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IMPACT OF OIL PRICE SHOCKS ON STOCK MARKET LIQUIDITY

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ABSTRACT

Oil prices may create direct impact into the real economy, by increasing the cost of firms and by decreasing the amount of disposal income that consumers have to spend. This study examines the impact of oil prices on the stock market liquidity in Pakistan. The main objective of this study to find the short run and long run impact of oil prices on stock market liquidity. This study measures the stock market liquidity by three proxies; first Amihud 2002 liquidity measures, second average value of share traded and third are trading volume. The independent variables include the exchange rate, inflation, oil production growth, consumer price index, oil prices, market volatility and stock market index. The final sample size for this research is 140 listed non-financial companies. The sample period for this research is 19 years from 2000 to 2019 on monthly basis. Study reports the results of unit root test, bound test, long run coefficient of ARDL, short run coefficient of ARDL along with diagnostic tests. Results show that oil prices and inflation has significant positive and negative impact on stock market liquidity. Oil production growth, real economic activity, market volatility and market index has significant positive relationship on stock market liquidity. Exchange rate has significant negative impact on stock market liquidity. Finally, study has policy implication for investor, regulators and all other stakeholder.

Keywords: Stock Market Liquidity, Sectorial Analysis, Oil Prices, ARDL Approach

1. INTRODUCTION

Stock market is a basic part for every country. All types of stocks are traded here like stocks, shares, bonds and some financial instruments. Different financial assets are traded in stock market these are less risky because they allow the savers or investors that easily buy and rapidly sell the stocks when they want to move another investment. Which asset consists of low risk and easily available in the market that asset allocation improves in the market and that is important for economic growth. More savings and investments is the result of increase the long term economic growth (Arestis, Demetriades, & Luintel, 2014). The stock market of Pakistan is still not developed more its less role influence the real sector of the economy. The Karachi stock exchange is the one and the oldest stock exchange market (KSE). The second stock exchange market is Lahore (LSE) and then third is Islamabad (ISE) was established in 1974 & 1997. According to current estimate, at least 85% of the turnover occurs at KSE, 14% at LSE and 1% at ISE (Iqbal, 2012). Some securities are short term & some long term. The three types of stock markets exist are as follows: primary market, secondary market & equity market. Primary market is that where new securities are sale. Secondary market is that where securities already traded like stock exchange. Equity market is that where invest the money in the market or company. Stock liquidity is characterized as which budgetary instruments and securities effectively convertible in real money without losing its esteem (Akhtar, March 2018).A market which is completely fluid, that every single amount of a particular stock that quickly convert

into money in a zero expense. Financial specialists are apprehensive about liquidity chance since that impact their capacity to exchange and the quantity of offers they need to buy and sell the inside time allotment. Stock liquidity is an important for growth and efficiency. Some companies liquidity is increasing it means the repute of the company is improves in the market (Hassan, 2017)**.** "Liquidity is considered as the lifeblood of financial markets" Jammazi and Nguyen (2015). For the purpose of smooth operations of an economy, liquidity is very important and critical" (Hassan, 2017). There are several determinants of liquidity are as the first one is width, which refers to the bid-ask spread for a given number of shares, commission & fees to be paid per share. Secondly is depth in which shares are traded bid & ask prices (Wuyts & Leuven, 2007)**.** In this view, liquidity is a source of destabilization in markets. The reasoning is that liquid markets are focused mainly on the Sh011 term and investors do no longer consider fundamentals when making their investment decision. The resulting instability can affect other markets and this contagion might lead to instability in the financial system therefore whole (Wuyts & Leuven, 2007)**.**

Economy has been affected by the prices of Oil. Cost of product incurred by the firms has been also increased and income available to consumer for spending has been also reduced. Performance of stock markets therefor has been affected due to shocks in Oil Prices, ultimately changes in real economy itself. Therefore, it could be presumed that increase in oil pricing have negative influence into the activity level of economy and its stock markets Oil price consider the important factor in every economy. It's important factor for understanding the fluctuations in the stock market. There is no consent about interconnection between stock price & the price of oil among economist. For example when stock price increases then stock market moves to decline (KILIAN & PARK, 2009). Oil prices increases due to different aspects on the real price of oil, it's depends on the underlying cause of the price increase. Like increase the demand of oil unconsciously, prices high of crude oil in the market, an increase in aggregate the demand for all industrial commodities cause a somewhat delayed, but sustained. So a lot of issues exist which are the cause of increase the price of crude oil due to demand and supply shocks in the global markets. The identification of these shocks is important not just for explaining fluctuations in the real price of oil, but also for understanding the response of the Pakistan economy associated with oil price fluctuations. With the use of new developed measures of month based globalized real economic activity, structural based crude oil price decomposition has been proposed in three components: shocks of crude oil supply; shocks in the demand of industrial products and other shocks in demand that are specific to the crude oil markets at global level. There are three determinants which can impact on the crude oil. The first oil supply shocks to the current demand for crude oil driven by fluctuations in the global business cycle. Second is aggregate demand shocks driven by shifts in the precautionary demand for oil and the third is precautionary demand shocks Precautionary demand arises from the uncertainty about shortfalls of expected supply relative to expected demand. These three shocks, oil supply shocks have been studied extensively based on data on global crude oil production (Kilian, 2009).

The increase in the oil prices will be welcomed by oil exporting countries and disappointing in the oil importing countries, the inverse expectations reverse should there when there is decrease in the oil price. On the supply side effects shows that crude oil is the basic input unit to the production, therefore result increase in the prices of oil cause to rise in the production costs ultimately leads to low output. The result of an increase in oil prices on real GDP growth are found to differ from those of an oil price decrease, providing indicate against the linear approach that assumes that oil prices have equality effects on the real economy. (Jime´nez-Rodrı´guez & Sa´nchez, 2005)**.** Existing literature mainly focus stock market returns as a result of oil price variations. This study extend the literature on the relation between oil prices and stock market liquidity (Park and Ratti, 2008; ONeill et al., 2008).It extend the existing debate on the relationship between oil prices chocks in develop world in emerging equity market. Bekaert et al. (2007) Argued that improve Liquidity conditions can have a significant impact on financial development and economic growth in emerging countries. The relationship between market liquidity and oil price was first tested, to the best of

our knowledge by Sklavos, Dam, and Scholtens (2013).

It contributes by examining the impact of oil price shocks on the sectorial level in equity market. So it has been found of that the oil price shocks contributes less changes in returns of real stock in U.S and is greater than that of the interest rate in all models.

However, the scope of these researches in Pakistanis limited because they adopted a traditional approach, treating oil price shocks as exogenous shocks which is criticized by Lutz Kilian (2009) as mentioned earlier in detail. Following that, the mainstream literature on the subject has backed up the viewpoint of Lutz Kilian (2009), There is a risk of reverse causality between oil shocks and macroeconomic indicators such as stock prices. This study therefore follows Lutz Kilian decomposed model of oil price shocks (Hassan, 2017).

2. Literature Review & Hypothesis development:

Some studies focus on stock returns, while other studies consider the relationship between oil prices and stock return or firm level return (Narayan, 2018). There are numerous studies in the literature that examine the impact of oil price variations on stock markets in various sophisticated economies, such as the United States, the United Kingdom, and European countries.(Al-hajj, Mulali, & Solarin, 2017). Oil specific demand shocks refer to an increase in precautionary demand due to concerns about future oil shortfalls (Narayan, 2018). Raza et al. (2016) inspected the influence of oil on some developing countries' stock markets. They discovered that the price of oil has a detrimental long-term and short-term impact on all emerging countries, because emerging markets are more affected by unfavorable news and events, which harm their economic conditions. Oil shocks, in general, have been determined to be unfavorable for the stock markets of rising countries. (Al-hajj, Mulali, & Solarin, 2017)**.**

Liquidity can be defined an important feature of energy market. Energy is a critical component of the economic infrastructure and is becoming increasingly scarce. (Hamilton, 2008; IEA, 2010). Market liquidity has received relatively strong attention during the last two decades (Amihud's et al., 2005).

Generally, the more of these studies have been found a negative relationship (see eg. Kling, 1985; Chen, 2009; Filis, 2010; Basher et al., 2012).Some studies have found oil supply shocks have a positive effect on stock returns (Basher et al., 2012; Abhyankar et al., 2013).Additionally, some studies find the impacts of oil prices on the stock market are time varying (Huanga, An, Huange, & Wanga, 2017)**.** There are several reasons for mixed results**.** If oil prices rise or fall, the projected present value of future cash flows may fall below the threshold, allowing the company to pay a bigger dividend. If the estimated present value of oil falls below the threshold, the company will choose not to pay dividends, resulting in a drop in stock prices, whereas if the price of oil lowers, the company will pay a bigger dividend, resulting in a rise in stock prices**.**

We include industrial production as a proxy variable for cash flow because it can assess the real production output of manufacturing, mining, and utilities, which is a solid predictor of real economy situation. (Jones &Kaul, 1996). Only a few studies have looked at the consequences of oil shocks on the stock market and economic activity, mostly in the United States, the United Kingdom, Japan, and Canada.(ŽLee, 1992; Jones and Kaul, 1996; Huang et al., 1996; Sadorsky, 1999).

We found that economic activity is significantly positive relationship with oil price (Trung & Vinh, The impact of oil price,real effective excahnge rate and inflation on ecnomic activity:Novel evidence for Vietnam, 2011). The relationship between oil price changes and economic activity has been the subject of numerous empirical research. Oil price shocks are demonstrated to have a major impact on output from an empirical standpoint Hamilton (1983) the most comprehensive study in the field discovers a negative association between oil prices and macroeconomic activity in the United States. **(**Trung & Vinh, The impact of oil price,real effective excahnge rate and inflation on ecnomic activity:Novel evidence for Vietnam, 2011**)**. Increase in oil prices may slow down the economic growth and create stock exchange dreads and may cause to inflation, which at the end lead to monetary and financial instability. This exchange rate is used to determine the worth of a country's currency in relation to the other main currencies in the index, and is thus inflation-adjusted. At the consumer level, this is also the price that an

individual consumer will pay for an imported commodity. Any customs and transaction charges involved with importing the good will be included in this value.Real Effective Exchange Rate (REER) can provide a clear profile of import costs encountered by domestic enterprises and customers with a fixed nominal exchange rate over the majority of our sample period. (Zhenga & Sub, 2017).

Oil prices and REER has impact on economic activity. Economic activity effect Vietnam by currency than oil prices (Ahmed & Nazir, 2016). Stock prices and exchange rates have been found to have a considerable positive association in some research (for instance Smith (1992), Solnik (1987), and Aggarwal (1981)) Others, on the other hand, have claimed that the two have a major negative association (e.g., Soenen and Hennigar (1998). On the other hand, several researchers have discovered a very weak or non-existent relationship between stock prices and currency rates (for instance, Franck & Young (1972), Bartov & Gordon Bodnor (1994). The link between the exchange rate and stock market liquidity reflects capital movements in the short term. When the exchange rate lowers and the national currency appreciates, foreign capital flows into the domestic market to profit from the appreciation, and a substantial entry of foreign capital into the stock market improves stock market liquidity. Meanwhile, increased stock market liquidity may contribute to a rise in stock market value. As a result, a growth in stock market value draws foreign investment and causes foreign investors to sell foreign currency and acquire local currency, causing the home currency to appreciate. Therefore, there should be a negative correlation between the exchange rate and stock market liquidity. Exchange rate variations affect a company's cash flow and stock prices in the long run by affecting international competitiveness, the balance of payments, and real output, as well as affecting stock market liquidity. For example, a depreciation of the local currency would reduce the cost of exports, increase competitiveness in the international market, and improve the company's cash flow (Li, Lu, Ren, & Zhou, 2018).

It is projected that the inflation rate and stock prices will have a positive relationship under this framework (Omran & Pointonb, 2001). One of the most important macroeconomic indicators is inflation rates. The stock price will be influenced by a number of macroeconomic policies on the stock market. In a market economy, inflation is the first to suffer from rising commodity prices. Commodity price movements can cause many kinds of market resources to tilt or alter in some way. The outcomes of their resource allocation will have a substantial impact on each link in the market economy (Bai, 2014).In financial theory, the consumer price index (CPI) reflects an overall increasing increase in the price of goods and services. (Geetha, Mohidin, Chandran, & Chong, 2011). Inflation occurs when prices rise or when purchasing the same products costs more money. Inflation rates, according to researchers, will affect stock market volatility and risk. (Geetha, Mohidin, Chandran, & Chong, 2011). Most Asian emerging equities markets have seen sell-offs in recent weeks, as foreign funds relocate their money to more mature markets as the region's inflation becomes more of a concern. With the increase in the price of oil, funds will begin to flow out of this region, mostly due to the theme of inflation, which is far from over (Geetha, Mohidin, Chandran, & Chong, 2011).Expected inflation and unforeseen inflation are two types of inflation. The expected rate of inflation is a prediction made by economists and consumers from year to year. When people predict inflation, they are less likely to keep currency because it loses value over time. While the unanticipated inflation is above what economists and consumers expected, (Geetha, Mohidin, Chandran, & Chong, 2011).

The associations were categorized into three groups based on empirical evidence. For starters, stock market returns and inflation have a favorable association. They employed the ARDL co integration technique in conjunction with Granger Causality to assess the long- and short-run impacts, as well as the direction of these effects, between the variables in question (Geetha, Mohidin, Chandran, & Chong, 2011). The market liquidity increases as the inflation rate decreases (Omran & Pointonb, 2001). Sadorsky (1999) Oil prices, as well as oil price volatility, have a significant impact on real stock returns. A high frequency component of quick fluctuations in the currency market, which is usually produced by speculative traders' actions, and a low frequency component, which is usually related with the real business cycle, generates volatility (Kpughur, Yila, & Godfrey, 2017). The market is said to have high volatility when market

prices vary a lot in a short period of time. When prices are reasonably stable, the market is expected to have minimal volatility. Assets are often hundreds of millions of dollars, if not billions of dollars, in the energy markets. The capacity to earn a profit from those investments is contingent on the ability to create fuels or power and sell it at a reasonable price (Crude oil price volatility, 2012). Schwert (1989) there are at least two theories that anticipate a positive relationship between volatility and volume, according to the report. First, new information generates both price movements and trading if investors have diverse opinions. Second, if some investors utilize price fluctuations as information to make trading decisions, huge price fluctuations result in high trading activity. The link between oil prices and stock returns has been extensively studied (i.e., Jones and Kaul, 1996; Huang et al., 1996; Sadorsky, 1999; Ciner, 2001; Diesprong et al., 2008; Apergis and Miller, 2009; Kilian and Park, 2009; Elyasiani et al., 2011; Narayan and Sharma, 2011; Lee et al., 2012; Scholtens and Yurtsever, 2012, among others). Various oil price specifications, such as nominal oil price variations, have been used in previous empirical studies on oil price and stock returns (i.e., Driesprong et al., 2008; Jones and Kaul, 1996; Narayan and Sharma, 2011), real oil price variations (i.e., Lee et al., 2012; Park and Ratti, 2008; Sadorsky, 1999), net oil price increases (i.e., Park and Ratti, 2008; Scholtens and Yurtsever, 2012), oil price volatility (i.e., Park and Ratti, 2008; Scholtens and Yurtsever, 2012), oil future price increases (Ciner, 2001) and decomposition of oil price shocks into three components – oil supply shocks, global demand shocks and specific demand shock – (i.e., Apergis and Miller, 2009; Güntner, 2013; Kilian and Park, 2009).

Recently, Jammazi and Nguyen (2015). The researchers looked studied the association between oil prices and stock returns in a group of oil-dependent countries and found that stock markets react to oil shocks differently depending on the country covered. Park and Ratti (2008) studied the relationship between oil prices and stock returns in thirteen European nations and found that oil price shocks have a considerable and favorable impact on oil exporters (e.g. Norway), whereas the opposite occurs for oil importing countries. There is some evidence that oil prices have an uneven effect on stock returns. Ramos and Veiga (2013) the influence of oil price changes on stock prices is dependent on whether a country is a net oil importer or exporter, according to the study. Increases in oil prices, in particular, have a beneficial impact on stock markets in countries that export oil. Also, Demirer *et al*. (2015) higher oil prices result in higher stock returns in Gulf Arab stock markets, according to research. (Basher, Haug, & Sadorsky, 2018). The assumption that equities are inflation hedges because they represent claims on real assets underpins a positive association between stock returns and inflation (Geske and Roll, 1983). This study develops the following hypothesis on above literature theoretical background:

H1: Oil Price shocks positively impact on Stock Market.

H2: Oil Price shocks negatively impact on Stock Market.

H3: There is a significant positive relationship within oil production growth and stock market.

H4: There is a significant positive relationship between oil price and real economic activity.

H5: There is a significant positive relationship between exchange rate and stock market in long run.

H6: There is a significant negative relationship between exchange rate and stock market in long run.

H7: There is a significant positive relation inflation and stock market.

H8: There is a significant negative relation inflation and stock market**.**

H9: There is a significant positive relationship in market volatility and stock market

H10: There is a significant positive relationship within oil prices and stock market return.

3. Data Description and Research Methodology

3.1. Data Description

This research is consists of 570 Pakistani stock exchange listed companies for initial sample size. The final sample size for this research is 140 listed non-financial companies. The sample period for this research is 19 years from 2000 to 2019 on monthly basis. This study collects the data from Pakistani stock exchange and company's monthly reports. Therefore, excluded the financial sectors these companies have different capital structure, profits and loss. Additionally, the companies which data are not available these are also excluded. In

this study included the 14 non-financial sectors. In this research consider the sectors are as: Automobiles, Chemical, Cement, Engineering, Food, Fertilizer, Pharmaceuticals, Refinery, Technology, Transport, Textile, Textile Spinning, Textile weaving, and woolen.

3.3 Methodology

3.3.1 Model Specification

This research uses the following econometrically examine the impact of stock market liquidity on Oil prices, exchange rate, market return (KSE100 index), oil production growth, market volatility and Inflation (CPI).

$$SML - P1 = \alpha + \beta_1 OP_{t-i} + \beta_2 ER_{t-i} + \beta_3 Mkt\ Rtn_{t-i} + \beta_4 OPRD_{t-i} + \beta_5 VTl_{t-i} + \beta_6 INF_{t-i} + \varepsilon_{t-i} \dots\dots\dots\dots\dots (1)$$

$$SML - P2 = \alpha + \beta_1 OP_{t-i} + \beta_2 ER_{t-i} + \beta_3 Mkt\ Rtn_{t-i} + \beta_4 OPRD_{t-i} + \beta_5 VTl_{t-i} + \beta_6 INF_{t-i} + \varepsilon_{t-i} \dots\dots\dots\dots\dots (2)$$

$$SML - P3 = \alpha + \beta_1 OP_{t-i} + \beta_2 ER_{t-i} + \beta_3 Mkt\ Rtn_{t-i} + \beta_4 OPRD_{t-i} + \beta_5 VTl_{t-i} + \beta_6 INF_{t-i} + \varepsilon_{t-i} \dots\dots\dots\dots\dots (3)$$

Where:

SML = Stock Market Liquidity MKT RTN = Market Return ER = Exchange Rate
OP = Oil Prices INF = Inflation OPRD = Oil Production VTL = Volatility

Firstly, in this study stationary of variables is checked by Augmented Dickey Fuller (ADF) and Phillips Perron (PP) by unit root test. Results of the unit root test is mixed therefore, used the ARDL approach. Firstly, apply the ARDL approach. Secondly apply the Serial Correlation if issue in F-Value then changed the lags. Further apply the Heteroscedasticity exist the issue then further apply the HAC Standard Errors & Covariance.

Thirdly, check the Long run and Bound test in this check the relationship. If relationship exists then apply the short run test in fourth step. The long run and bound test among variables indicates the long run on the basis of F-Stats. The long run and short impact of oil production, exchange rate, market return (KSE 100), oil production, market volatility and inflation (CPI) on stock market liquidity.

$$SML = \alpha + \beta_1 OP_{t-i} + \beta_2 ER_{t-i} + \beta_3 KSE100_{t-i} + \beta_4 OPRD_{t-i} + \beta_5 VTL_{t-i} + \beta_6 CPI_{t-i} + \varepsilon_{t-i}$$

$$\Delta SML = \alpha + \Delta\beta_1 OP_{t-i} + \Delta\beta_2 ER_{t-i} + \Delta\beta_3 KSE100_{t-i} + \Delta\beta_4 OPRD_{t-i} + \Delta\beta_5 CPI_{t-i} + VTL_{t-i} + CPI_{t-i} + \varepsilon_{t-i}$$

In the last step of ARDL, this research diagnostic test including CUSUM Test.

4. Results and Discussion

Table 4.1 (a)

Unit Root Test

Sectors	Variables	Level	1st Diff	Level	1st Diff
Automobiles	Ato P1	-2.62*	-14.77***	-3.40***	-19.09***
	Ato P2	-5.35***	-10.06***	-5.35***	-5.35***
	Ato P3	-1.94**	-12.12***	-4.12***	-47.94***
Chemical	Chm P1	-4.81*	-12.01***	-5.95***	-31.65***
	Chm P2	-4.40*	-19.17***	-4.41***	-23.98***
	Chm P3	-15.04***	-11.49***	-15.04***	-227.59***
Cement	Cmn P1	-5.95***	-10.14***	-5.74***	-31.30***
	Cmn P2	-4.60***	-15.7***	-4.60***	-17.95***

	Cmn P3	-5.09***	-24.6***	-8.63***	-30.09***
Engineering	Eng P1	-8.40***	-9.80***	-8.64***	-51.03***
	Eng P2	-3.95***	-9.73***	-6.58***	-46.20***
	Eng P3	-11.35***	-10.91***	-11.29***	-86.15***
Food	Fod P1	-5.26***	-10.82***	-5.32***	-39.02***
	Fod P2	-4.07***	-7.92***	-3.91***	-21.00***
	Fod P3	-3.68***	-10.57***	-8.17***	-67.71***
Fertilizer	Frt P1	-4.96***	-10.01***	-6.86***	-47.75***
	Frt P2	-8.13***	-10.71***	-49.55***	-49.55***
	Frt P3	-5.02***	-8.28***	-12.81***	-96.06***
Pharmaceuticals	Prm P1	-2.90***	-12.59***	-6.26***	-56.31***
	Prm P2	-6.17***	-12.49***	-6.24***	-49.82***
	Prm P3	-2.16**	-11.61***	-13.65***	-99.61***
Refinery	Ref P1	-3.13***	-8.64***	-7.16***	-40.22***
	Ref P2	-4.16***	-14.59***	-5.92***	-22.01***
	Ref P3	-6.41***	-23.47***	-10.53***	-52.37***
Technology	Tecn P1	-8.01***	-14.79***	-7.95***	-38.03***
	Tecn P2	-6.20***	-13.74***	-6.04***	-21.46***
	Tecn P3	-10.49***	-9.55***	-10.65***	-81.10***

Table 4.1 (a)
Unit Root Test

Sectors	Variables	Level	1st Diff	Level	1st Diff
Transport	Trs P1	-6.82***	-14.18***	-6.89***	-29.57***
	Trs P2	-5.80***	-10.38***	-5.70***	-22.17***
	Trs P3	-5.69***	-19.14***	-9.39***	-31.27***
Textile	Txt P1	-5.86***	-10.22***	-5.83***	-26.40***
	Txt P2	-6.09***	-11.47***	-5.72***	-31.15***
	Txt P3	-3.22***	-4.67***	-12.08***	-44.07***
Textile Spinning	Txt Sp P1	-3.60***	-15.92***	-11.09***	-45.53***
	Txt Sp P2	-3.11***	-12.94***	-9.37***	-44.19***
	Txt Sp P3	-3.84***	-17.92***	-7.34***	-28.17***
Textile Weaving	Txt Wev P1	-8.04***	-12.43***	-8.16***	-36.19***
	Txt Wev P2	-7.82***	-11.98***	-7.68***	-51.45***
	Txt Wev P3	-3.21***	-17.32***	-12.97***	-69.16***

Woolen	Wol P1	-11.31***	-11.57***	-11.45***	-71.57***
	Wol P2	-11.62***	-13.83***	-12.16***	-75.51***
	Wol P3	-5.81***	-16.96***	-10.59***	-55.69***
Oil Prices	Op	-2.24*	-10.35***	-2.06**	-10.30***
Exchange Rate	Ex Rate	2.51**	-4.98***	2.09*	-9.85***
Market return	Kse 100	-2.23*	-14.33***	-2.36*	-14.33***
Oil Production	Oprd	2.21**	-15.07***	2.26**	-15.07***
Volatility	Vtl	-8.87***	-10.402***	-8.82***	-61.50***
Inflation	Cpi	0.0397***	-1.7311***	2.11*	-6.14***

Note: * shows significance at level 1%, ** shows significance at 5% and *** shows significance at 10%

4.2 Bound Test

Table 4.3

Bound Test

Sectors	SML-P1	SML-P2	SML-P3
Automobiles	3.688	4.379	5.84
Textile	10.95	11.39	11.39
Technology	10.22	6.76	6.43
Pharmaceutical	4.84	4.23	7.65
Refinery	4.19	4.37	6.21
Textile Spinning	5.13	2.31	3.23
Engineering	8.59	8.99	13.2
Chemical	3.53	5.65	3.37
Cement	6.48	6.05	27.69
Woolen	12.63	13.31	4.09
Transport	7.65	6.05	5.28
Textile Weaving	13.79	9.85	7.31
Fertilizer	15.25	14.92	10.78
Food	9.53	8.92	3.7
	I(0)	**I(1)**	
AT 1%	2.88	3.99	
AT 5%	2.27	3.28	
AT 10%	1.99	2.94	

Table 4.3

Long run coefficient of ARDL model in automobile sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – SML-P1				
Ato P1	-0.2020	0.0491	-4.1124	0.0001
In_ Op	-0.2020	0.1614	-1.2700	0.2055
In_ Er	-0.7185	0.7947	-0.9040	0.3670

In_ Kse 100	0.4376	0.1716	2.5498	0.0115
In_ Oprd	1.0773	0.4977	2.1645	0.0316
In_ Vtl	-19.5674	8.7829	-2.2279	0.0270
In_ Cpi	0.4619	0.5478	0.8432	0.4001
Stock Market Liquidity – SML-2				
Ato P2	-0.2821	0.0544	-5.1893	0.0000
In_ Op	-0.2804	0.1562	-1.7945	0.0741
In_ Er	-0.8446	0.8398	-1.0058	0.3157
In_ Kse 100	0.2839	0.1384	2.0510	0.0415
In_ Oprd	0.4269	0.4817	1.0195	0.3091
In_ Vtl	-14.8401	9.2524	-1.6039	0.1102
In_ Cpi	0.2201	0.5975	0.3683	0.7130
Stock Market Liquidity – SML P3				
Ato P3	-0.4218	0.0645	-6.5413	0.0000
In_ Op	0.0549	0.0419	1.3078	0.1924
In_ Er	-0.1183	0.2354	-0.5027	0.6157
In_ Kse 100	-0.1377	0.0377	-3.6552	0.0003
In_ Oprd	-0.5569	0.1646	-3.3843	0.0009
In_ Vtl	-2.2848	1.9158	-1.1926	0.2343
In_ Cpi	0.5180	0.1711	3.0281	0.0028

Table 4.3
Long run coefficient of ARDL model in textile sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity –Amihud P1				
TXT P1	-0.43410	0.04982	-8.71068	0.00000
In_ OP	0.01337	0.14361	0.09312	0.92590
In_ ER	-0.85265	0.80928	-1.05359	0.29330
In_ Kse 100	0.69843	0.13252	5.27015	0.00000
In_ OPRD	0.02301	0.47381	0.04856	0.96130
In_ VTL	-25.72270	9.52603	-2.70025	0.00750
In_ CPI	-0.94994	0.56371	-1.68514	0.09340
Stock Market Liquidity – Amihud P2				
TXT P2	-0.4430	0.0494	4.1748	0.0000
In_ OP	-0.1208	0.1275	-8.9693	0.3444
In_ ER	-0.1514	0.6864	-0.2205	0.8257
In_ Kse 100	0.3021	0.1037	2.9133	0.0040
In_ OPRD	-0.8480	0.3499	-2.4234	0.0162
In_ VTL	-22.9908	8.5909	-2.6762	0.0080
In_ CPI	-0.4133	0.5034	-0.8210	0.4126
Stock Market Liquidity – Amihud P3				
TXT P3 (-1)	-0.2222	0.0667	-3.3311	0.0010
In_ OP	-0.0002	0.0002	-0.9078	0.3650
In_ ER	0.0020	0.0012	1.6704	0.0963
In_ Kse 100	5.9100	0.0002	0.3533	0.7242
In_ OPRD	-0.0012	0.0006	-1.8212	0.0699
In_ VTL	0.0012	0.0109	-1.0774	0.2825
In_ CPI	-0.0005	0.0009	-0.5976	0.5507

Table 4.3
Long run coefficient of ARDL model in technology sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Tecn P1 (-1)	-0.4975	0.0585	-0.8500	0.0000
In_ Op	0.0218	0.1395	0.1560	0.8762
In_ Er	-0.8987	0.8136	-1.1046	0.2706
In_ Kse 100	-0.3600	0.1133	-3.1769	0.0017
In_ Oprd	0.0155	0.5030	0.0308	0.9754
In_ Vtl	0.7016	9.4228	0.0745	0.9407
In_ Cpi	1.0743	0.5588	1.9226	0.0559
Stock Market Liquidity – Amihud P2				
Tecn P2	-0.3722	0.0586	-6.3543	0.0000
In_ Op	-0.1433	0.1216	-1.1786	0.2399
In_ Er	-1.0579	0.7007	-1.5097	0.1326
In_ Kse 100	0.0659	0.0917	0.7193	0.4727
In_ Oprd	1.0997	0.4186	2.6273	0.0092
In_ Vtl	-12.3874	8.9853	-1.3786	0.1695
In_ Cpi	-0.2303	0.4851	-0.4748	0.6354
Stock Market Liquidity – Amihud P3				
Tecn P3	-0.7146	0.1012	-7.0620	0.0000
In_ Op	-2.7700	6.9900	-0.3958	0.6927
In_ Er	4.1700	3.9000	1.0696	0.2860
In_ Kse 100	-7.2100	5.7300	-1.2589	0.2094
In_ Oprd	-4.2100	2.0100	-2.0881	0.0380
In_ Vtl	-0.0002	0.0003	-0.7373	0.4617
In_ Cpi	7.9000	2.8700	0.2756	0.7832

Table 4.3
Long run coefficient of ARDL model in pharmaceutical sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
PRM P1	-0.3177	0.0566	-5.6100	0.0000
In_ OP	0.0923	0.1588	0.5813	0.5617
In_ ER	-1.5916	0.9212	-1.7277	0.0854
In_ Kse 100	-0.2291	0.1273	-1.8006	0.0731
In_ OPRD	0.6924	0.5022	1.3788	0.1694
In_ VTL	-2.0633	7.7200	-0.2673	0.7895
In_ CPI	1.6625	0.6814	2.4400	0.0155
Stock Market Liquidity – Amihud P2				
PRM P2	-0.3294	0.0614	-5.3667	0.0000
In_ OP	0.0351	0.1610	0.2179	0.8277
In_ ER	-2.2061	0.9627	-2.2915	0.0229
In_ Kse 100	0.0544	0.1296	0.4195	0.6753
In_ OPRD	1.0427	0.5324	1.9586	0.0514
In_ VTL	-1.1210	8.5204	-0.1316	0.8954
In_ CPI	1.4971	0.6788	2.2056	0.0285
Stock Market Liquidity – Amihud P2				
PRM P3	-0.9277	0.1212	-7.6513	0.0000
In_ OP	-2.1800	1.3700	-1.5883	0.1137

In_ ER	0.0002	7.5300	2.4421	0.0154
In_ Kse 100	-7.3100	1.0600	-0.6886	0.4918
In_ OPRD	-0.0001	3.8600	-3.0570	0.0025
In_ VTL	0.0009	0.0011	0.7643	0.4455
In_ CPI	-3.4400	5.8300	-0.6387	0.5237

Table 4.3
Long run coefficient of ARDL model in refinery sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Ref P1 (-1)	-3.3052	0.0616	-4.9515	0.0000
In_ Op	-0.6708	0.2461	-2.7253	0.0070
In_ Er	0.6872	1.4147	0.4857	0.6277
In_ Kse 100	0.5888	0.2070	2.8442	0.0049
In_ Oprd	-1.3472	0.8825	-1.5265	0.1284
In_ Vtl	2.2787	11.6578	0.1955	0.8452
In_ Cpi	0.2801	0.9612	0.2914	0.7711
Stock Market Liquidity – Amihud P2				
Ref P2 (-1)	-0.3086	0.0611	-5.0464	0.0000
In_ Op	-0.4034	0.2381	-1.6944	0.0917
In_ Er	0.5375	1.4200	0.3785	0.7054
In_ Kse 100	0.7290	0.2253	3.2361	0.0014
In_ Oprd	-1.2861	0.8790	-1.4631	0.1450
In_ Vtl	3.0866	11.8301	0.2609	0.7944
In_ Cpi	0.0051	0.9676	0.0052	0.9958
Stock Market Liquidity – Amihud P3				
Ref P3 (-1)	-0.3799	0.0816	-4.6552	0.0000
In_ Op	1.3400	6.8300	1.9635	0.0510
In_ Er	-4.5400	4.0000	-1.1348	0.2578
In_ Kse 100	-1.2600	5.6900	-2.2122	0.0281
In_ Oprd	1.5500	2.3100	0.6711	0.5029
In_ Vtl	0.0016	0.0005	2.9653	0.0034
In_ Cpi	3.4700	2.7100	1.2777	0.2030

Table 4.3
Long run coefficient of ARDL model in textile spinning sector*

Regressors	**Coefficient**	**Standard Error**	**T-Statistics**	**Prob.**
Stock Market Liquidity – Amihud P1				
Txt Sp P1 (-1)	-0.4012	0.0799	-5.0213	0.0000
In_ Op	-0.5346	0.1876	-2.8500	0.0048
In_ Er	-0.5346	1.0512	0.5148	0.6073
In_ Kse 100	0.2054	0.1282	1.6026	0.1106
In_ Oprd	-1.4448	0.4924	-2.9344	0.0037
In_ Vtl	-22.0216	9.6403	-2.2843	0.0234
In_ Cpi	0.2851	0.7471	0.3186	0.7032
Stock Market Liquidity – Amihud P2				
Txt Sp P2 (-1)	-0.2812	0.0716	-3.9286	0.0001
In_ Op	-0.0463	0.1438	-0.3223	0.7476

In_ Er	-0.2448	0.7972	-0.3071	0.7591
In_ Kse 100	0.1054	0.1151	0.9157	0.3609
In_ Oprd	0.0435	0.4049	0.1074	0.9145
In_ Vtl	-7.5526	7.4465	-1.0142	0.3116
In_ Cpi	0.1449	0.5814	0.2493	0.8034
Stock Market Liquidity – Amihud P3				
Txt Sp P3 (-1)	-0.3243	0.0652	-4.9668	0.0000
In_ Op	-0.0006	0.0003	-1.5450	0.1238
In_ Er	0.0045	0.0021	2.0848	0.0383
In_ Kse 100	5.6700	0.0002	0.1912	0.8485
In_ Oprd	-0.0032	0.0011	-2.7682	0.0061
In_ Vtl	-0.0035	0.0182	-0.1909	0.8487
In_ Cpi	-0.0007	0.0015	-0.4592	0.6465

Table 4.3
Long run coefficient of ARDL model in engineering sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Eng P1 (-1)	-0.437	0.054	-8.131	0.000
In_ Op	0.213	0.182	1.170	0.243
In_ Er	-0.265	0.984	-0.269	0.788
In_ Kse 100	-0.229	0.145	-1.581	0.115
In_ Oprd	0.413	0.497	0.832	0.406
In_ Vtl	23.802	12.194	-1.952	0.052
In_ Cpi	0.520	0.730	0.712	0.477
Stock Market Liquidity – Amihud P2				
Eng P2 (-1)	-0.4484	0.0538	-8.3220	0.0000
In_ Op	-0.0079	0.1634	-0.0486	0.9612
In_ Er	-0.6002	0.8934	0.6717	0.5025
In_ Kse 100	0.4056	0.1346	3.0133	0.0029
In_ Oprd	0.1355	0.4477	0.3027	0.7624
In_ Vtl	-15.4133	11.0097	-1.3999	0.1630
In_ Cpi	0.3723	0.6561	0.5674	0.5710
Stock Market Liquidity – Amihud P3				
Eng P3 (-1)	-0.8422	0.0820	-10.2708	0.0000
In_ Op	-4.3800	6.3000	-0.6955	0.4875
In_ Er	0.0004	0.0003	1.3490	0.1787
In_ Kse 100	-2.7000	4.9500	-0.5446	0.5865
In_ Oprd	-0.0004	0.0001	-2.2811	0.0235
In_ Vtl	-0.0015	0.0030	-0.4983	0.6188
In_ Cpi	-1.4000	0.0002	-0.0553	0.9559

Table 4.3
Long run coefficient of ARDL model in chemical sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
		Stock Market Liquidity – Amihud P1		
Chm P1	-0.2612	0.0604	-4.3236	0.0000
In_ Op	-0.1467	0.2446	-0.5996	0.5494
In_ Er	-0.0119	1.1955	-0.0099	0.9921
In_ Kse 100	-0.1010	0.1835	-0.5506	0.5825
In_ Oprd	-1.3343	0.6148	-2.1702	0.0311
In_ Vtl	-13.9612	14.4838	-0.9639	0.3362
In_ Cpi	0.2988	0.8713	0.3429	0.7320
		Stock Market Liquidity – Amihud P2		
Chm P2	-0.3522	0.0595	-5.9152	0.0000
In_ Op	-0.0036	0.1840	-0.0198	0.9842
In_ Er	-1.1570	0.9667	-1.1968	0.2327
In_ Kse 100	-0.2436	0.1464	-1.6632	0.0977
In_ Oprd	-0.0533	0.4980	-0.1071	0.9148
In_ Vtl	-16.5852	11.6839	-1.4194	0.1572
In_ Cpi	0.3198	0.6737	0.4748	0.6354
		Stock Market Liquidity – Amihud P3		
Chm P3	-0.4002	0.0902	-4.4334	0.0000
In_ Op	-0.5230	0.3740	-1.3986	0.1634
In_ Er	1.8631	2.1174	0.8799	0.3799
In_ Kse 100	-0.3138	0.3180	-0.9870	0.3247
In_ Oprd	-4.1583	1.2200	-3.4082	0.0008
In_ Vtl	33.8577	17.5551	1.9286	0.0551
In_ Cpi	1.2681	1.5483	0.8191	0.4136

Table 4.3
Long run coefficient of ARDL model in cement sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
		Stock Market Liquidity – Amihud P1		
Cmn P1	-0.3495	0.0595	-5.8660	0.0000
In_ Op	-0.1631	0.1283	-1.2717	0.2049
In_ Er	0.4077	0.7205	0.5659	0.5720
In_ Kse 100	0.2163	0.1000	2.1611	0.0318
In_ Oprd	-0.0587	0.4280	-0.1372	0.8909
In_ Vtl	-10.2634	7.7860	-1.3181	0.1889
In_ Cpi	-0.6334	0.4998	-1.2673	0.2064
		Stock Market Liquidity – Amihud P2		
Cmn P2	-0.2932	0.0466	-6.2862	0.0000
In_ Op	-0.0601	0.1249	-0.4814	0.6307
In_ Er	-0.3142	0.7056	-0.4453	0.6565
In_ Kse 100	0.5070	0.1219	4.1582	0.0000
In_ Oprd	0.4932	0.4215	1.1701	0.2432
In_ Vtl	-8.1793	7.7034	-1.0617	0.2895
In_ Cpi	-1.0122	0.5080	-1.9922	0.0476
		Stock Market Liquidity – Amihud P3		

Cmn P3	-0.9913	0.0667	-14.8502	0.0000
In_ Op	-0.0028	0.0029	-0.9682	0.3340
In_ Er	0.0254	0.0158	1.6035	0.1103
In_ Kse 100	0.0005	0.0022	0.2618	0.7937
In_ Oprd	-0.0151	0.0079	-1.8986	0.0589
In_ Vtl	-0.0237	0.1380	-0.1720	0.8636
In_ Cpi	-0.0063	0.0114	-0.5574	0.5778

Table 4.3
Long run coefficient of ARDL model in woolen sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Wol P1	-0.5953	0.0609	-9.7599	0.0000
In_ Op	-0.8704	0.2123	-4.0991	0.0001
In_ Er	-2.5172	1.1810	-2.1312	0.0342
In_ Kse 100	-0.2243	0.1586	-1.4141	0.1588
In_ Oprd	-1.6627	0.6881	-2.4162	0.0165
In_ Vtl	4.8515	17.2250	0.2816	0.7785
In_ Cpi	2.8652	0.8594	3.3338	0.0010
Stock Market Liquidity – Amihud P2				
Wol P2	-0.5984	0.0585	-10.2290	0.0000
In_ Op	-0.6240	0.2090	-2.9858	0.0031
In_ Er	-2.1240	1.1157	-1.9036	0.0582
In_ Kse 100	0.3694	0.1618	2.2827	0.0234
In_ Oprd	-1.7511	0.5689	-3.0781	0.0023
In_ Vtl	-12.1283	11.9223	-1.0172	0.3101
In_ Cpi	1.6600	0.8218	2.0198	0.0446
Stock Market Liquidity – Amihud P3				
Wol P3	-0.3648	0.0644	-5.6638	0.0000
In_ Op	-4.9200	5.2600	-0.9356	0.3505
In_ Er	0.0003	0.0002	1.2329	0.2189
In_ Kse 100	-6.7600	4.1500	-0.1628	0.8708
In_ Oprd	-0.0003	0.0001	-2.2542	0.0252
In_ Vtl	0.0002	0.0025	0.0955	0.9240
In_ Cpi	4.9200	0.0002	0.0232	0.9815

Table 4.3
Long run coefficient of ARDL model in transport sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Trs P1	-0.3247	0.0441	-7.3628	0.0000
In_ Op	-0.0617	0.1910	-0.3231	0.7469
In_ Er	0.8715	0.0105	0.8624	0.3894
In_ Kse 100	0.3290	0.1546	2.1281	0.0345
In_ Oprd	0.4952	0.5265	0.9406	0.3479
In_ Vtl	-34.9125	12.6434	-2.7613	0.0063
In_ Cpi	-1.0964	0.7422	-1.4773	0.1411
Stock Market Liquidity – Amihud P2				
Trs P2	-0.2631	0.0407	-6.4504	0.0000
In_ Op	-0.1519	0.2036	-0.7460	0.4564

In_ Er	0.6794	1.0765	0.6311	0.5286
In_ Kse 100	0.4867	0.1752	2.7776	0.0060
In_ Oprd	0.7259	0.5717	1.2697	0.2056
In_ Vtl	-32.0720	13.4299	-2.3881	0.0178
In_ Cpi	-1.4661	0.7980	-1.8371	0.0676
Stock Market Liquidity – Amihud P3				
Trs P3	-0.6128	0.0956	-6.4045	0.0000
In_ Op	-1.7500	2.9600	-0.5892	0.5563
In_ Er	1.7200	1.7300	0.9942	0.3212
In_ Kse 100	-3.4300	2.3600	-1.4517	0.1480
In_ Oprd	-1.3100	1.0600	-1.2438	0.2149
In_ Vtl	1.8000	0.0001	0.0124	0.9901
In_ Cpi	2.4600	1.1700	0.2100	0.8338

Table 4.3
Long run coefficient of ARDL model in textile weaving sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Txt Wev P1	-0.6368	0.0614	-10.3653	0.0000
In_ Op	0.0125	0.1520	0.0827	0.9341
In_ Er	0.2946	0.9492	0.3103	0.7566
In_ Kse 100	-0.0053	0.1159	-0.0461	0.9632
In_ Oprd	-0.0735	0.4069	-0.1807	0.8568
In_ Vtl	-43.2732	10.1095	-4.2804	0.0000
In_ Cpi	0.2573	0.6768	0.3802	0.7041
Stock Market Liquidity – Amihud P2				
Txt Wev P2	-0.4783	0.0552	-8.6525	0.0000
In_ Op	-0.0053	0.1467	-0.0364	0.9710
In_ Er	-0.4964	0.9426	-0.5266	0.5990
In_ Kse 100	0.1437	0.1182	1.2150	0.2257
In_ Oprd	0.8764	0.4061	2.1580	0.0320
In_ Vtl	-12.8966	7.6588	-1.6838	0.0937
In_ Cpi	-0.0480	0.6847	-0.0701	0.9441
Stock Market Liquidity – Amihud P3				
Txt Wev P3	-0.6416	0.0848	-7.5643	0.0000
In_ Op	-0.0005	0.0005	-0.9012	0.3684
In_ Er	0.0036	0.0031	1.1767	0.2406
In_ Kse 100	-9.8700	0.0004	-0.2185	0.8272
In_ Oprd	-0.0041	0.0016	-2.5731	0.0107
In_ Vtl	-0.0172	0.0277	-2.5731	0.5343
In_ Cpi	0.0004	0.0023	-0.6224	0.8688

Table 4.3
Long run coefficient of ARDL model in fertilizer sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
FER P1	-0.6296	0.0628	-10.0173	0.0000
In_ OP	0.3065	0.1514	2.0240	0.0442
In_ ER	-3.3157	0.8400	-3.9472	0.0001
In_ Kse 100	-0.9575	0.1459	-6.5601	0.0000

In_ OPRD	0.6287	0.4825	1.3030	0.1940
In_ VTL	-19.0372	10.2544	-1.8564	0.0648
In_ CPI	2.7268	0.5845	4.6651	0.0000
Stock Market Liquidity – Amihud P2				
FER P2	-0.6216	0.0623	-9.9768	0.0000
In_ OP	0.2873	0.1446	1.9866	0.0483
In_ ER	-3.3163	0.8149	-4.0691	0.0001
In_ Kse 100	-0.5541	0.1188	-4.6636	0.0000
In_ OPRD	0.3555	0.4536	0.7838	0.4340
In_ VTL	-17.8293	9.9484	-1.7921	0.0745
In_ CPI	2.3651	0.5590	4.2306	0.0000
Stock Market Liquidity – Amihud p3				
FER P3	-0.8743	0.0985	-8.8711	0.0000
In_ OP	-3.4700	2.2100	-0.1569	0.8754
In_ ER	-3.3200	1.4900	-2.2271	0.0270
In_ Kse 100	-7.5000	2.0300	-3.6907	0.0003
In_ OPRD	1.2300	6.4700	1.8997	0.0589
In_ VTL	-2.3400	0.0001	-0.1306	0.8962
In_ CPI	1.8700	1.0300	1.8095	0.0718

Table 4.3
Long run coefficient of ARDL model in food sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Fod P1	-0.4805	0.0554	-8.6607	0.0000
In_ Op	-0.4084	0.2008	-2.0333	0.0432
In_ Er	0.2320	1.0515	0.2206	0.8256
In_ Kse 100	0.4054	0.1588	2.5518	0.0114
In_ Oprd	0.5555	0.5230	1.0621	0.2894
In_ Vtl	-19.7146	12.0368	-1.6378	0.1039
In_ Cpi	0.0045	0.7640	0.0059	0.9953
Stock Market Liquidity – Amihud P2				
Fod P2	-0.4559	0.0547	-8.3327	0.0000
In_ Op	-0.2005	0.1723	-1.1636	0.2459
In_ Er	-1.2906	0.9153	-1.4101	0.1600
In_ Kse 100	0.2461	0.1359	1.8112	0.0715
In_ Oprd	1.1182	0.4756	2.3512	0.0196
In_ Vtl	-34.8222	11.8078	-2.9490	0.0035
In_ Cpi	1.3458	0.6772	1.9872	0.0482
Stock Market Liquidity – Amihud P3				
Fod P3	-0.4098	0.0771	-5.3151	0.0000
In_ Op	-8.8600	6.8100	-1.3017	0.1944
In_ Er	0.0008	0.0003	2.1604	0.0318
In_ Kse 100	-5.9600	5.2400	-0.1138	0.9095
In_ Oprd	-0.0006	0.0002	-3.1029	0.0022
In_ Vtl	-0.0001	0.0031	-0.0445	0.9645
In_ Cpi	-8.0700	0.0002	-0.3034	0.7618

4.4 Short Run (Error Correction) Coefficient of ARDL

Short run defines the difference and speed of adjustment from disequilibrium to equilibrium. The short run model consists of two parts. First part is depends on coefficient of short run dynamics and second part depends on the measure of error correction speed and adjustment whereby, short run dynamics to the long run equilibrium path in the model (Eco34).

In short run defines how much percent depend variable vary in your independent variables. In this how much speed short run again convert in long run. In this short run check the speed how much disequilibrium convert in equilibrium. In short run Coint Eq (-1) defines how much speedily its convert disequilibrium to equilibrium. In this R^2 defines the total variance in percentage. It explains the explanatory power of equilibrium by our regresses. F-stats value is significant less than 0.1 and 0.5. Its significant value is 2.32 and also included Durbin Watson (DW) its significant amount is round about 2.

Table 4.4

Short run coefficient of ARDL model in automobile sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_ Ato P1 (-1)	-0.2337	0.0622	-3.7588	0.0002
Δ In_ Ato P1 (-2)	-0.1162	0.0563	-2.0653	0.0401
Δ In_ Op	0.0044	0.4034	0.0110	0.9912
Δ In_ Op (-1)	0.9294	0.4132	2.2495	0.0255
Δ In_ Op (-2)	-0.8334	0.4116	-2.0250	0.0441
Δ In_ Kse 100	3.7132	0.5070	7.3239	0.0000
Δ In_ Kse 100 (-1)	2.0480	0.5187	3.9487	0.0001
Δ In_ Oprd	1.4832	1.2064	1.2294	0.2203
Δ In_ Oprd (-1)	-3.1920	1.1890	-2.6846	0.0078
Δ In_ Oprd (-2)	-2.4659	1.2400	-1.9886	0.0480
Δ In_ Vtl	-5.2328	6.5366	-0.8005	0.4243
Δ In_ Cpi	11.8885	10.4427	1.1384	0.2562
Δ In_ Cpi (-1)	16.5001	10.4427	1.5801	0.1156
Coint Eq (-1)	-0.2020	0.0366	-5.5221	0.0000
$R^2 = 0.43, \text{Adj } R^2 = 0.40$, F − Statastics = 3.69**, DW = 1.93				
Stock Market Liquidity – Amihud P2				
Δ In_ Ato P2 (-1)	-0.1446	0.0641	-2.2549	0.0251
Δ In_ Ato P2 (-2)	-0.1161	0.0599	-1.9394	0.0538
Δ In_ Kse 100	3.2006	0.5574	5.7419	0.0000
Δ In_ Kse 100 (-1)	1.7045	0.5477	3.1118	0.0021
Δ In_ Vtl	1.7515	6.9120	0.2534	0.8002
Coint Eq (-1)	-0.2821	0.0469	-6.0138	0.0000
$R^2 = 0.31, \text{Adj } R^2 = 0.29$, F − Statastics = 4.38**=, DW = 1.98				
Stock Market Liquidity – Amihud P3				
Δ In_ Ato P3 (-1)	-0.1729	0.0640	-2.7001	0.0075
Δ In_ Er	3.0211	0.7757	3.8945	0.0001
Δ In_ Oprd	-0.4521	0.3243	-1.3943	0.1647
Δ In_ Oprd (-1)	0.7834	0.3391	2.3098	0.0219
Δ In_ Oprd (-2)	0.6298	0.3356	1.8765	0.0620
Δ In_ Oprd (-3)	-0.5441	0.3396	-1.6022	0.1106
Δ In_ Cpi	7.4086	3.3971	2.3596	0.0192
Δ In_ Cpi (-1)	-1.2707	3.0863	-0.4118	0.6810
Δ In_ Cpi (-2)	-7.4308	3.0677	-2.4223	0.0163

Coint Eq (-1)	-0.4218	0.0607	-6.9483	0.0000

$R^2 = 0.35, \text{Adj } R^2 = 0.32, F - \text{Statastics} = 5.84, DW = 1.9$

Table 4.4
Short run coefficient of textile model in automobile sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
	Stock Market Liquidity – Amihud P1			
Δ In_ Kse 100	4.6693	0.5179	9.0151	0.0000
Δ In_ Kse 100 (-1)	1.7578	0.5645	3.2157	0.0015
Δ In_ Oprd	-1.5490	1.2369	-1.2523	0.2118
Δ In_ Oprd (-1)	1.6371	1.2352	1.3254	0.1865
Δ In_ Oprd (-2)	3.5565	1.2478	2.8502	0.0048
Δ In_ Vtl	3.8510	6.6815	0.5764	0.5650
Δ In_ Vtl (-1)	15.1189	7.0496	2.1447	0.0331
Δ In_ Cpi	22.2599	5.7446	3.8749	0.0001
Coint Eq (-1)	-0.4301	0.0456	-9.5134	0.0000
$R^2 = 0.43, \text{Adj } R^2 = 0.41, F - \text{Statastics} = 10.95, DW = 1.93$				
	Stock Market Liquidity – Amihud P2			
Δ In_ Kse 100	3.9438	0.4669	8.4468	0.0000
Δ In_ Kse 100 (-1)	1.2089	0.4965	2.4345	0.0157
Δ In_ Oprd	-1.6853	0.1082	-1.5208	0.1298
Δ In_ Oprd (-1)	2.4609	1.1053	2.2264	0.0270
Δ In_ Oprd (-2)	3.4368	1.1210	3.0658	0.0024
Δ In_ Vtl	3.0556	6.0391	0.5060	0.6134
Δ In_ Vtl (-1)	14.4505	6.4054	2.2560	0.0251
Coint Eq (-1)	-0.4430	0.0457	-9.0079	0.0000
$R^2 = 0.42, \text{Adj } R^2 = 0.40, F - \text{Statastics} = 11.39,$ DW = 1.87				
	Stock Market Liquidity – Amihud P3			
Δ In_ Txt P3 (-1)	-0.8162	0.0707	-11.5470	0.0000
Δ In_ Txt P3 (-2)	-0.3742	0.0603	-6.2082	0.0000
Δ In_ Kse 100	0.0012	0.0007	1.6240	0.1058
Coint Eq (-1)	-0.2222	0.0590	-3.7687	0.0002
$R^2 = 0.58, \text{Adj } R^2 = 0.457, F - \text{Statastics} = 2.72,$ DW = 2.05				

Table 4.4
Short run coefficient in technology sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
	Stock Market Liquidity – Amihud P1			
Δ In_ Txt P1 (-1)	0.1137	0.0607	1.8755	0.0622
Δ In_ Er	-6.9446	2.6864	-2.5851	0.0104
Δ In_ Kse 100	1.3345	0.4944	2.6995	0.0075
Δ In_ Kse 100 (-1)	0.9839	0.5005	1.9658	0.0506
Δ In_ Oprd	-0.8421	1.1320	-0.7439	0.4578
Δ In_ Oprd (-1)	4.0448	1.1430	3.5389	0.0005
Δ In_ Oprd (-2)	6.4709	1.1889	5.4427	0.0000
Δ In_ Oprd (-3)	-3.0922	1.2509	-2.4719	0.0142
Δ In_ Vtl	41.3283	6.1412	6.7297	0.0000
Δ In_ Vtl (-1)	21.2159	6.4853	3.2714	0.0013

Δ In_ Cpi	-19.3496	9.9496	-1.9448	0.0531
Δ In_ Cpi (-1)	19.8011	9.8772	2.0047	0.0463
Coint Eq (-1)	-0.4975	0.0541	-9.1966	0.0000
$R^2 = 0.53, Adj\ R^2 = 0.51, F - Statastics = 10.22$, DW = 2.04				
Stock Market Liquidity – Amihud P2				
Δ In_ Txt P2 (-1)	-0.4151	0.0595	-0.6980	0.4860
Δ In_ Tcn P2 (-2)	-0.1248	0.0583	-2.1410	0.0334
Δ In_ Er	-7.4110	2.2766	-3.2552	0.0013
Δ In_ Kse 100	2.0924	0.4418	4.7363	0.0000
Δ In_ Kse 100 (-1)	0.9012	0.4464	2.0188	0.0448
Δ In_ Oprd	-0.4187	1.0299	-0.4066	0.6847
Δ In_ Oprd (-1)	2.2201	1.0327	2.1499	0.0327
Δ In_ Oprd (-2)	4.2669	1.0510	4.0598	0.0001
Δ In_ Vtl	34.6130	5.7354	6.0350	0.0000
Δ In_ Vtl (-1)	27.0587	6.6154	4.0903	0.0001
Δ In_ Vtl (-2)	12.8127	5.7546	2.2265	0.0270
Coint Eq (-1)	-0.3722	0.0498	-7.4793	0.0000
$R^2 = 0.46, Adj\ R^2 = 0.43, F - Statastics = 6.77$, DW = 1.98				
Stock Market Liquidity – Amihud P3				
Δ In_ Txt P3 (-1)	-0.0138	0.0928	-0.1491	0.8816
Δ In_ Tcn P3 (-2)	0.0470	0.0816	0.5759	0.5653
Δ In_ Tcn P3 (-3)	0.1510	0.0658	2.2933	0.0228
Coint Eq (-1)	-0.7146	0.0981	-7.2877	0.0000
$R^2 = 0.38, Adj\ R^2 = 0.37, F - Statastics = 6,43$, DW = 2.00				

Table 4.4
Short run coefficient of textile model in pharmaceuticals sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_ Prm P1	-0.1547	0.0627	-2.4654	0.0145
Δ In_ Op	0.8078	0.4497	1.7963	0.0738
Δ In_ Cpi	32.0835	6.5994	4.8616	0.0000
Coint Eq (-1)	-0.3177	0.0502	-6.3262	0.0000
$R^2 = 0.25, Adj\ R^2 = 0.24, F - Statastics = 4.85$, DW = 2.02				
Stock Market Liquidity – Amihud P2				
Δ In_ Prm P2	-0.1773	0.0644	-2.7530	0.0064
Δ In_ Kse 100	0.8342	0.5688	1.4666	0.1440
Δ In_ Kse 100 (-1)	1.3182	0.5740	2.2964	0.0226
Δ In_ Kse 100 (-2)	0.1139	0.5717	0.1992	0.8423
Δ In_ Kse 100 (-3)	-1.1872	0.5702	-2.0821	0.0385
Δ In_ Cpi	37.1709	7.3808	5.0362	0.0000
Coint Eq (-1)	-0.3294	0.0557	-5.9128	0.0000
$R^2 = 0.28, Adj\ R^2 = 0.26, F - Statastics = 4.23$, DW = 1.99				
Stock Market Liquidity – Amihud P3				
Δ In_ Prm P3 (-1)	-0.0808	0.1053	-0.7675	0.4437

Δ In_ Prm P3 (-2)	-0.0246	0.0887	-0.2778	0.7814
Δ In_ Prm P3 (-3)	0.1051	0.0633	1.6602	0.0984
Δ In_ Op	2.2500	3.9300	0.5721	0.5679
Δ In_ Op (-1)	-8.9600	4.0000	-2.1703	0.0311
Δ In_ Op (-2)	6.1400	3.9300	1.5620	0.1198
Δ In_ Vtl	0.0012	0.0006	2.0006	0.0467
Δ In_ Vtl (-1)	0.0008	0.0007	1.2221	0.2230
Δ In_ Vtl (-2)	-2.1600	0.0006	-0.0033	0.9735
Δ In_ Vtl (-3)	-0.0015	0.0006	-2.4698	0.0143
Coint Eq (-1)	-0.9277	0.1167	-7.9527	0.0000
$R^2 = 0.57, \text{Adj } R^2 = 0.55, F - \text{Statastics} = 7.65$, DW = 1.99				

Table 4.4

Short run coefficient of textile model in pharmaceuticals sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
		Stock Market Liquidity – Amihud P1		
Δ In_ Ref P1 (-1)	-0.2480	0.0580	-4.2776	0.0000
Δ In_ Op	1.0064	0.6428	1.5656	0.1190
Δ In_ Op (-1)	1.7826	0.6529	2.7302	0.0069
Δ In_ Er	-0.3247	4.9133	-0.0661	0.9474
Δ In_ Er (-1)	6.2906	5.1067	1.2318	0.2194
Δ In_ Er (-2)	-16.009	4.9632	-3.2256	0.0015
Δ In_ Kse 100	1.9976	0.7765	2.5725	0.0108
Δ In_ Kse 100 (-1)	0.1254	0.7564	0.1659	0.8684
Δ In_ Kse 100 (-2)	-1.7245	0.7759	-2.2225	0.0273
Δ In_ Oprd	-2.4548	1.8436	-1.3315	0.1845
Δ In_ Oprd (-1)	6.8501	1.8444	3.7141	0.0003
Δ In_ Oprd (-2)	-5.4005	1.9344	-2.7918	0.0057
Δ In_ Oprd (-3)	6.7134	1.9798	3.3909	0.0008
Δ In_ Cpi	37.571	8.8487	4.2460	0.0000
Coint Eq (-1)	-0.3052	0.0518	-5.8935	0.0000
$R^2 = 0.52, \text{Adj } R^2 = 0.49, F - \text{Statastics} = 4.19$, DW = 1.95				
		Stock Market Liquidity – Amihud P2		
Δ In_ Ref P2 (-1)	-0.2426	0.0577	-4.2031	0.0000
Δ In_ Op	1.1322	0.6482	1.7467	0.0822
Δ In_ Op (-1)	1.8798	0.6517	2.8843	0.0043
Δ In_ Er	-2.8058	4.9221	-0.5700	0.5693
Δ In_ Er (-1)	7.4931	5.1376	1.4585	0.1462
Δ In_ Er (-2)	-17.3901	4.9925	-3.4833	0.0006
Δ In_ Kse 100	2.7382	0.7874	3.4773	0.0006
Δ In_ Kse 100 (-1)	1.1346	0.7704	1.4726	0.1424
Δ In_ Kse 100 (-2)	-1.2511	0.7858	-1.5922	0.1129
Δ In_ Oprd	-2.0821	1.8598	-1.1195	0.2642
Δ In_ Oprd (-1)	6.8458	1.8596	3.6813	0.0003
Δ In_ Oprd (-2)	-6.3383	1.9477	-3.2542	0.0013
Δ In_ Oprd (-3)	6.4366	2.0074	3.2064	0.0016
Δ In_ Cpi	41.7891	9.2160	4.5344	0.0000

Coint Eq (-1)	-0.3086	0.0513	-6.0137	0.0000
$R^2 = 0.53, \text{Adj } R^2 = 0.51, F - \text{Statastics} = 4.37$, DW = 1.97				
Stock Market Liquidity – Amihud P3				
Δ In_ Ref P3 (-1)	-0.3422	0.0657	-5.2111	0.0000
Δ In_ Ref P3 (-2)	-0.2471	0.0625	-3.9532	0.0001
Δ In_ Ref P3 (-3)	-0.1410	0.0506	-2.7854	0.0059
Δ In_ Op	1.1100	1.8400	0.0606	0.5453
Δ In_ Op (-1)	-3.0200	1.8500	-1.6343	0.1037
Δ In_ Op (-2)	-5.6700	1.8600	-3.0465	0.0026
Δ In_ Er	-0.0003	0.0001	-2.3000	0.0189
Δ In_ Kse 100	-0.0001	2.3800	-4.4415	0.0000
Δ In_ Kse 100 (-1)	-7.0300	2.3800	-2.9528	0.0035
Δ In_ Oprd	-0.0001	5.3800	1.9592	0.0515
Δ In_ Oprd (-1)	-0.0001	5.4700	-1.9010	0.0587
Δ In_ Oprd (-2)	6.8500	5.6600	1.2106	0.2274
Δ In_ Oprd (-3)	-0.0002	5.7400	-4.1797	0.0000
Δ In_ Vtl	0.0007	0.0003	2.0640	0.0403
Δ In_ Vtl (-1)	-0.0012	0.0003	-3.5394	0.0005
Δ In_ Vtl (-2)	-0.0018	0.0003	-5.5419	0.0000
Δ In_ Vtl (-3)	-0.0013	0.0003	-4.2013	0.0000
Δ In_ Cpi	-0.0011	0.0003	-3.8996	0.0001
Coint Eq (-1)	-0.3799	0.0530	-7.1735	0.0000
$R^2 = 0.60, \text{Adj } R^2 = 0.56, F - \text{Statastics} = 6.22$, DW = 1.67				

Table 4.4
Short run coefficient in textile spinning sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_ Txt Sp P1 (-1)	-0.2507	0.0720	-3.4803	0.0006
Δ In_ Txt Sp P1 (-2)	-0.2075	0.0704	-2.9496	0.0036
Δ In_ Txt Sp P1 (-3)	-0.1109	0.0655	-1.6930	0.0920
Δ In_ Op	-0.0009	0.4921	-0.0018	0.9986
Δ In_ Op (-1)	1.2110	0.4981	2.4312	0.0159
Δ In_ Er	5.0075	3.8104	1.3142	0.1903
Δ In_ Er (-1)	2.0540	3.9178	0.5243	0.6007
Δ In_ Er (-2)	-0.5716	4.0559	-0.1409	0.8881
Δ In_ Er (-3)	10.6705	4.0352	2.6444	0.0088
Δ In_ Kse 100	1.5215	0.6018	2.5281	0.0122
Δ In_ Oprd	2.3793	1.4454	1.6461	0.1013
Δ In_ Oprd (-1)	4.3498	1.4583	2.9827	0.0032
Δ In_ Oprd (-2)	4.1025	1.4996	2.7358	0.0068
Δ In_ Vtl	-5.1540	7.8498	-0.0657	0.5122
Coint Eq (-1)	-0.4012	0.0615	-6.5186	0.0000
$R^2 = 0.39, \text{Adj } R^2 = 0.35, F - \text{Statastics} = 5.13$, DW = 2.02				
Stock Market Liquidity – Amihud P2				
Δ In_ Txt Sp P2 (-1)	-0.2041	0.0740	-2.7576	0.0063

Δ In_ Txt Sp P2 (-2)	-0.1690	0.0699	-2.4182	0.0164
Δ In_ Txt Sp P2 (-3)	-0.1254	0.0648	-1.9355	0.0542
Δ In_ Kse 100	1.3852	0.5128	2.7015	0.0074
Coint Eq (-1)	-0.2812	0.0643	-4.3730	0.0000
$R^2 = 0.26, \text{Adj } R^2 = 0.25, F - \text{Statastics} = 2.31, \text{DW} = 2.06$				
Stock Market Liquidity – Amihud P3				
Δ In_ Txt Sp P2 (-1)	-0.1544	0.0689	-2.2426	0.0259
Δ In_ Txt Sp P2 (-2)	-0.2627	0.0625	-4.2016	0.0000
Δ In_ Op	0.0013	0.0011	1.1439	0.2539
Δ In_ Op (-1)	-0.0012	0.0012	-1.0653	0.2879
Δ In_ Op (-2)	0.0034	0.0011	2.9927	0.0031
Coint Eq (-1)	-0.3243	0.0628	-5.1671	0.0000
$R^2 = 0.311, \text{Adj } R^2 = 0.29, F - \text{Statastics} = 3,23, \text{DW} = 1.99$				

Table 4.4
Short run coefficient in engineering sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_ Kse 100	0.1918	0.6662	0.2878	0.7737
Δ In_ Kse 100 (-1)	2.1036	0.6658	3.1597	0.0018
Δ In_ Oprd	-1.1218	1.5811	-0.7095	0.4788
Δ In_ Oprd (-1)	3.1442	1.5816	1.9880	0.0481
Δ In_ Vtl	-5.0344	8.6015	-0.5853	0.5590
Δ In_ Vtl (-1)	24.1881	8.6768	2.7877	0.0058
Coint Eq (-1)	-0.4368	0.0519	-8.4239	0.0000
$R^2 = 0.28, \text{Adj } R^2 = 0.26, F - \text{Statastics} = 8.59, \text{DW} = 2.12$				
Stock Market Liquidity – Amihud P2				
Δ In_ Kse 100	1.1852	0.6053	1.9579	0.0515
Δ In_ Kse 100 (-1)	2.1736	0.6036	3.6013	0.0004
Δ In_ Oprd	-0.5291	1.4346	-0.3688	0.7126
Δ In_ Oprd (-1)	3.7148	1.4348	2.5890	0.0103
Δ In_ Vtl	3.1674	7.7989	0.4061	0.6850
Δ In_ Vtl (-1)	20.3746	7.8602	2.5921	0.0102
Coint Eq (-1)	-0.4485	0.0520	-8.6168	0.0000
$R^2 = 0.32, \text{Adj } R^2 = 0.30, F - \text{Statastics} = 8.99, \text{DW} = 2.07$				
Stock Market Liquidity – Amihud P3				
Δ In_ Eng P3 (-1)	0.1076	0.0655	1.6421	0.1020
Coint Eq (-1)	-0.8422	0.0807	10.4405	0.0000
$R^2 = 0.38, \text{Adj } R^2 = 0.38, F - \text{Statastics} = 13.21, \text{DW} = 2.00$				

Table 4.4
Short run coefficient in chemical sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_ Chm P1 (-1)	-0.2310	0.0651	-3.5479	0.0005
Δ In_ Chm P1 (-2)	-0.1193	0.0616	-1.9368	0.0541
Δ In_ Op	1.7450	0.6500	2.6845	0.0078

Δ In_ Oprd	-0.2667	1.9086	-0.1397	0.8890
Δ In_ Oprd (-1)	4.3106	1.9257	2.2385	0.0262
Δ In_ Oprd (-2)	5.3885	1.9700	2.7352	0.0068
Δ In_ Oprd (-3)	-5.0520	1.9971	-2.5297	0.0121
Δ In_ Vtl	14.9127	9.9810	1.4941	0.1366
Δ In_ Vtl (-1)	27.5081	9.9618	2.7614	0.0063
Coint Eq (-1)	-0.2612	0.0483	-5.4075	0.0000
$R^2 = 0.32, \text{Adj } R^2 = 0.29, F - \text{Statastics} = 3.53$, DW = 2.04				
Stock Market Liquidity – Amihud P2				
Δ In_ Chm P2 (-1)	-0.1949	0.0614	-3.1751	0.0017
Δ In_ Op	1.0728	0.5109	2.0995	0.0370
Δ In_ Kse100	1.5177	0.6486	2.3400	0.0202
Δ In_ Kse100 (-1)	1.5353	0.6388	2.4035	0.0171
Δ In_ Oprd	3.0139	1.4830	2.0323	0.0434
Δ In_ Oprd (-1)	0.5042	1.4906	0.3383	0.7355
Δ In_ Oprd (-2)	1.8220	1.5119	1.2051	0.2295
Δ In_ Oprd (-3)	-3.5895	1.5413	-2.3289	0.0208
Δ In_ Vtl	11.9056	8.1302	1.4644	0.1446
Δ In_ Vtl (-1)	27.0096	8.1500	3.3141	0.0011
Coint Eq (-1)	-0.3521	0.0515	-6.8352	0.0000
$R^2 = 0.34, \text{Adj } R^2 = 0.31, F - \text{Statastics} = 5.65$, DW = 2.07				
Stock Market Liquidity – Amihud P3				
Δ In_ Chm P3 (-1)	-0.3577	0.0802	-4.4587	0.0000
Δ In_ Chm P3 (-2)	-0.3032	0.0739	-4.1010	0.0001
Δ In_ Chm P3 (-3)	-0.2218	0.0624	-3.5532	0.0005
Δ In_ Er	17.8529	7.2808	2.5621	0.0150
Δ In_ Oprd	1.5393	3.1680	0.4859	0.6275
Coint Eq (-1)	-0.4002	0.0758	-5.2811	0.0000
$R^2 = 0.40, \text{Adj } R^2 = 0.38, F - \text{Statastics} = 3.37$, DW = 2.05				

Table 4.4
Short run coefficient in cement sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_ Cmn P1 (-1)	-0.0746	0.0606	-1.2322	0.2192
Δ In_ Cmn P1 (-2)	0.0231	0.0601	0.3852	0.7005
Δ In_ Cmn P1 (-3)	-0.1500	0.0587	-2.5549	0.0113
Δ In_ Kse 100	2.7103	0.4730	5.7303	0.0000
Δ In_ Kse 100 (-1)	1.1065	0.4511	2.5463	0.0150
Δ In_ Oprd	1.7808	1.1099	1.6044	0.1101
Δ In_ Oprd (-1)	1.6964	1.0915	1.5542	0.1216
Δ In_ Oprd (-2)	4.6025	1.1204	4.1080	0.0001
Δ In_ Vtl	5.0331	5.8052	0.8670	0.3869
Δ In_ Cpi	21.3538	5.5500	3.8475	0.0002
Coint Eq (-1)	-0.3495	0.0477	-7.3213	0.0000
$R^2 = 0.36, \text{Adj } R^2 = 0.33, F - \text{Statastics} = 6.48$, DW = 2.04				
Stock Market Liquidity – Amihud P2				

Δ In_ Kse 100	3.6802	0.4609	7.9845	0.0000
Δ In_ Kse 100 (-1)	1.4052	0.4493	3.1273	0.0020
Δ In_ Kse 100 (-2)	-0.5397	0.4502	-1.1987	0.2320
Δ In_ Oprd	3.1089	1.0879	2.8577	0.0047
Δ In_ Oprd (-1)	-0.7073	1.0704	-0.6608	0.5095
Δ In_ Oprd (-2)	2.1478	1.0938	1.9636	0.0509
Δ In_ Vtl	6.0164	5.7162	1.0525	0.2938
Δ In_ Cpi	27.3674	6.0139	4.5507	0.0000
Coint Eq (-1)	-0.2932	0.0415	-7.0714	0.0000
$R^2 = 0.36, \text{Adj } R^2 = 0.34, F - \text{Statastics} = 6.05$, DW = 2.07				
Stock Market Liquidity – Amihud P3				
Δ In_ Op	0.0128	0.0085	1.5037	0.1341
Δ In_ Op (-1)	-0.0105	0.0087	-1.2088	0.2281
Δ In_ Op (-2)	0.0214	0.0085	2.5292	0.0121
Coint Eq (-1)	-0.9914	0.0656	-15.1210	0.0000
$R^2 = 0.52, \text{Adj } R^2 = 0.52, F - \text{Statastics} = 27.69$, DW = 2.08				

Table 4.4
Short run coefficient in woolen sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_ Kse 100	3.3274	0.7489	4.4432	0.0000
Δ In_ Kse 100 (-1)	1.4534	0.7898	0.7898	0.0671
Δ In_ Kse 100 (-2)	0.6483	0.7775	0.7775	0.4054
Δ In_ Kse 100 (-3)	1.9184	0.7619	0.7619	0.0125
Δ In_ Vtl	2.2508	9.8621	9.8621	0.8197
Δ In_ Vtl (-1)	-8.8363	10.4686	10.4686	0.3996
Δ In_ Vtl (-2)	18.0168	10.2085	10.2085	0.0790
Δ In_ Vtl (-3)	15.3493	9.4911	9.4911	0.1073
Δ In_ Cpi	32.1747	7.6159	7.6160	0.0000
Coint Eq (-1)	-0.5953	0.0583	0.0583	0.0000
$R^2 = 0.40, \text{Adj } R^2 = 0.37, F - \text{Statastics} = 12.63$, DW = 1.99				
Stock Market Liquidity – Amihud P2				
Δ In_ Kse 100	4.4406	0.7448	5.9623	0.0000
Δ In_ Vtl	4.8874	9.0672	9.0672	0.5904
Coint Eq (-1)	-0.5984	0.0571	-10.4820	0.0000
$R^2 = 0.39, \text{Adj } R^2 = 0.39, F - \text{Statastics} = 13.31$, DW = 2.09				
Stock Market Liquidity – Amihud P3				
Δ In_ Wol P3 (-1)	-0.2739	0.0630	-4.3470	0.0000
Coint Eq (-1)	-0.3648	-5.8147	-5.8147	0.0000
$R^2 = 0.30, \text{Adj } R^2 = 0.30, F - \text{Statastics} = 4.09$, DW = 1.99				

Table 4.4
Short run coefficient in transport sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_ Kse 100	3.8093	0.6857	5.5551	0.0000

Δ In_ Oprd	-0.9970	1.6170	-0.6166	0.5382
Δ In_ Oprd (-1)	8.4657	1.6263	5.2054	0.0000
Δ In_ Oprd (-2)	-1.8996	1.6913	-1.1231	0.2626
Δ In_ Oprd (-3)	-4.5912	1.6538	-2.7761	0.0060
Δ In_ Vtl	37.4308	8.9377	4.1880	0.0000
Δ In_ Vtl (-1)	31.3560	8.8988	3.5236	0.0005
Coint Eq (-1)	-0.3248	0.0408	-7.9536	0.0000
$R^2 = 0.39, \text{Adj } R^2 = 0.37, F - \text{Statastics} = 13.799$, DW = 1.94				
Stock Market Liquidity – Amihud P2				
Δ In_ Kse 100	4.8605	0.7295	6.6625	0.0000
Δ In_ Oprd	-0.6020	1.7183	-0.3504	0.7264
Δ In_ Oprd (-1)	7.8804	1.7277	4.5613	0.0000
Δ In_ Oprd (-2)	-2.5106	1.7788	-1.4114	0.1596
Δ In_ Oprd (-3)	-4.5173	1.7533	-2.5765	0.0107
Δ In_ Vtl	38.7856	9.5030	4.0814	0.0001
Δ In_ Vtl (-1)	28.7583	9.3484	3.0763	0.0024
Coint Eq (-1)	-0.2631	0.0372	-7.0711	0.0000
$R^2 = 0.32, \text{Adj } R^2 = 0.30, F - \text{Statastics} = 9.88$, DW = O.88				
Stock Market Liquidity – Amihud P3				
Δ In_ Trs P3 (-1)	0.1500	0.0880	1.7040	0.8980
Δ In_ Trs P3 (-2)	-0.1685	0.0717	-2.3506	0.0197
Δ In_ Trs P3 (-3)	0.1014	0.0651	1.5590	0.1205
Δ In_ Oprd	2.4800	2.5500	0.9720	0.3322
Δ In_ Oprd (-1)	-7.2100	2.5700	-2.8036	0.0055
Δ In_ Cpi	0.0007	0.0002	2.9958	0.0031
Δ In_ Cpi (-1)	-0.0005	0.0002	-2.1572	0.0321
Coint Eq (-1)	-0.6129	0.0928	-6.6055	0.0000
$R^2 = 0.46, \text{Adj } R^2 = 0.46, F - \text{Statastics} =$ 7.31, DW = 1.98				

Table 4.4
Short run coefficient in textile weaving sector*

Repressors'	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity - Amihud P1				
Δ In_ ER	3.3639	3.3337	1.0091	0.3141
Δ In_ ER (-1)	-0.8883	3.5259	-0.2519	0.8013
Δ In_ ER (-2)	-8.8832	3.5586	-2.4963	0.0133
Δ In_ ER (-3)	7.2226	3.5068	2.0596	0.0407
Δ In_ OPRD	2.9098	1.2898	2.2559	0.0251
Δ In_ OPRD (-1)	2.1144	1.2975	1.6296	0.1047
Δ In_ VTL	-16.1898	6.6766	-2.4249	0.0161
Δ In_ VTL (-1)	12.5965	6.9985	1.7999	0.0733
Coint Eq (-1)	-0.6368	0.0596	-10.6781	0.0000
$R^2 = 0.42, \text{Adj } R^2 = 0.41, F - \text{Statastics} =$ 7.66, DW = 2.10				
Stock Market Liquidity – Amihud P2				
Δ In_ ER	0.9389	3.2426	0.2896	0.7724
Δ In_ ER (-1)	1.7708	3.4572	0.5122	0.6090

Δ In_ ER (-2)	-6.2751	3.4799	-1.8032	0.0728
Δ In_ ER (-3)	9.8566	3.3344	2.9560	0.0035
Δ In_ KSE 100	1.0113	0.4977	2.0318	0.0434
Δ In_ KSE 100 (-1)	1.3848	0.5000	2.7698	0.0061
Δ In_ KSE 100 (-2)	1.0201	0.5107	1.9974	0.0471
Δ In_ OPRD	3.1157	1.2466	2.4994	0.0132
Coint Eq (-1)	-0.4783	0.0529	-9.0377	0.0000
$R^2 = 0.42, \text{Adj } R^2 = 0.41, F - \text{Statastics} = 7.66$, DW = 2.10				
Stock Market Liquidity – Amihud P3				
Δ In_ TXT WEV P3 (-1)	-0.2445	0.0637	-3.8395	0.0002
Coint Eq (-1)	-0.6417	0.0826	-7.7685	0.0000
$R^2 = 0.42, \text{Adj } R^2 = 0.41, F - \text{Statastics} = 7.66$, DW = 2.10				

Table 4.4
Short run coefficient in fertilizer sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_ Frt P1 (-1)	0.1580	0.0576	2.7455	0.0066
Δ In_Kse 100	2.2324	0.5011	4.4553	0.0000
Δ In_Kse 100 (-1)	1.1688	0.5120	2.2828	0.0234
Δ In_Kse 100 (-2)	0.9416	0.5295	1.7782	0.0768
Δ In_Oprd	-3.4185	1.1961	-2.8579	0.0047
Δ In_Oprd (-1)	3.9616	1.2157	3.2587	0.0013
Δ In_Oprd (-2)	6.5474	1.2366	5.2946	0.0000
Δ In_Vtl	24.3335	6.5768	3.6999	0.0003
Δ In_Vtl (-1)	34.1424	7.2764	4.6922	0.0000
Δ In_Vtl (-2)	20.4099	6.8714	2.9703	0.0033
Δ In_Cpi	-22.4173	5.0686	-4.4228	0.0000
Coint Eq (-1)	-0.6297	0.0561	-11.2286	0.0000
$R^2 = 0.52, \text{Adj } R^2 = 0.49, F - \text{Statastics} = 15.25$, DW = 1.95				
Stock Market Liquidity – Amihud P2				
Δ In_ Frt P2 (-1)	0.1577	0.0573	2.7537	0.0064
Δ In_Kse 100	2.7864	0.4833	5.7647	0.0000
Δ In_Kse 100 (-1)	1.0944	0.5008	2.1851	0.0300
Δ In_Kse 100 (-2)	0.9566	0.5142	1.8605	0.0642
Δ In_Oprd	-3.3128	1.1622	-2.8506	0.0048
Δ In_Oprd (-1)	2.9670	1.1737	2.5279	0.0122
Δ In_Oprd (-2)	5.4759	1.1940	4.5863	0.0000
Δ In_Vtl	24.6072	6.3699	3.8630	0.0001
Δ In_Vtl (-1)	33.7107	7.0660	4.7709	0.0000
Δ In_Vtl (-2)	2.0977	6.6780	3.1412	0.0019
Δ In_Cpi	-14.9205	4.7433	-3.1456	0.0019
Coint Eq (-1)	-0.6216	0.0560	-11.1067	0.0000
$R^2 = 0.50, \text{Adj } R^2 = 0.48, F - \text{Statastics} = 14.92$, DW = 1.99				
Stock Market Liquidity – Amihud P3				

Δ In_ Frt P3 (-1)	-0.2683	0.0758	-3.5412	0.0005
Δ In_ Frt P3(-2)	-0.1285	0.0555	-2.3133	0.0217
Δ In_Er	-1.3200	4.8900	-0.2708	0.7868
Δ In_Er (-1)	3.9800	5.1600	0.7701	0.4421
Δ In_Er (-2)	7.0200	5.2300	1.3435	0.1806
Δ In_Er (-3)	0.0001	5.1400	2.1532	0.0325
Δ In_Kse 100	-1.0100	9.0100	-0.1119	0.9110
Δ In_Kse 100 (-1)	-2.2000	8.4800	-2.5907	0.0103
Δ In_Vtl	0.0002	0.0001	1.6782	0.0948
Δ In_Vtl (-1)	0.0002	0.0001	1.4869	0.1386
Δ In_Vtl (-2)	1.5000	0.0001	0.1366	0.8915
Δ In_Vtl (-3)	-0.0002	0.0001	-2.1699	0.0312
Coint Eq (-1)	-0.8743	0.0926	-9.4462	0.0000
$R^2 = 0.62, \text{Adj } R^2 = 0.60, F - \text{Statastics} = 10.78$, DW = 2.02				

Table 4.4
Short run coefficient in food sector*

Regressors	Coefficient	Standard Error	T-Statistics	Prob.
Stock Market Liquidity – Amihud P1				
Δ In_Op	-1.2427	0.5608	-2.2160	0.0277
Δ In_Kse 100	2.2206	0.7113	3.1218	0.0020
Δ In_Kse 100 (-1)	1.1801	0.6753	1.7474	0.0820
Δ In_Kse 100 (-2)	1.1482	0.6831	1.6808	0.0942
Δ In Vtl	-1.5239	8.8335	-0.1725	0.8632
Coint Eq (-1)	-0.4805	0.0541	-8.8756	0.0000
$R^2 = 0.29, \text{Adj } R^2 = 0.27, F - \text{Statastics} = 9.53$, DW = 2.09				
Stock Market Liquidity – Amihud P2				
Δ In_Kse 100	1.5510	0.6121	2.5337	0.0120
Δ In_Kse 100 (-1)	1.1492	0.6008	1.9127	0.0571
Δ In_Oprd	2.1921	1.4286	1.5344	0.1264
Δ In_Oprd (-1)	-2.4940	1.4375	-1.7350	0.0842
Δ In_Oprd (-2)	0.6406	1.4352	0.4463	0.6558
Δ In_Oprd (-3)	-3.4130	1458.0000	-2.3409	0.0202
Δ In_Vtl	-0.4018	7.9571	-0.0505	0.9598
Δ In_Vtl (-1)	25.4035	8.0872	3.1412	0.0019
Coint Eq (-1)	-0.4559	0.0532	-8.5759	0.0000
$R^2 = 0.31, \text{Adj } R^2 = 0.29, F - \text{Statastics} = 8.9$, DW = 1.89				
Stock Market Liquidity – Amihud P3				
Δ In_For P3 (-1)	-0.1790	0.0831	-2.1537	0.0324
Δ In_For P3 (-2)	-0.1877	0.0747	-2.5138	0.0127
Δ In_For P3 (-3)	0.1598	0.0651	2.4534	0.0149
Δ In_Op	0.0001	0.0002	0.6775	0.4988
Δ In_Op (-1)	-0.0002	0.0002	-1.0043	0.3164
Δ In_Op (-2)	0.0005	0.0002	2.5782	0.0106
Coint Eq (-1)	-0.4098	0.0741	-5.5295	0.0000
$R^2 = 0.38, \text{Adj } R^2 = 0.36, F - \text{Statastics} = 3.70$, DW = 1.97				

4.5 Diagnostic Test

The Breusch–Godfrey serial correlation LM test is a test for autocorrelation in the errors in a regression model. It makes use of the residuals from the model being considered in a regression analysis, and a test statistic is derived from these.

The null hypothesis is that there is no serial correlation of any order up to p.

Table 4.5
Diagnostic Test

Sectors	Variables	Serial Correlation	Heteroscedasticity
Automobiles	Ato P1	0.4174	0.000
	Ato P2	0.4960	0.0027
	Ato P3	0.6242	0.0062
Chemical	Chm P1	0.2779	0.3272
	Chm P2	0.1141	0.2979
	Chm P3	0.3132	0.0297
Cement	Cmn P1	0.6886	0.000
	Cmn P2	0.4154	0.000
	Cmn P3	0.2955	0.2747
Engineering	Eng P1	0.2346	0.0058
	Eng P2	0.5848	0.3256
	Eng P3	0.4210	0.5530
Food	Fod P1	0.4274	0.0456
	Fod P2	0.4714	0.2546
	Fod P3	0.1440	0.0000
Fertilizer	Frt P1	0.6305	0.0000
	Frt P2	0.9130	0.0000
	Frt P3	0.8247	0.0000
Pharmaceutical	Prm P1	0.5775	0.1835
	Prm P2	0.6467	0.0654
	Prm P3	0.9752	0.0752
Refinery	Ref P1	0.5132	0.0000
	Ref P2	0.6276	0.0000
	Ref P3	0.0233	0.0000

Table 4.6
Diagnostic Test

Sectors	Variables	Serial Correlation	Heteroscedasticity
Technology	Tecn P1	0.2499	0.0379
	Tecn P2	0.9276	0.6596
	Tecn P3	0.5596	0.1835
Transport	Trs P1	0.5123	0.0450
	Trs P2	0.3374	0.0634
	Trs P3	0.7990	0.8739
Textile	Txt P1	0.7784	0.0080
	Txt P2	0.2770	0.0218
	Txt P3	0.5374	0.0000
Textile Spinning	Txt Sp P1	0.6446	0.0254
	Txt Sp P2	0.0230	0.0062
	Txt Sp P3	0.9405	0.0000
Textile Weaving	Txt Wev P1	0.3046	0.0000
	Txt Wev P2	0.3123	0.0001

	Txt Wev P3	0.8708	0.5072
Woolen	Wol P1	0.9737	0.0002
	Wol P2	0.3039	0.7404
	Wol P3	0.8259	0.0000

In diagnostic test checks for the model are presented in Table 4.5 check the normality and P-value test that ensures the data is normal. The null hypothesis of serial correlation exists is there is no serial correlation exists in data. In this study apply the heteroscedasticity the issue exist in heteroscedasticity then apply the HAC standard errors and covariance. That HAC test resolves the hetero issue.

4.6 CUSUM Test for Coefficient Stability

There is uncertainty the sum of recursive residuals CUSUM test are applied to check the stability in the long and short run. CUSUM test defines that the model is smooth and stable over the time or not. Therefore, if the curve is exist within the value of 5% significance level then null hypothesis cannot be rejected (Coefficient in all ECM models variables). The table 4.7 shows the stability in within the critical bound in case of all sectors. So, now we conclude that econometric table is stable.

4.6 Plot of CUSUM statistics for recursive residuals –Automobile Sector

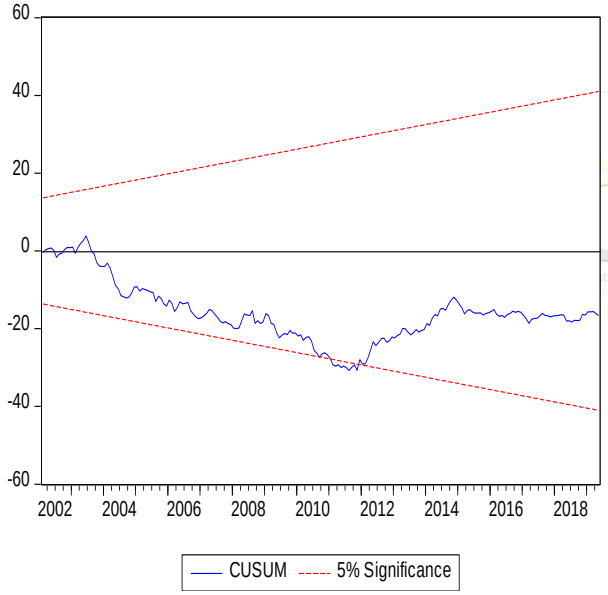

Figure 1: In automobile sector the first measure SML-P1graph shown the data is stable.

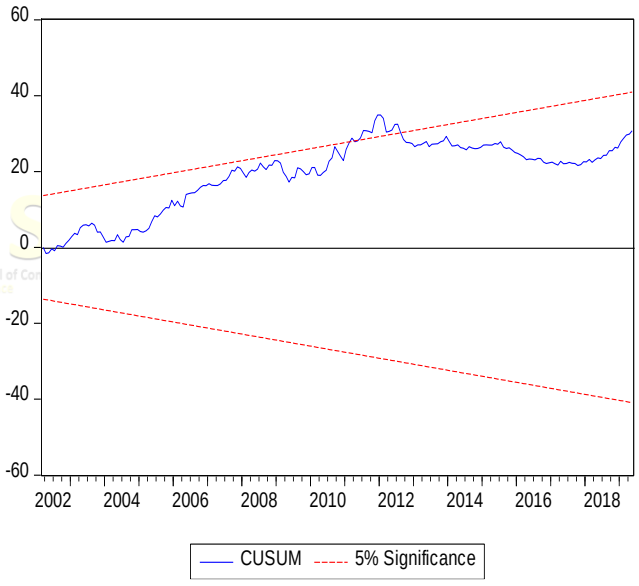

Figure 2: In automobile sector the second measure SML-P2graph shown the data is stable

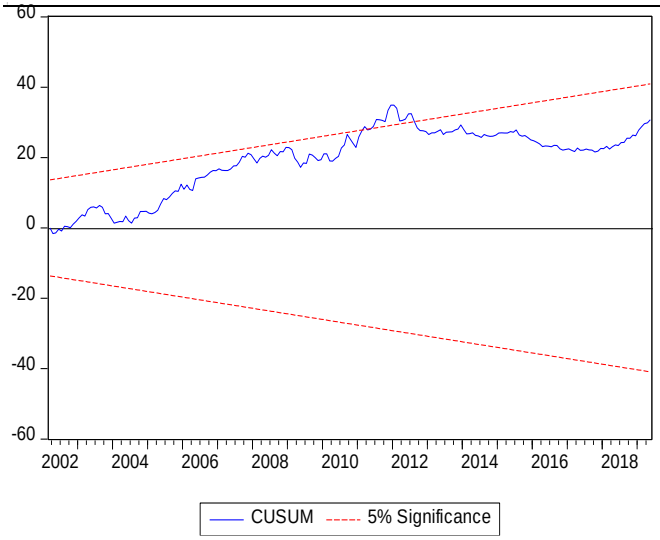

Figure 3: In automobile sector the third measure SML-P3graph shown the data is stable.

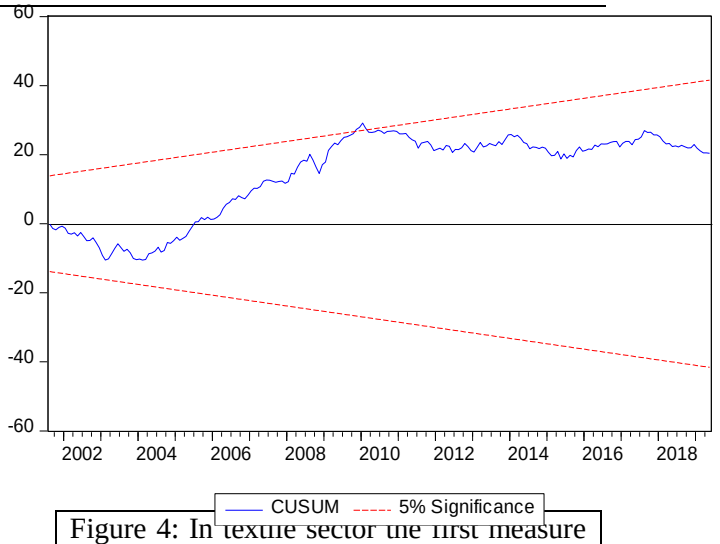

Figure 4: In textile sector the first measure SML-P1 graph shown the data is stable

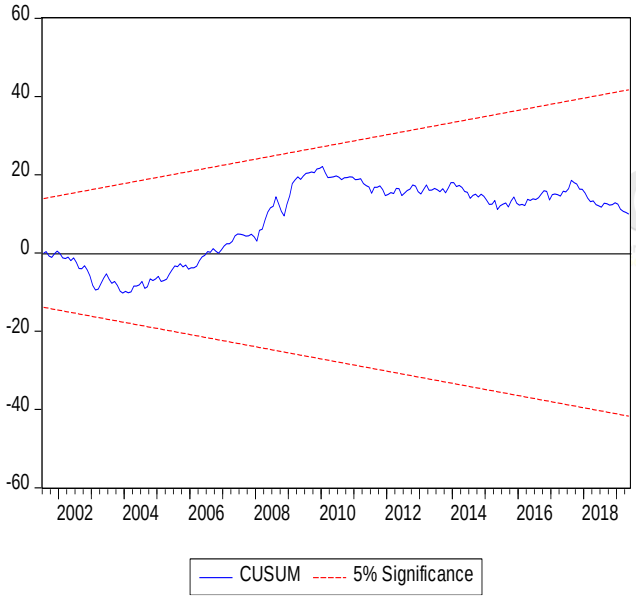

Figure 5: In textile sector the second measure SML-P2 graph shown the data is stable

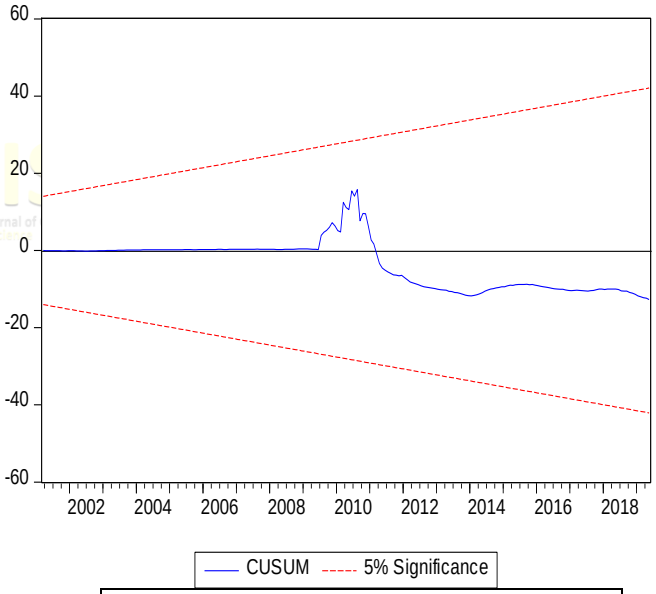

Figure 6: In textile sector the second measure SML-P3 graph shown the data is stable

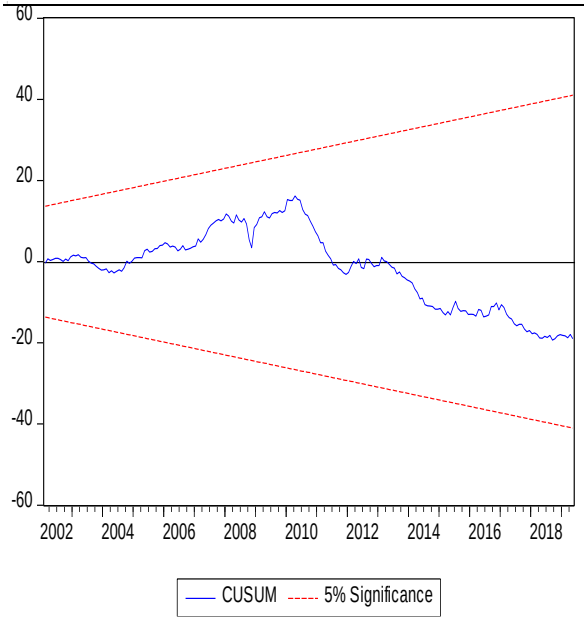

Figure 7: In technology sector the first measure SML-P1 graph shown the data is stable

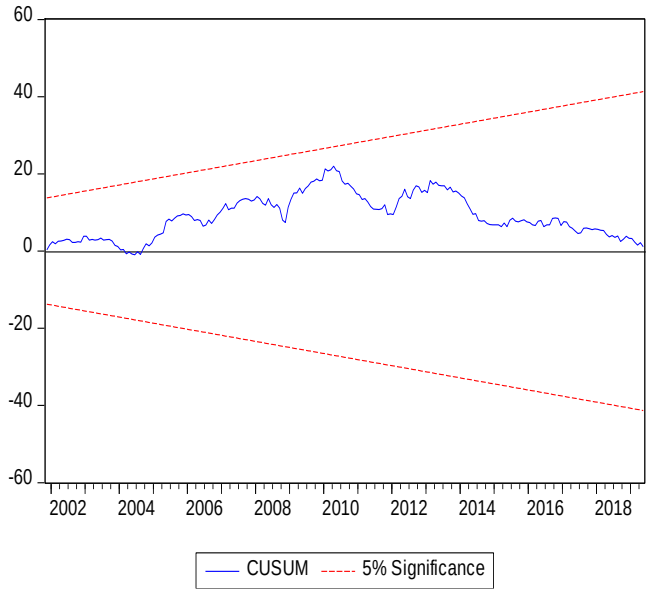

Figure 8: In technology sector the second measure SML-P2 graph shown the data is stable

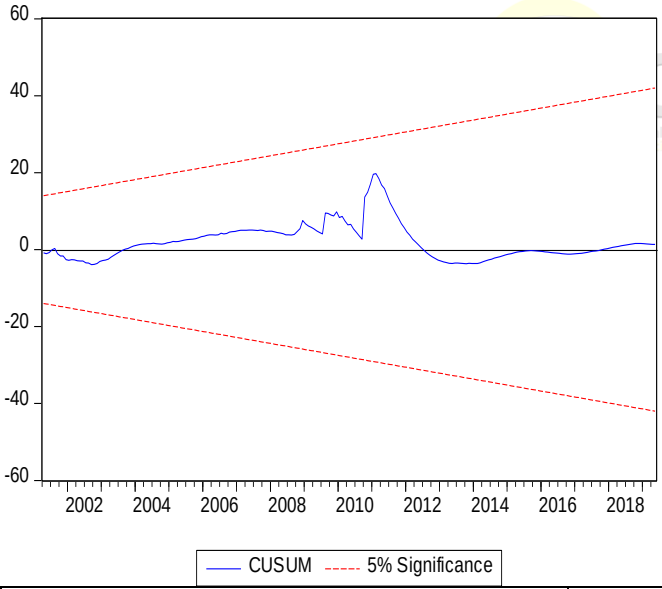

Figure 9: In technology sector the third measure SML-P3 graph shown the data is stable.

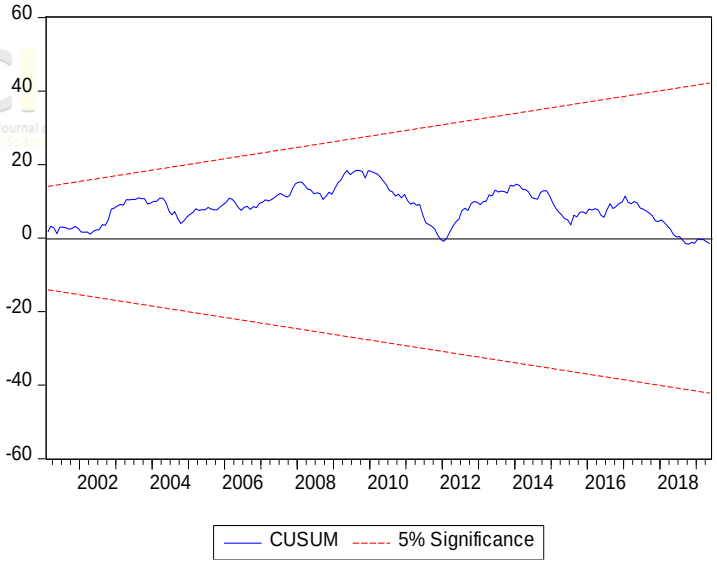

Figure 10: In pharmaceutical sector the first measure SML-P1 graph shown the data is stable.

4.7 Result Discussions

This session is depends upon association between stock market liquidity and oil prices, exchange rate, market index, oil production, market volatility and inflation (CPI). There is first relationship stock market liquidity and oil prices. Our result shows there is significant impact on stock market liquidity in Pakistan. There is different impact between exporting and importing countries. I also found the asymmetric effect oil price shocks in stock market liquidity (Park & Ratti, 2007). It is evident that the oil price increases have a greater effect on the stock

market place then oil prices decreases. In the full sample period of 2000 to 2019 there is mixed asymmetric results. It shows that the importing countries oil price increases have a greater impact then oil price decreases. in somehow the oil importing countries oil prices decreases have a greater impact than oil prices decreases (Park & Ratti, 2007).The real oil prices shocks calculated as world real oil prices rather than national real oil prices. So the results depend on import and export quantity.

There is next relationship is stock market liquidity and exchange rate. Our result shows there is significant impact on stock market liquidity in Pakistan. The current study find the evidence that real GDP per capita, stock market liquidity, domestic savings, investments and crude oil prices increases in country then the exchange rate affected. The second evidence is if our currency depreciates against the dollar then it shows a serious threat to the exchange rate (Korsah & Fosu, The Effects of Exchange Rates Movements on Stock Market, 2016). These both two evidences create impact on exchange rate in stock market liquidity.

There is next relationship stock market liquidity and market index. Our result shows there is significant impact on stock market liquidity. There is find the evidence that the correlation between realized excess returns and the change in liquidity is negative. This is due to the fact that positive shocks of illiquidity usually reflect firms experiencing poorer performance than expected; to attract investors to absorb stocks into their portfolios, prevailing stock prices have to fall. Therefore result, current stock returns decline. Empirically, the coefficient of the unexpected change in the illiquidity on excess stock returns is negative. The positive relation is seen to reflect investors' expectations of a higher illiquidity premium to compensate for less liquid securities (Chiang & Zheng, 2015). There is next independent variable relationship stock market liquidity and oil inflation (CPI). Many previous studies examine the relationship between stock market liquidity and inflation. It's proposed the different results. Results can be vary according to stock market ups and down. According to this study increases in the cost of living will be harmful for the GDP growth. The existing rate of inflation in 2014 in Pakistan is 7%. Therefore according to some researchers if inflation level is below form this rate then it's creating positive and significant impact. If rate is increases from this it's not good for economic growth of Pakistan (Hunjra, Ijaz, Shahzad, Farooq, & khan, 2014). There is next independent variable is stock market liquidity and market volatility. There is a significant impact on stock market liquidity and market volatility. The unexpected changes in market volatility exert a significant impact on this. The evidence is that the organization with liquid balance sheet and liquid markets for their value were increasingly presented to these shocks.

4.8 Discussion and Concluding Remarks

The stock market evaluation and its part of economic growth is a major area of research in financial economics. Its substantial theoretical & empirical studies on that topic have shown in latest years. Stock market is a best place where invest in large & small projects through invest in different portfolios. Oil value developments area a significant matter to examine the study because increases in oil prices are frequently indicative the inflationary weight in the economy. That shows the future investments and interest rate of all types for the investors (Sadorsky, 1999).

In this study developed the new methodology for understanding the fluctuations in stock market relate with oil prices. This study explore that the relationship between stock market liquidity and oil prices, exchange rate, market index, oil production, market volatility and inflation (CPI). There are some studies that examined these approaches and measured these variables. In previous studies mostly work on stock market in Pakistan reference. In this study measure the stock market liquidity by ARDL model.

This study is based on the secondary data that has been collected from different sites. Secondary data is the data which is already available for analysis. This research is consists of 570 Pakistani stock exchange listed companies for initial sample size. The final sample size for this research is 140 listed non-financial companies. The sample period for this research is 17 years from 2000 to 2019 on monthly basis. This study collects the data from Pakistani stock exchange and company's monthly reports. Therefore, excluded the financial sectors these companies have different capital structure, profits and loss. Additionally, the companies which

data are not available these are also excluded. In this study included the 14 non-financial sectors. In this research consider the sectors are as: Automobiles, Chemical, Cement, Engineering, Food, Fertilizer, Pharmaceuticals, Refinery, Technology, Transport, Textile, Textile Spinning, Textile weaving, and woolen. In this study stock market liquidity therefore dependent variable measured through three different proxies Amihud liquidity, average trading volume and average volume of share traded. The remaining variables oil prices, exchange rate, market index, oil production, market volatility and inflation (CPI) is take as independent variable and take the data from different sites. Apply the different test on this data. Firstly apply the unit root test for check that stationarity of data. The results of this analysis are mixed. Some sectors are stationary on level and some stationary is on 1st difference. Then apply the bound test measures the relationship of long run in bound test. The null hypothesis of bound test is "no longer relationship exists among variables". Comparing the F-Stats value of I (0) and I(1) therefore, F-stats value is greater than upper and lower value it means there exist long run relationship among variables. So, the null hypothesis of bound test is rejected. If F-Stats value is smaller the upper and lower value than there is no long run relationship among variables. Then apply the Co integration test used to identify long run relationship among variables. The short run model consists of two parts. First part is depends on coefficient of short run dynamics and second part depends on the measure of error correction speed and adjustment whereby, short run dynamics to the long run equilibrium path in the model (Eco34). In the last apply the CUSUM test. There is uncertainty the sum of recursive residuals CUSUM test are applied to check the stability in the long and short run. CUSUM test defines that the model is smooth and stable over the time or not. Therefore, if the curve is exist within the value of 5% significance level then null hypothesis cannot be rejected (Coefficient in all ECM models variables). The table 4.7 shows the stability in within the critical bound in case of all sectors. So, now we conclude that econometric table is stable. This study is important because it tests shows how dependent variable can impact on these independent variables. This provides empirical result of significant impact of stock market liquidity on oil prices, exchange rate, market index, oil production, market volatility and market inflation (CPI). This study has certain limitations such as the many researchers' research on stock market liquidity in different countries but very sufficient research on Pakistan. Furthermore data is not available properly a lot of discrepancies exist in the data.

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