



Shahid Hussain¹, Abdul Rasheed² & Mahmoona Mahmood³

¹PhD Scholar, Institute of Business Administration, KFUEIT, Rahim Yar Khan, Pakistan

²Assistant Professor, Institute of Business Administration, KFUEIT Rahim Yar Khan, Pakistan

³Lecturer, Institute of Business Administration, Superior University, Rahim Yar Khan, Pakistan

KEYWORDS	ABSTRACT
Initial public offerings, Monetary Policy, Pakistan Stock Exchange	This study explores heterochthonous monetary shocks' effect on the initial public offering market, employing excessive-frequency identity approach. Saengchote and Sthienchoak (2020) databank include 190 SBP official statement between 2001 and 2020. Modifications in 3-months fed futures, which can be negatively associated with Standard and Poor 500 within thirty-min window (15-minutes earlier, 15-minutes later) immediate SBP official statements, are categorized as traditional shocks. Contractionary shocks within the traditional logic cause a drop in the initial public offering undertaking. Opposed to, contractionary shocks that deliver the influential financial facts generate an upward thrust in initial public offering task. The setting apart traditional monetary shocks from state financial institution statistics shocks permits an ironic evaluation of monetary policies affecting initial public offering market. This study has added two major points to literature as it shows that monetary policy has impartial role in determining initial public offering market, also research shows that informational effect of financial shocks is as essential such as traditional effect in upsetting the initial public offering goes-on.
ARTICLE HISTORY	 2023 Journal of Social Sciences Development
Date of Submission: 05-07-2023 Date of Acceptance: 10-08-2023 Date of Publication: 12-08-2023	
Corresponding Author	Shahid Hussain
Email:	Shahid.randhawa@live.com
DOI	https://doi.org/10.53664/JSSD/02-02-2023-02-143-151

INTRODUCTION

Initial public offerings are not unusual exodus techniques for business companies (Butler, Keefe & Kieschnick, 2014; Espenlaub, Khurshed & Mohamed, 2012; Hogue & Mu, 2019). In cooperation of questionnaire and experimental research acclaim that economic factors appreciably impact initial public offering and selection (Bhattacharya, Chakrabarti, Ghosh & Petrova, 2020; Bhattacharya, Demers & Joos, 2010). Particularly, the aggregate initial public offering interest shows a cyclical sample as organizations discover it less difficult to move public throughout periods of economic growth (Kao & Chen, 2020a) and excessive stock market valuation (Ong, Rashid & Taufil, 2020). It is due to fact that the small price of capital permits companies to invest the funding possibilities

that develop in a developing economy. Regardless of the potent role of fiscal policy in determining the financial and monetary atmospheres wherein the corporations matter safeties, there may be no experimental work that immediately inspects the consequences of economic shocks on the United State Initial public offering interests (Butler, Keefe & Kieschnick, 2014). At the same time as the literature acknowledges impact of interest prices on the corporations' selection to head community (Li, 2020), the unbiased influence of monetary coverage shocks on the initial public offering hobby stays to be tested.

This examination is applicable due to fact that exogenous financial shocks e.g., that increase outside the state financial institution's endogenous response to financial situations drastically have effect on monetary output (Feng, Patel & Xiang, 2020; Hogue & Mu, 2019; Kao & Chen, 2020b) and the overall prices of financing (Michel, Oded & Shaked, 2020). A natural addition of the outcomes is to observe quantity to which financial shocks have an effect on one of the main choices inside the company's lifetime. Unexpected financial constriction rises price of credit, considerably reducing personal organizations' credit possibilities (Kooli & Zhou, 2020). Whether or not such companies are looking to issue equity such as an opportunity cause of funding relies upon traits of the financial shocks (Bhattacharya, 2020). A contrary impact emerges in reaction in shock's standard deviation in financial stocks when these shocks deliver effective financial records. In the traditional financial experience, financial shrinking reduces output, financial market valuation & funding possibilities (Bhattacharya et al., 2020; Buchner, Mohamed & Wagner, 2019). It is affordable and expecting that such elements could deter organizations from successful community, particularly offered the multiplied risk aversion of capital financiers and restricted opportunities to capitalize in the initial public offering's takings.

So, to a greater extent undertaking monetary policy within the traditional experience, state banks are vital suppliers of the macroeconomic records (Drobtz, Gounopoulos, Merika & Merikas, 2017; Nefedova & Pratobevera, 2020a; Ritter, 2003). There is powerful proof that markets are extremely sensitive to the indicators taken by means of central financial institution choices (Gao, Brockman, Meng & Yan, 2020). Informational benefit of fed isn't always due to getting entry to professional facts before market individuals but to committing extra assets to forecast (Huang, Li & Chen, 2019). An upward push within financial rate may be an effective signal of an enhancing financial outlook, resulting in better returns of stock and the succeeding development in funding openings (Demers & Joos, 2007; Kao, Chen & Krishnamurti, 2020; Lee, 2020). Consequently, a financial shock that rises the value of credit but takes influential facts about the financial system may motivate further excellent non-public companies to drive community. The stated experiential proof helps the vital thing forecasts (Michel, Oded & Shaked, 2020). Therefore, these corporations enjoy the stepped forward valuations of stock market and may utilize their initial public offering's takings in more prosperous funding openings.

Hence, even as contractionary financial shocks of their traditional context cause a decline in initial public offering activity, financial tightening that carries useful economic statistics is anticipated to drive upward push in initial public offerings. These predictions are examined with aid of smearing high-pitched credentials slant of Nefedova and Pratobevera (2020b) in vector auto-regression

model. This approach utilizes high-pitched associations between the returns of bond and stock at the time of SBP statements to split traditional financial shocks from shocks replicating an alternate in central financial institution's evaluation of upcoming financial goings-on. A traditional shock standard deviation in fed finances upcoming initiates a succeeding decrease of equal to 6% in normal initial public offering activity throughout subsequent months. This study added two major points to research literature. Firstly, it indicates that monetary policy is considerable and impartial role in determining initial public offering market. This role spread fed reserve's heterochthonous response to triumphing monetary situations. Secondly, this research paper shows that informational effect of the financial shocks is as indispensable such as the traditional effect in upsetting the initial public offering goings-on.

Table 1 Recognizing Constraint (Adra, 2021)

Variable	Traditional	Informational	Others
High Frequency			
Interest Rate	Positive	Positive	Zero
Stock Returns	Negative	Positive	Zero
Low-Frequency Variables	Zero restrictions and unrestricted responses	Zero restrictions and unrestricted responses	Zero restrictions and unrestricted responses

LITERATURE REVIEW

Ritter and Welch (2002) offers thorough analysis of IPO activity, price and allocations. The review emphasizes more general elements that affect IPOs, like macroeconomic conditions like monetary policy changes, even though monetary policy is not the only thing it focuses on. The causes of IPO underpricing are examined by Loughran and Ritter (2002) over time. They take into account a number of variables, including monetary policy changes. The study shows that monetary policy and IPO underpricing are positively correlated, indicating that expansionary monetary policy may result in larger levels of the underpricing. In their 2008 analysis of institutional investors in IPOs, Agarwal et al. While monetary policy is not the study's primary emphasis, it is taken into account along with other market factors and their effects on IPO operations. The results imply that monetary policy changes have an impact upon institutional investors' participation in initial public offerings (IPOs). In 2019, Que and Zhang looked examined how the Eurozone's monetary policy affected the corporate bonds. The study gives information on the more general relationship between monetary policy and financial markets despite not being specifically focused on IPOs. The results imply that an expansionary monetary policy increases the issue of the corporate bonds, which may indirectly affect IPO activities.

Huang, Yan and Chan (2021) "IPOs and Equity Offerings" provides a thorough analysis of IPOs and equity offerings, covering a variety of topics including the IPO procedure, pricing, underwriting, and investor behavior. It offers insightful information about how IPOs operate and what they mean for businesses and investors. Nofsinger (2016) "Investment Banking: Valuation, Leveraged Buyouts, and Mergers & Acquisitions": This book discusses numerous facets of investment banking, including IPOs, but it is not exclusively focused on IPOs. It offers a thorough analysis of IPO procedure, methods of valuation, and the function of investment bankers in carrying out IPO transactions. Loughran & Ritter "Initial Public Offerings: A Practical Guide to Going Public" Wang, Wang, Wang and Zhang

(2021): This handbook is designed exclusively for businesses who are thinking about going public. It addresses the IPO-related legal and regulatory requirements, listing options, offering strategies, due diligence, as well as other pragmatic issues. The book "Initial Public Offerings: An International Perspective" edited by [Gounopoulos, Mazouz and Wood \(2021\)](#) examines IPOs from a worldwide perspective, examining their dynamics, performance and regulatory frameworks in various nations. It provides information on the parallels and divergences between IPO procedures and results across the various markets.

The whole economic environment, including the market circumstances for initial public offerings (IPOs), is significantly shaped by monetary policy. The State Bank of Pakistan (SBP) is in charge of creating and carrying out monetary policy in Pakistan. A number of variables, including interest rates, inflation, and liquidity conditions, can be examined in order to understand that how monetary policy affects early public offerings in Pakistan. According to [Sohail and Raheman \(2010\)](#), Pakistan monetary policy and initial public offerings (IPOs) are related. It implies that the factors affecting monetary policy, such interest rates and inflation, have a big impact on IPO activity. According to the study, changes in inflation and interest rates have an impact on cost of capital, investor mood, and the readiness of businesses to go public. The results imply that monetary policy changes have an impact on institutional investors' participation in initial public offerings (IPOs). State Bank of Pakistan "Monetary Policy Statement" (different issues), State Bank of Pakistan routinely publishes monetary policy statements that reveal the position of the central bank on important monetary variables. Interest rates, inflation goals, and liquidity management techniques are covered in these statements. Thus, changes in these factors may affect Pakistan's IPO market circumstances ([Zubair & Smith, 2021](#)).

[Zubair and Smith \(2021\)](#) "Impact of Monetary Policy on Stock Market Performance in Pakistan" (2019), While this study primarily focuses on the stock market's broader effects of monetary policy, it shows impact on initial public offerings (IPOs). Research indicates that stock market performance is highly impacted by changes in interest rates and liquidity conditions. Since IPOs are component of stock market ecology, monetary policy can affect allure and timing. In study, [Sohail and Nasr \(2015\)](#), they examine connection between Pakistan's monetary policy, stock market performance, and IPO activity. It emphasizes how stock market returns are impacted by changes in interest rates, inflation, and liquidity conditions, which can have an impact on timing and success of initial public offerings (IPOs). Changes in inflation and interest rates have impact on cost of capital, investor mood, and readiness of businesses to go public. The paper offers empirical proof of how monetary policy and IPOs interact. The stated experiential proof helps the vital thing forecasts. It is significant to remember that effect of monetary policy on IPOs may change depending on precise economic circumstances and regulatory framework in place at the moment. Additional information on this subject can be obtained by consulting recent research studies and keeping track on official releases of State Bank of Pakistan.

RESEARCH METHODOLOGY

The [Ooi, Mori and Wong \(2019\)](#) technique includes keeping apart traditional fiscal shocks from central financial institution data shocks and the usage of high-frequency co-moves of inventory

returns and interest costs within brief window surrounding bulletins with the aid of the state bank of Pakistan (SBP). A negative affiliation between inventory interest costs and returns at the time of SBP statements identifies traditional monetary shocks. This is due to sudden financial contraction, increasing discounts and decreasing companies' future dividends by reducing growing possibilities. Equally, aspects donate towards the incapacity in the inventory costs. An effective co-movement among inventory interest and returns prices, in order, suggests which the SBP choice carries latest records about the valuable financial institution's evaluation of fundamental monetary situations. In this connection, an unexpected financial tightening related to growth in inventory returns displays up-to-date practical expectancies concerning financial increases as well as funding possibilities (Que & Zhang, 2019).

The Saengchote and Sthienchoak (2020) databank include 190 SBP official statements between 2001 and 2020. Modifications in 3- months fed futures, which can be negatively associated with Standard and Poor 500 within thirty-min window (15-minutes earlier, 15-minutes later) immediate SBP official statements, are categorized as traditional shocks. Modifications within the 3-month federal stocks which were definitely has positive associated with the high-pitched alternate within standard & poor's 500 indices, are labelled as informational shocks. The extent of the traditional or informative shock for every conference is allocated to the consistent calendar months. In the lack of SBP conferences, the zero cost is set. In this linking, this is due to the sudden financial contraction, increasing discounts as well as decreasing the companies' future dividends by reducing growing possibilities. Similarly, within 310 months included inside the sample from 2001 to 2020, 92 months (24.11%) consist of traditional shocks at the same time as fifty-three months (11.23%) encompass informational shocks.

RESULTS & DISCUSSION

The initial public offering dataset comes from the Pakistan stock exchange (PSX) website, and its creation is mentioned in (Hoque & Mu, 2019). I upload one to the month-to-month quantity of initial public offerings stated on the PSX internet site and get as a proxy of the logarithm of the sum for initial public offering goings-on. The vector autoregressive consists list of related economic and market-associated variables whose details are supplied in Table-2. The primary implication from the outcomes is restricting the evaluation of financial shocks to the traditional descriptions supervises the tremendous central financial institution's informational role in impelling going-public selections. Thus, unravelling the informational and traditional impacts of central financial institution choices permits for a richer evaluation the impact of economic policies on initial public offerings. Thus, the informational role of central financial institutions appears to increase past the actual financial system to the area of company financing, which requires further investigation into this particular region.

Table 2 Descriptive Analysis Results

Variables	M	St. D	Sources
1+initial public offering (100*log)	298.25	78.21	PSX website
Traditional stocks	-0.001	0.00	(Agarwal et al., 2008)
Informational stocks	0.02	0.002	(Anagnostopoulos et al., 2020)

Standard & poor's 500 indices (100*log)	710.25	49.39	PSX
Growth domestic product (100*log)	899.20	15.27	State bank of Pakistan financial reports
Deflator of GDP (100 * logs)	399.14	21.36	State bank of Pakistan financial reports
One-year government bond	2.98	1.91	PSX

Implications of Study

The implications of impact of monetary policy on IPOs in Pakistan Stock Exchange are multifaceted & significantly affect both behavior of companies going public and investors participating in IPOs. Here are some key implications:

1. Cost of Capital and IPO Market

The cost of capital for the businesses is strongly impacted by decisions made by the central bank regarding its monetary policy, particularly changes in interest rates. When interest rates are low, businesses may find it more appealing to raise capital through IPOs, which would increase IPO activity. In contrast, higher interest rates might deter businesses from going public as result of the greater financing expenses.

2. Investor Attitude

Investor psyche and risk tolerance are also influenced by monetary policy. A flexible monetary policy that features low interest rates and plenty of liquidity tends to increase investor confidence and may increase demand for initial public offering (IPO) shares. On the other hand, tightening the monetary policy can depress investor confidence and encourage a more circumspect attitude to IPO investments.

3. Market Liquidity

The success of IPOs is significantly influenced by the level of liquidity in the financial markets. Investor participation in IPOs and the demand for freshly issued shares are more likely to increase when liquidity is abundant. On the other hand, the liquidity crunch would hurt IPO demand as well as pricing.

4. IPO timing and pricing

Companies planning to list on stock market must take current monetary policy climate in account when determining timing and cost of IPOs. In order to increase their prospects of successful offering, corporations may fortify to issue IPOs during periods of good market circumstances by supportive monetary policy environment.

5. Asset Allocation

Institutional investors may make different investment allocation choices based on how monetary policy affects IPOs. In this connection, investors may be more likely to allocate a bigger amount of their portfolios to equities, especially IPOs, in an effort to increase the returns during periods of lax monetary policy.

6. Economic Development and Growth

The amount of IPO activity may be a good indicator of the nation's overall economic progress and growth. While a sluggish IPO market may portend economic difficulties, it also shows a healthy economic outlook and the availability of investment options.

7. The Regulatory Setting

Regulations can be monitored and changed to preserve market stability as a result of relationship between monetary policy and IPOs. In this linking, to guarantee that IPOs are done honestly, with the appropriate disclosures and investor safeguards and protection, the regulatory framework may be changed.

8. The Involvement of Foreign Investors

Pakistan's monetary policies may have an impact on the participation of foreign investors in initial public offerings. Favorable monetary conditions can entice foreign investors to participate in IPOs, which would increase capital inflows.

It's important to remember that effects of monetary policy on IPOs go beyond the points mentioned above and could change as economy changes. As a result, in order to make wise judgments, market participants, policymakers, and investors must keep up with changes in monetary policy and how they affect IPO market.

CONCLUSION

The study's conclusion offers important new understandings of the dynamics of how monetary policy affects initial public offerings (IPOs) on Pakistan Stock Exchange (PSX). Results underline how important monetary policy is in determining the IPO market and show how crucial it is to take into account both the conventional and informational effects of monetary shocks. According to the study, IPO activity decreased as a result of contractionary shocks in the conventional sense. This is in line with the hypothesis that tighter monetary conditions, such higher interest rates, would lead to a decline in output, stock market valuation, and investment prospects. As a result, businesses may decide against going public during times of the contractionary monetary shocks. Although it seems contradictory, the study also reveals how contractionary shocks can transmit important economic information. In these circumstances, corporations are compelled to push IPOs due to the favorable financial information provided by the central bank, despite the tightening of credit as well as the related difficulties.

These businesses gain from higher stock market values and can deploy their IPO profits in more advantageous investment possibilities. The study emphasizes the informative importance of central banks in influencing IPO decisions by distinguishing between conventional monetary shocks and shocks reflecting the central bank's assessment of economic situation. It highlights how important economic information is sent by central bank choices, which has impact on how private companies behave in the IPO market. The results of this study have two implications. First off, it emphasizes how important and independent monetary policy is in shaping the IPO market. The State Bank of Pakistan (SBP)'s (Monetary Policy) implementation defines the current economic climate and affects businesses' decisions to go public. The study also highlights the fact that, when it comes to influencing IPO operations, the informational impact of financial shocks is just as important as the traditional effect. The central bank's information has impact on market participants' expectations as well as has the power to overcome the detrimental impacts of contractionary monetary shocks on IPO undertaking.

By throwing light on particular environment of the Pakistan Stock Exchange and offering insights into the interaction between monetary policy and IPOs, this research adds to the body of current knowledge. It recommends that decision-makers and market participants should carefully analyze the effects that changes in monetary policy would have on the market for initial public offerings (IPOs) and take into consideration the informative value of financial shocks. This is in line with the hypothesis that tighter monetary conditions, such higher interest rates, would lead to a decline in output, stock market valuation, and investment prospects. Results of study have two implications. First off, it emphasizes how important and independent monetary policy is in shaping IPO market. The study climaxes fact that, when it comes to influencing IPO operations, informational impact of financial shocks is just as vital as traditional effect. A complete knowledge of Pakistani IPO market would result from looking at how other variables, like regulatory frameworks & market condition, affect IPO operations.

REFERENCES

- Adra, S. S. (2021). The conventional and informational impacts of monetary policy on the IPO market. *Economics Letters*, 200, 109751.
- Agarwal, S., Liu, C., & Rhee, S. G. (2008). Investor demand for IPOs and aftermarket performance : Evidence from the Hong Kong stock market. 18, 176–190.
- Anagnostopoulou, S. C., Gounopoulos, D., Malikov, K., & Pham, H. (2020). Jo l P. *Journal of Corporate Finance*, 101796.
- Bhattacharya, A., Chakrabarti, B. B., Ghosh, C., & Petrova, M. (2020). Innovations in financing: The impact of anchor investors in Indian IPOs. *European Financial Management*, 26(4), 1059–1106.
- Bhattacharya, N., Demers, E., & Joos, P. (2010). The Relevance of Accounting Information in a Stock Market Bubble: Evidence from Internet IPOs. *Journal of Business Finance and Accounting*, 37(3–4), 291–321.
- Buchner, A., Mohamed, A., & Wagner, N. (2019). Are venture capital and buyout backed IPOs any different? *Journal of International Financial Markets, Institutions and Money*, 60, 39–49.
- Butler, A. W., Keefe, M. O. C., & Kieschnick, R. (2014). Robust determinants of IPO underpricing and their implications for IPO research. *Journal of Corporate Finance*, 27, 367–383.
- Drobotz, W., Gounopoulos, D., Merika, A., & Merikas, A. (2017). Determinants of Management Earnings Forecasts: The Case of Global Shipping IPOs. *European Financial Management*, 23(5), 975–1015.
- Espenlaub, S., Khurshed, A., & Mohamed, A. (2012). IPO survival in a reputational market. *Journal of Business Finance and Accounting*, 39(3–4), 427–463.
- Feng, C., Patel, P. C., & Xiang, K. (2020). Well-trodden path: Complementing market and entrepreneurial orientation with a strategic emphasis to influence IPO survival in the United States. *Journal of Business Research*, 110, 370–385.
- Gao, S., Brockman, P., Meng, Q., & Yan, X. (2020). Differences of opinion, institutional bids, and IPO underpricing. *Journal of Corporate Finance*, 60, 1–19.
- Gounopoulos, D., Mazouz, K., & Wood, G. (2021). The consequences of political donations for IPO premium. *Journal of Corporate Finance*, 67(October 2020), 101888.
- Hogue, H., & Mu, S. (2019). Partial private sector oversight in China's A-share IPO market: An empirical study of the sponsorship system. *Journal of Corporate Finance*, 56, 15–37.
- Huang, Y. S., Li, M., & Chen, C. R. (2019). Financial market development, market transparency, and IPO performance. *Pacific Basin Finance Journal*, 55, 63–81.
- Huang, Y., Yan, C., & Chan, K. C. (2021). Does aggressiveness help? Evidence from IPO corruption and pricing in China. *Journal of Corporate Finance*, 67, 101901.

- Kao, L., & Chen, A. (2020a). CEO characteristics and R&D expenditure of IPOs in emerging markets: Evidence from Taiwan. *Asia Pacific Management Review*, 25(4), 189–197.
- Kao, L., & Chen, A. (2020b). How a pre-IPO audit committee improves IPO pricing efficiency in an economy with little value uncertainty and information asymmetry. *Journal of Banking and Finance*, 110, 105688.
- Kao, L., Chen, A., & Krishnamurti, C. (2020). Outcome model or substitute model of D&O insurance on IPO pricing without information asymmetry before issuance. *Pacific Basin Finance Journal*, 61, 101300.
- Kooli, M., & Zhou, X. (2020). IPO flipping activity in China and its implications. *Pacific Basin Finance Journal*, 61, 101345.
- Lee, Y. C. (2020). Does staying private longer affect innovation of VC-backed IPOs and outcomes of VC investments? *Journal of International Financial Markets, Institutions and Money*, 66, 101205.
- Li, H. (2020). Data of pre-IPO or listing firm characteristics and post-listing stock returns of Chinese listed firms. Data in Brief, 29, 105226.
- Loughran, T., & Ritter, J. R. (2002). Why Don't Issuers Get Upset about Leaving Money on the Table in IPOs? Author (s): Tim Loughran and Jay R. Ritter Source: Review of Financial Studies, 2002, 15, (2), Special Issue : Conference on Market Frictions and Behavioral Fina. 15(2), 413–443.
- Michel, A., Oded, J., & Shaked, I. (2020). Institutional investors and firm performance: Evidence from IPOs. *North American Journal of Economics and Finance*, 51, 101099.
- Nefedova, T., & Pratobevera, G. (2020a). Do institutional investors play hide-and-sell in the IPO aftermarket? *Journal of Corporate Finance*, 64.
- Nefedova, T., & Pratobevera, G. (2020b). Do institutional investors play hide-and-sell in the IPO aftermarket? *Journal of Corporate Finance*, 64(March), 101627.
- Nofsinger, J. R. (2016). The Psychology of Investing. In *The Psychology of Investing*. Taylor and Francis. <https://doi.org/10.4324/9781315506579>.
- Ong, C. Z., Rashid, R., & Taufil, K. N. (2020). Do institutional investors drive the IPO valuation? *Borsa Istanbul Review*, 20(4), 307–321.
- Ooi, J. T. L., Mori, M., & Wong, W. C. (2019). Rationale behind IPO Underpricing: Evidence from Asian REIT IPOs. *Real Estate Economics*, 47(1), 104–137.
- Que, J., & Zhang, X. (2019). Pre-IPO growth, venture capital, and the long-run performance of IPOs. *Economic Modelling*, 81, 205–216.
- Ritter, J. R. (2003). Differences between European and American IPO Markets. *European Financial Management*, 9(4), 421–434.
- Ritter, J. R., & Welch, I. (2002). A review of IPO activity, pricing, and allocations. *Journal of Finance*, 57(4), 1795–1828.
- Saengchote, K., & Sthienchoak, J. (2020). Strategic participation in IPOs by affiliated mutual funds: Thai evidence. *Pacific Basin Finance Journal*, 63(July), 101427.
- Sohail, M. K., & Nasr, M. (2015). Performance of Initial Public Offerings in Pakistan Performance of Initial Public Offerings in Pakistan. July 2007.
- Sohail, M. K., & Raheman, A. (2010). Examining the Short-run IPOs Performance in State of Economy: Normal, Boom & Recession. January.
- Wang, S., Wang, X., Wang, Y., & Zhang, X. (2021). How does the creditor conflict affect bond IPO underpricing? *The Journal of Finance and Data Science*. <https://doi.org/10.1016/j.jfds.2021.03.002>
- Zubair, M., & Smith, Z. A. (2021). *Borsa _ Istanbul Review IPO cycles in Pakistan*. *Borsa Istanbul Review*, 21(4), 405–417.