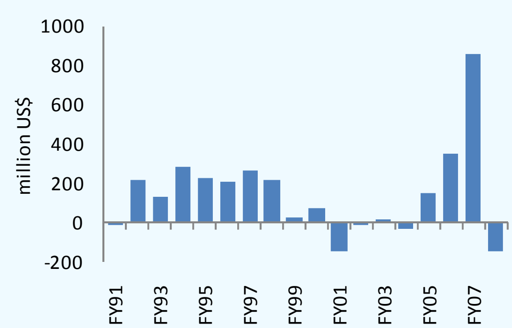
Special Section I: Does Foreign Investment Drive The Equity Market in Pakistan?

The cross-border flow of equity investments as a sign of increasing financial globalization, particularly in the case of emerging economies, has generated an ensuing debate on the impact of foreign equity flows on the domestic stock market. A wide body of literature is of the view that international equity flows tend to enhance the depth and liquidity of domestic markets, particularly in case of emerging economies where equity markets are relatively illiquid. These flows also serve to strengthen domestic capital markets and decrease the cost of capital by reducing the country's risk premium. Foreign interest in the stock market leads to a reduction in the cost of capital, which in turn encourages domestic investors to invest in profitable projects and thus further reinforces the performance of the capital market. However, despite these many benefits, these flows are more vulnerable to adverse developments, given their short-term view, and hence are usually highly volatile with a potentially destabilizing impact on stock market volumes. This process is also exacerbated because of foreign investors' herd instincts, and positive feedback trading, both of which tend to move stock prices away from fundamentals, thereby increasing volatility.

Pakistan has witnessed a surge in international capital flows since the liberalization of foreign portfolio investment[1] (FPI) in the 1990s.[2] This was particularly reflected in a marked increase in FPI flows during FY07, reaching a historic peak of US$ 861.5 million (**Figure 1**). Ample liquidity in global markets, stable macroeconomic fundamentals and the remarkable performance of equity markets[3] in the last few years, aptly explain this surge in FPI. The uptrend in FPI, however, was short-lived as adverse developments on both the domestic and global front resulted in a reversal in FPI during FY08.

Figure 1: Yearly Foreign Equity Investment Flows



Source: Statistics and Data Warehouse Department, SBP

Though the volume of FPI is historically insignificant, the sharp movements in the flows (investment and disinvestment) in recent years can be seen as a source of stock market volatility in the last two years, given the short-term consideration of such flows. Such outflows also exert pressure on the value of the domestic currency, as they did in FY08 and subsequent months. The changes in the value of the domestic currency might in turn cause volatility in the stock market prices.[4] The concern expressed about exchange rate volatility becomes increasingly important

[1] Foreign portfolio investment includes investments in equity market only.

[2] In 1992, Pakistan allowed non-residents to invest and trade freely in the domestic equity market through the facility of the Special Convertible Rupee Account (SCRA), which they can open with any Authorized Dealers (Commercial Banks) in Pakistan.

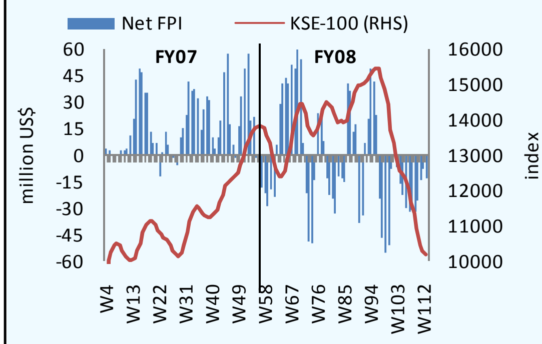
[3] Pakistani stock market has traditionally traded at a discount in comparison with regional markets.

[4] Literature suggests that currency depreciation leads to a decline in stock prices in the short-run.
This is because exchange rate depreciation creates expectation of higher future inflation which make investors more skeptical about the future performance of companies and thus leads to a drop in their stock prices. From the company's balance sheet perspective, it is also argued that the effect of currency depreciation on stock prices also depends on whether it is an importer or exporter. For instance, in case of higher exports, currency depreciation tends to increase the export competiveness of domestic firms, which results into higher income, and thus leads to an increase in the firms' stock prices. Therefore, the overall impact of currency depreciation on stock prices can be both positive or negative. For detail see "Stock prices and Exchange rate in the EU and USA: Evidence of their Mutual Interactions", 2004

given that the stock market returns are sensitive to the volatility in foreign exchange market in Pakistan.[5]

Keeping in view the risks attached with FPI, this section discusses the recent FPI trend and its implications for the domestic stock market.[6]

Figure 2: Weekly Net Foreign Investment since Jul-2007 (4 weeks moving average)

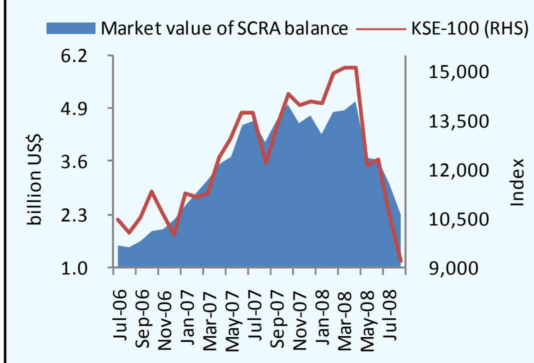


Source: Statistics and Data Warehouse Department, SBP

The widening macroeconomic imbalances,[7] moderation in growth and sharp uptrend in inflationary pressures in FY08 swiftly eroded the investors' confidence. Additionally, the political noise through most of FY08 further distorted incentives for the international investors to divert their investments to the Pakistan stock market. Though most of the emerging markets have experienced reversal in FPI inflows as the global financial crisis unfolded in 2008, the impact of financial markets' turmoil on foreign equity flows in Pakistan has been negligible. Nevertheless, the country recorded net FPI outflows of US$ 142.9 million in FY08, after registering an average net FPI inflow of US$ 606.5 million in the last two years.

Monthly trends indicate that FPI witnessed net inflows during the initial months of FY08. It was only after November 2007 that the rising political unrest and sharp worsening of imbalances which led to net outflows from the stock market (**Figure 2**).

Figure 3: Market Value of SCRA Balance



Source: Statistics and Data Warehouse Department, SBP

This fall in FPI was further aggravated by the drop in the KSE-100 index after reaching the peak level in mid of April 2008: leading to a net FPI outflow of US$ 172.9 million during the last three months of FY08. The impact of net FPI withdrawal is more pronounced from the sharp decline in the market value of the equity investments during the same period which dropped to US$ 3.7 billion in Jun-08 in comparison to US$ 5.1 billion in Apr-08 (**Figure 3**).[8] A large part of this decrease in value was also caused by the sharp depreciation in the value of rupee against the US$ during the same period. Indeed, exchange rate stability is crucial in sustaining foreign inflows. This is because in case of the falling value of the domestic currency, foreign investors are generally unwilling to hold stocks as currency depreciation would erode the value of their investments.

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[5] For detail see "Volatility Spillover between the Stock Market and the Foreign Exchange Market in Pakistan" by Qayyum and Kemal 2006. This study suggests that "the returns of stock market are sensitive to the returns as well as the volatility of foreign exchange market".

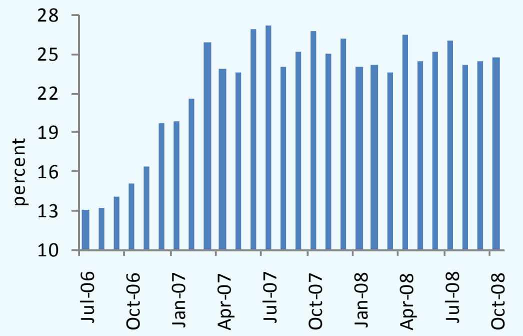
[6] This analysis is based on weekly foreign sales and purchases (in million Rs) in shares complied by the Statistic department of SBP. These numbers are converted into US dollar by using week-end exchange rate.

[7] As a result, Pakistan's sovereign credit rating has been downgraded by S&P's and Moody's.

[8] Though the market value of foreign investments declined sharply by end June-FY08, its share in the free-float of market capitalization is still robust at 25 percent (**Figure 4**).

Notwithstanding these net FPI outflows, the weekly volatility of foreign buying and selling activities in the stock market increased substantially throughout FY08, particularly since November 2007, probably due to the higher volatility in the KSE-100 Index (**Figure 5**). Especially, the co-efficient of variation of purchases and sales reached a peak in the period between January to April, coincided with the run-up to the peak level of the KSE-100.

Figure 4: Foreign holding as percent of Free-Foat Market Cap



Source: Statistics and Data Warehouse Department, SBP

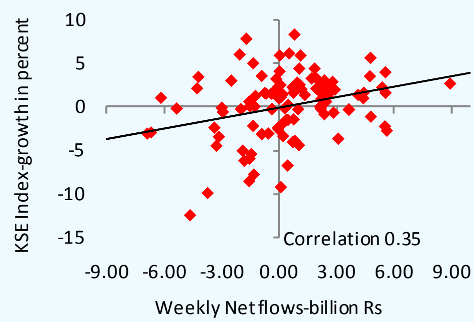
In the backdrop of these recent trends in FPI, a significant positive relation can be found between the KSE-100 index and the weekly net FPI in the equity market: with the Granger causality running from the former to the latter (**Figure 6 & Table 1a**). However, taking into account the impact of changes in regulatory measures regarding upper and lower limit on price movement of stocks in June FY08 is important in analyzing the relation between investor behavior and the KSE-100 index.[9] In this context, **Table 1b** reveals that prior to June FY08, there appears to be a bi-directional causality between FPI and changes in the KSE-100 index.[10] Therefore, it can be argued that there is some evidence in favor of a two-way relationship between FPI and stock market volumes over the estimation period.

Figure 5: Coefficient of Variation of Weekly FPI

Source: Statistics and Data Warehouse Department, SBP

Though the above exercise does not suggest the extent of FPI impact on the performance of the KSE-100 index, however, it does indicate that the movements in FPI can influence the performance of the stock market, and vice versa.

Figure 6: Relationship between KSE and Weekly Net Foreign Investment



Source: Statistics and Data Warehouse Department, SBP

On the basis of above established relation, it can be inferred that once the measure of price floor mechanism, taken in August 2008, is removed, the stock market can potentially witness massive investment outflows which, in turn, would impact the market capitalization base, given that the foreign investor still hold approximately 24.0 percent of the free-float market capitalization as of end-October, 2008.

[9] In view of continuous decline in the KSE-index, it was decided that the price of a stock could drop to 1 percent and could gain to 10 percent instead of 5 percent. Further, a ban was introduced on future short selling.
[10] The results must be interpreted with caution, as this analysis is based on two years weekly data i.e. Jul-06-Aug-08.

Table 1a:Granger Causality between KSE-100 & NFI
Sample: weekly data (Jul-06-Aug-08)
Lag 1

Null Hypothesis	Level of significance	Result
Net Foreign Investments does not Granger cause the Changes in KSE	0.408 (0.524)	Accept Null
Changes in KSE does not Granger cause the Net Foreign Investments	12.708 (0.000)	Reject Null

Table 1:b Granger Causality between KSE-100 & NFI
Sample: weekly data (Jul-06-May-08)
Lag 1

Null Hypothesis	Level of significance	Result
Net Foreign Investments does not Granger cause the Changes in KSE	4.091 (0.046)	Reject Null
Changes in KSE does not Granger cause the Net Foreign Investments	17.306 (0.000)	Reject Null