when channelled toward productive sectors. These studies do not examine Iraq or Qatar directly, but they are useful in situating the present study within a broader debate on crisis vulnerability, institutional preparedness, and resilience.

Against this background, two gaps remain clear. First, comparative evidence on Arab stock exchanges is still limited, especially for markets with sharply different structural characteristics such as the Iraq Stock Exchange and the Qatar Stock Exchange. Second, the dominant COVID-19 finance literature still places greater emphasis on returns and volatility than on trading-activity indicators. This study addresses both gaps by providing a comparative

descriptive assessment of traded shares, traded value, and executed financial transactions in Iraq and Qatar during 2019–2020. By focusing on activity-based indicators rather than causal policy estimation, the study offers a more direct view of market breadth, liquidity conditions, and transaction intensity during the pandemic period.

### **3. Methodology**

This study adopts a comparative descriptive research design to examine the impact of the COVID-19 pandemic on the trading activity of the Iraq Stock Exchange (ISX) and the Qatar Stock Exchange (QSE). The design allows a direct comparison of market performance across two structurally-different stock exchanges during the pre-pandemic and pandemic periods. Rather than estimating a causal policy model, the study focuses on describing and comparing changes in key trading activity indicators across the two markets.

#### **3.1 Data source and description**

The study relies on secondary data obtained from the official monthly trading bulletins and annual reports of the Iraq Stock Exchange and the Qatar Stock Exchange. The dataset covers the 24-month period from January 2019 to December 2020, including 12 months before the pandemic (2019) and 12 months during the pandemic (2020). This timeframe enables a clear comparison between pre-pandemic and pandemic-period market activity.

To evaluate stock market performance, the study uses three activity-based indicators: the number of traded shares, which serves as a proxy for market breadth and liquidity; the value of traded shares, measured in local currency, which reflects the monetary size of transactions and the overall value of market activity; and the number of executed financial transactions, which indicates investor participation and the intensity of trading activity. These indicators are widely used in empirical finance to assess stock market activity beyond price or return movements.

### **3.2 Estimation techniques**

The analysis uses the Statistical Package for the Social Sciences (SPSS version 20) and consists of descriptive and inferential procedures.

#### *3.2.1 Descriptive Analysis*

Monthly and annual totals are computed for each performance indicator for both the ISX and QSE. To assess the magnitude and direction of change between the pre-pandemic and pandemic periods, percentage changes are calculated using the following expression:

$$\Delta\% = [(X_{2020} - X_{2019}) / X_{2019}] \times 100$$

where  $\Delta\%$  represents the percentage change,  $X_{2020}$  denotes the indicator value in 2020, and  $X_{2019}$  denotes the corresponding value in 2019.

This procedure determines whether each market experienced contraction or expansion during the pandemic period relative to the preceding year.

#### *3.2.2 Inferential Analysis*

To assess whether the observed differences between the two periods are statistically significant, the independent-samples t-test is applied. For each stock exchange separately, the monthly mean values of traded shares, traded value, and executed financial transactions in 2019 are compared with the corresponding monthly mean values in 2020. A significance level of 5% ( $p < 0.05$ ) is adopted for all statistical tests.

#### *3.2.3 Research Procedures*

The analytical procedures are applied consistently to both markets. For the Iraq Stock Exchange and the Qatar Stock Exchange, the three performance indicators are compiled on a monthly basis and then aggregated annually for comparison. The observed changes are interpreted in relation to the institutional and structural characteristics of each market, including market depth, investor participation, and trading infrastructure.

## 4. Results and Discussion

### 4.1 Traded shares

Traded shares showed sharply contrasting patterns between the two exchanges during the COVID-19 period. In the Iraq Stock Exchange, total traded shares declined from 460.1 billion in 2019 to 403.3 billion in 2020, representing a decrease of 12.34%. The decline was most pronounced in April (−87.47%) and July (−78.14%), although unusually large increases were observed in August (+511.41%) and September (+1,569.45%). The overall difference is statistically significant ( $t = 7.58$ ,  $p < 0.001$ ). By contrast, the Qatar Stock Exchange recorded a substantial increase in traded shares, rising from 544.4 million in 2019 to 2,649.6 million in 2020, equivalent to a 386.65% increase. Strong gains were observed throughout most months of 2020, and the overall increase was statistically significant ( $t = 25.04$ ,  $p < 0.001$ ) as seen in Table 1.

These contrasting results suggest that the pandemic period was associated with weaker trading breadth and liquidity in Iraq, but stronger trading expansion in Qatar. The Iraqi pattern is consistent with a thinner and more fragile market structure, where trading activity appears more vulnerable to systemic disruption. By contrast, the Qatari pattern suggests stronger liquidity support and market depth during the same shock period. This interpretation is broadly consistent with the liquidity literature, which emphasizes that illiquidity increases market vulnerability (Amihud, 2002), and with international COVID-19 evidence showing that pandemic conditions affected stock markets differently across institutional settings (Ashraf, 2020; Zaremba et al., 2021).

**Table 1.** Comparative Number of Traded Shares in the Iraq and Qatar Stock Exchanges, 2019–2020

| Month    | Iraq 2019 (bn shares) | Iraq 2020 (bn shares) | Iraq % Change | Qatar 2019 (mn shares) | Qatar 2020 (mn shares) | Qatar % Change |
|----------|-----------------------|-----------------------|---------------|------------------------|------------------------|----------------|
| January  | 67.17                 | 27.74                 | −58.70        | 9.92                   | 82.40                  | +730.35        |
| February | 22.01                 | 23.45                 | +6.56         | 8.91                   | 81.99                  | +820.51        |
| March    | 56.66                 | 21.54                 | −61.99        | 11.72                  | 139.16                 | +1,086.97      |
| April    | 18.01                 | 2.26                  | −87.47        | 12.87                  | 175.42                 | +1,262.58      |
| May      | 32.31                 | 8.43                  | −73.92        | 19.98                  | 218.88                 | +995.63        |

| Month     | Iraq 2019 (bn shares) | Iraq 2020 (bn shares) | Iraq % Change | Qatar 2019 (mn shares) | Qatar 2020 (mn shares) | Qatar % Change |
|-----------|-----------------------|-----------------------|---------------|------------------------|------------------------|----------------|
| June      | 41.27                 | 14.30                 | -65.34        | 37.33                  | 234.93                 | +529.27        |
| July      | 73.61                 | 16.09                 | -78.14        | 55.74                  | 317.97                 | +470.42        |
| August    | 15.12                 | 92.45                 | +511.41       | 68.87                  | 303.08                 | +340.07        |
| September | 6.49                  | 108.29                | +1,569.45     | 106.52                 | 369.28                 | +246.66        |
| October   | 61.50                 | 40.77                 | -33.72        | 70.18                  | 269.04                 | +283.37        |
| November  | 29.89                 | 35.48                 | +18.70        | 70.60                  | 246.35                 | +248.94        |
| December  | 36.06                 | 12.53                 | -65.26        | 71.79                  | 211.04                 | +193.99        |
| Total     | 460.10                | 403.32                | -12.34        | 544.44                 | 2,649.55               | +386.65        |

Note: Iraq figures are presented in billions of shares; Qatar figures are presented in millions of shares. Values are rounded to two decimal places.

#### 4.2 Traded value

The value of traded shares also differed considerably between the two markets. In Iraq, total traded value increased from IQD 284.9 billion in 2019 to IQD 330.4 billion in 2020, representing a rise of 15.96%. However, this increase occurred alongside declines in traded shares and executed transactions, suggesting that the rise in value did not necessarily reflect broad-based market strengthening. In Qatar, traded value rose more strongly, from QAR 3.26 billion in 2019 to QAR 5.07 billion in 2020, an increase of 55.57%. The largest gains were recorded in July, August, September, and October. The differences are statistically significant for both markets (Iraq:  $t = 9.20$ ,  $p < 0.001$ ; Qatar:  $t = 22.44$ ,  $p < 0.001$ ) as illustrated in Table 2.

The Iraqi traded-value result should therefore be interpreted cautiously. Because it does not coincide with stronger performance in the other activity indicators, it may reflect concentration in higher-value trades or episodic market activity rather than sustained improvement in overall market depth. The unusually sharp Iraqi increases in August and September reinforce this caution. By contrast, the Qatari increase in traded value appears broader and more sustained, suggesting stronger investor confidence and more stable trading conditions during the pandemic period. This reading is consistent with evidence that market liquidity and policy responses influenced trading conditions internationally during COVID-19 (Zaremba et al., 2021), and with

recent Qatar-specific evidence showing that pandemic conditions and government responses were significantly associated with stock-market performance in Qatar (Al-alawneh et al., 2025).

**Table 2.** Comparative Value of Traded Shares in the Iraq and Qatar Stock Exchanges, 2019–2020

| Month     | Iraq 2019<br>(IQD bn) | Iraq 2020<br>(IQD bn) | Iraq %<br>Change | Qatar 2019<br>(QAR bn) | Qatar 2020<br>(QAR bn) | Qatar %<br>Change |
|-----------|-----------------------|-----------------------|------------------|------------------------|------------------------|-------------------|
| January   | 28.63                 | 45.56                 | +59.14           | 0.26                   | 0.22                   | –15.51            |
| February  | 18.50                 | 30.23                 | +63.45           | 0.27                   | 0.24                   | –12.07            |
| March     | 23.90                 | 39.46                 | +65.06           | 0.34                   | 0.37                   | +9.32             |
| April     | 13.36                 | 14.87                 | +11.33           | 0.25                   | 0.29                   | +16.16            |
| May       | 14.86                 | 7.15                  | –51.85           | 0.47                   | 0.38                   | –18.34            |
| June      | 52.86                 | 8.43                  | –84.05           | 0.30                   | 0.39                   | +28.92            |
| July      | 41.08                 | 8.63                  | –78.99           | 0.16                   | 0.52                   | +216.71           |
| August    | 14.40                 | 63.25                 | +339.32          | 0.23                   | 0.51                   | +126.89           |
| September | 7.52                  | 66.19                 | +779.86          | 0.27                   | 0.65                   | +136.92           |
| October   | 18.36                 | 19.20                 | +4.57            | 0.20                   | 0.49                   | +139.58           |
| November  | 34.01                 | 28.17                 | –17.18           | 0.26                   | 0.52                   | +99.42            |
| December  | 17.45                 | 12.65                 | –27.51           | 0.23                   | 0.48                   | +106.57           |
| Total     | 284.91                | 343.79                | +20.66           | 3.26                   | 5.07                   | +55.57            |

*Notes:* Iraq figures are reported in IQD billions and Qatar figures in QAR billions. Values are rounded to two decimal places.

### 4.3 Executed financial transactions

Executed financial transactions declined in Iraq but increased substantially in Qatar. In the Iraq Stock Exchange, total executed transactions fell from 81,973 in 2019 to 73,291 in 2020, representing a decrease of 10.59%. The sharpest decline occurred in April (–92.67%), followed by May and June, although some recovery was observed in August and September. The difference is statistically significant ( $t = 21.07$ ,  $p < 0.001$ ). In contrast, the Qatar Stock Exchange recorded a rise in executed transactions from 73,603 in 2019 to 110,118 in 2020, an increase of 49.61%. Strong gains were recorded in several months, especially July, October, and November, and the overall increase is statistically significant ( $t = 43.02$ ,  $p < 0.001$ ), as shown in Table 3.

These contrasting patterns indicate weaker market dynamism and more uneven adjustment in Iraq, but stronger trading continuity and investor participation in Qatar during the pandemic period. Since executed transactions reflect the frequency and intensity of market participation, the Qatari result suggests a more resilient trading environment under crisis conditions. The Iraqi result, by contrast, points to weaker continuity of participation and greater sensitivity to disruption. This interpretation is also consistent with the broader COVID-19 literature, which shows that market responses to the pandemic varied substantially across countries depending on liquidity conditions, institutional structures, and the nature of policy responses (Zaremba et al., 2021).

**Table 3.** Comparative Number of Executed Financial Transactions in the Iraq and Qatar Stock Exchanges, 2019–2020

| Month     | Iraq 2019 | Iraq 2020 | Iraq % Change | Qatar 2019 | Qatar 2020 | Qatar % Change |
|-----------|-----------|-----------|---------------|------------|------------|----------------|
| January   | 6,366     | 10,457    | +64.26        | 6,315      | 4,831      | −23.50         |
| February  | 5,651     | 8,189     | +44.91        | 5,671      | 6,335      | +11.71         |
| March     | 7,123     | 4,757     | −33.22        | 5,987      | 9,225      | +54.08         |
| April     | 5,551     | 407       | −92.67        | 5,463      | 8,873      | +62.42         |
| May       | 8,813     | 3,924     | −55.47        | 8,821      | 10,144     | +15.00         |
| June      | 7,967     | 3,176     | −60.14        | 6,723      | 8,995      | +33.79         |
| July      | 7,293     | 5,167     | −29.15        | 4,771      | 9,694      | +103.19        |
| August    | 4,900     | 5,324     | +8.65         | 6,606      | 10,628     | +60.88         |
| September | 6,425     | 8,729     | +35.86        | 6,707      | 11,425     | +70.34         |
| October   | 7,693     | 7,148     | −7.08         | 4,850      | 9,375      | +93.30         |
| November  | 7,939     | 9,027     | +13.70        | 5,837      | 10,814     | +85.27         |
| December  | 7,152     | 6,986     | −2.32         | 5,852      | 9,779      | +67.11         |
| Total     | 81,973    | 73,291    | −10.59        | 73,603     | 110,118    | +49.61         |

*Notes:* Data were obtained from the official reports of the Iraq Stock Exchange and the Qatar Stock Exchange; authors' calculations using SPSS version 20. The figures for Iraq and Qatar are reported as the total number of executed financial transactions. Percentage changes compare annual totals in 2020 with those in 2019. The reported t-statistic and p-value refer to the overall comparison of the 2019 and 2020 monthly observations for each market. Statistical significance was assessed at  $p < 0.05$ .

## 5. Conclusion

This study examined the performance of the Iraq Stock Exchange (ISX) and the Qatar Stock Exchange (QSE) during the COVID-19 period using a comparative descriptive analysis of traded shares, traded value, and executed financial transactions for 2019–2020. The findings reveal a clear divergence between the two exchanges. The ISX recorded an overall decline in traded shares (−12.34%) and executed transactions (−10.59%), whereas the QSE showed strong increases in traded shares (+386.65%), traded value (+55.57%), and executed transactions (+49.61%). These results indicate that the pandemic period is associated with weaker trading activity in Iraq but stronger market activity in Qatar.

The comparative evidence suggests that stock market resilience during a major crisis is closely related to differences in liquidity, institutional capacity, market depth, and trading infrastructure. The Iraqi market appears more fragile and uneven in its adjustment, whereas the Qatari market demonstrated stronger continuity of activity during the same period. This contrast reinforces the view that structurally stronger and more developed exchanges are better positioned to absorb systemic shocks and sustain investor participation under conditions of uncertainty.

From a policy perspective, the findings suggest that strengthening resilience in developing stock markets requires more than short-term stabilization measures. For markets such as Iraq, the priority should be to deepen liquidity, broaden investor participation, improve disclosure quality, and modernize trading systems so that trading activity becomes less vulnerable to external shocks. For stronger markets such as Qatar, the results highlight the value of sustaining reform momentum, improving market efficiency, and preserving regulatory credibility during periods of uncertainty. More broadly, the policy challenge in fragile markets is not only to restore trading after a crisis but also to strengthen the wider financial conditions that support resilient and inclusive development (Metu et al., 2025).

The findings should, however, be interpreted within the scope of the study design. This research provides a comparative descriptive assessment of two stock exchanges during 2019–2020 and does not estimate the causal effect of any single policy measure. The results therefore offer focused comparative evidence on how two structurally different exchanges behaved during the

COVID-19 period rather than a generalized conclusion about all Arab, emerging, or frontier markets. Future studies can extend this line of inquiry by including a larger sample of exchanges, a longer time horizon, and formal econometric modelling of the determinants of crisis-period market performance.

This study has several limitations. First, it is based on a two-country comparative design, so the findings should not be generalized automatically to all Arab, emerging, or frontier markets. Second, the analysis covers only the 2019–2020 period and therefore reflects the immediate pandemic phase rather than longer-term post-pandemic adjustment. Third, the study adopts a comparative descriptive approach and does not estimate the causal effect of any specific policy measure or macroeconomic determinant. Finally, some monthly observations, particularly in the Iraqi market, show unusually sharp movements and should therefore be interpreted cautiously.

Future research could extend this analysis by including a larger sample of Arab, emerging, and frontier stock exchanges, using a longer time horizon, and applying formal econometric models to examine the determinants of crisis-period market performance. Further studies may also incorporate liquidity measures, macroeconomic fundamentals, oil-price dynamics, and policy-related indicators to provide a broader understanding of stock market resilience during systemic disruptions.

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