Special Declaration and Notice: This market performance report is only a statistical analysis and summarization of market liquidity, volatility, operational stability and order execution efficiency of SZSE in 2013. It does not contain any forecast or judgment as to the future movement of the market or any individual stock, nor does it constitute any investment advice or recommendation. Any investor who makes investment based on the information contained herein shall assume all the risk themselves.

Stock Market Performance Report of Shenzhen Stock Exchange in 2013

Shenzhen Stock Exchange (SZSE) releases market performance reports annually for the main purpose of providing a quantitative reference for regulators' institutional building and investors' investment activities on an on-going basis.

Shenzhen stock market maintained an overall high level of performance in 2013. Firstly, liquidity was further improved and higher than the level in 2012. The impact cost was 17.7 basis points, better than that in 2012 (19.5 basis points). The liquidity index was RMB 2.29 million, also better than the level in 2012 (RMB 1.77 million). The liquidity of both the SME Board and ChiNext Market was improved with their impact cost at 17.2 and 19.3 basis points and liquidity index at RMB 1.99 million and RMB 1.77 million respectively. The relative bid-ask spread and relative effective spread were 18 and 34 basis points, better than those in 2012 (21 and 39 basis points). Secondly, the market showed relatively high operational stability with both the return to volatility and short-interval volatility ratios at 45 basis points, slightly higher than the levels in 2012 (43 and 40 basis points respectively). The overall market stability, however, was within the reasonable level. The high volatility was largely due to increase in the volatility of ChiNext Market whose return to volatility rose from 46 basis points in 2012 to 50 in 2013, while the volatility of the Main Board and SME Board remained relatively stable. Thirdly, market effectiveness was further enhanced. The market efficiency coefficient (MEC) was 0.93, higher than that in 2012 (0.90) and close to a random walk. Fourthly, order quality and execution efficiency remained at high levels and were close to those of the previous three years. 60% of orders were executed, 35% were executed within 10 seconds after submission and 29% were cancelled. The average execution time for limit orders was 319 seconds (the time span from the arrival to execution of an order). The average execution time for market orders and other limit orders was 36 and 774 seconds respectively.

In 2013, market liquidity was favorable. Trading on the SME Board and ChiNext Market was very active, which pushed up the overall market liquidity. However, there were areas of concern. Firstly, the structural difference in market liquidity was further heightened. The liquidity of some stocks was too low. Secondly, upward and downward liquidity risk was asymmetrical. The liquidity risk for slight price advances was higher than that for slight declines and the liquidity risk for sharp price declines higher than that for sharp advances.

I. Shenzhen A-share liquidity further increased, structural difference widened

(1) Overall liquidity better than in 2012

Market liquidity is a major measure of market performance. It generally refers to the ability of the market to execute orders without causing significant price fluctuations, measured in terms of impact cost, liquidity index, market breadth and depth, etc. ***Impact cost*** measures the level of impact of a certain trading amount (RMB 100 thousand) on market prices and can visually reflect market liquidity condition. The higher the market liquidity, the lower the impact cost is. In contrast to impact cost, ***Liquidity index*** measures the amount of money that is needed to bring about a certain level of price change (1 percent). The higher the market liquidity, the higher the liquidity index is. ***Market breadth*** represents the bid-ask spread. The higher the liquidity, the smaller the breadth is. ***Market depth*** reflects the capacity of the market to instantly absorb orders, measured in terms of the aggregate amount of the five best orders. The higher the liquidity, the bigger the market depth is.

1. Impact cost and liquidity index

The impact cost of Shenzhen A-share market for RMB 100 thousand was 17.7 basis points and the liquidity index for 1 percent of price change was RMB 2.29 million (Figures 1 and 2), compared to 19.5 basis points and RMB 1.77 million in 2012.

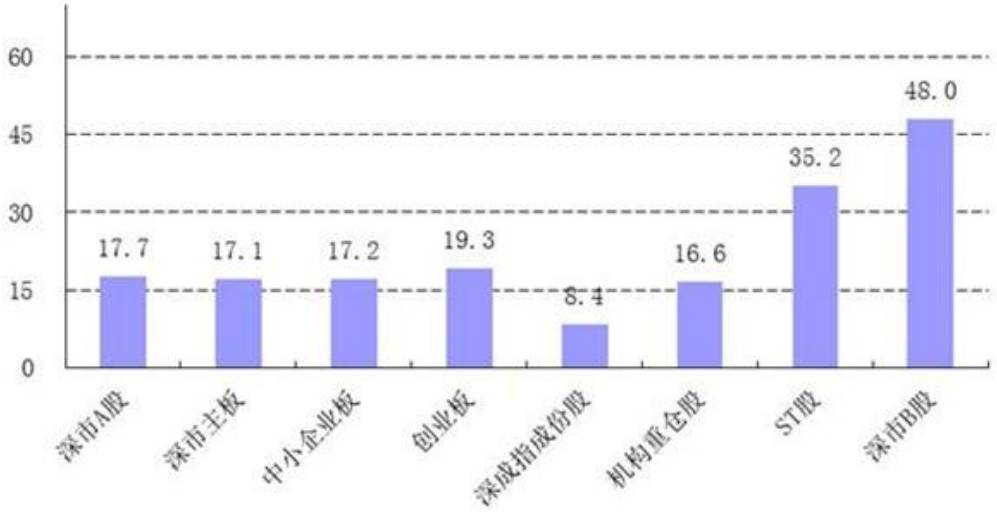
The liquidity of the constituent stocks of SZSE Component Index was the highest with their impact cost at only 8.4 basis points. Their liquidity index was as high as RMB 11.72 million. Both their impact cost and liquidity index were better than the average levels on SZSE. Stocks heavily held by institutions (mutual funds, social security fund, brokers' proprietary business, QFII, insurance institutions, ordinary institutions, same as below) came next, with their impact cost and liquidity index at 16.6 basis points and RMB 2.552 million respectively.

The liquidity of the SME Board (impact cost at 17.2 basis points and liquidity index at RMB 1.99 million) was higher than that in 2012 (impact cost at 19.1 basis points and liquidity index at RMB 1.45 million). Due to a rally and active trading on the SME Board

in 2013, the SME Composite Index surged by 26.3% last year.

ChiNext market enjoyed an exuberant bull run in 2013 with the ChiNext Composite Index soaring 74.7%. Drastic increase in trading activity improved the liquidity of the segment. Its impact cost rose from 22.2 basis points in 2012 to 19.3 basis points in 2013. The liquidity index was RMB 1.767 million, much higher than that in 2012 (RMB 1.14 million). However, as ChiNext Market was dominated by small companies, its liquidity performance was still slightly lower than that of the Main Board and SME Board and there is still room for improvement.

The liquidity of individual stocks was size-specific: the impact cost of stocks of large companies was only 61% of that of small companies, while the liquidity index of the former was more than three times that of the latter. The impact cost and liquidity index was positively correlated with the percentage of institutional shareholdings. The higher the institutional shareholding, the higher the liquidity of stocks was. The impact cost of stocks with high institutional shareholdings was just approximately 88% of that of stocks with low institutional shareholdings. The impact cost was related to the level of stock prices. The lower the stock prices, the higher the impact cost was (the lower the liquidity). The impact cost of high-price stocks was merely around 76% of that of low-price stocks.



From left to right: Shenzhen A-shares; Shenzhen Main Board; SME Board; ChiNext Market; Constituents of SZSE Component Index; Stocks Heavily Held by Institutions; ST shares; Shenzhen B-shares

Figure 1: Impact Cost of Shenzhen Market (basis point)

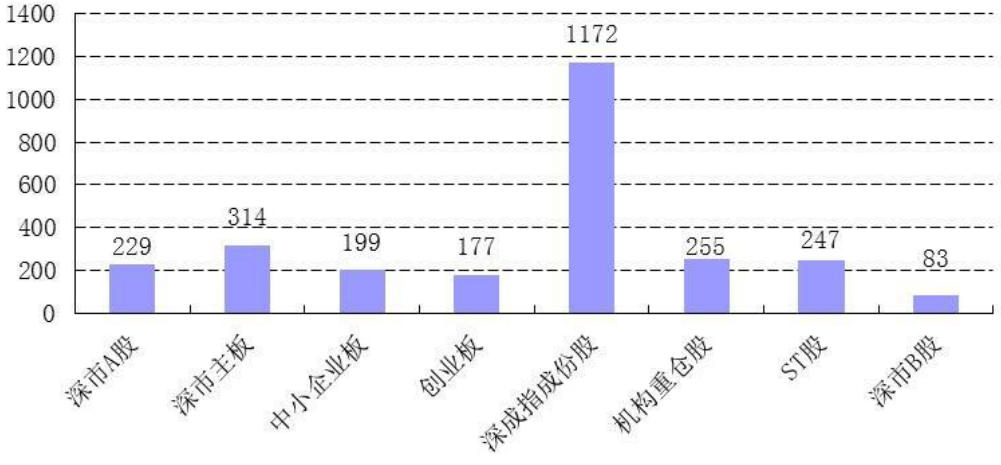
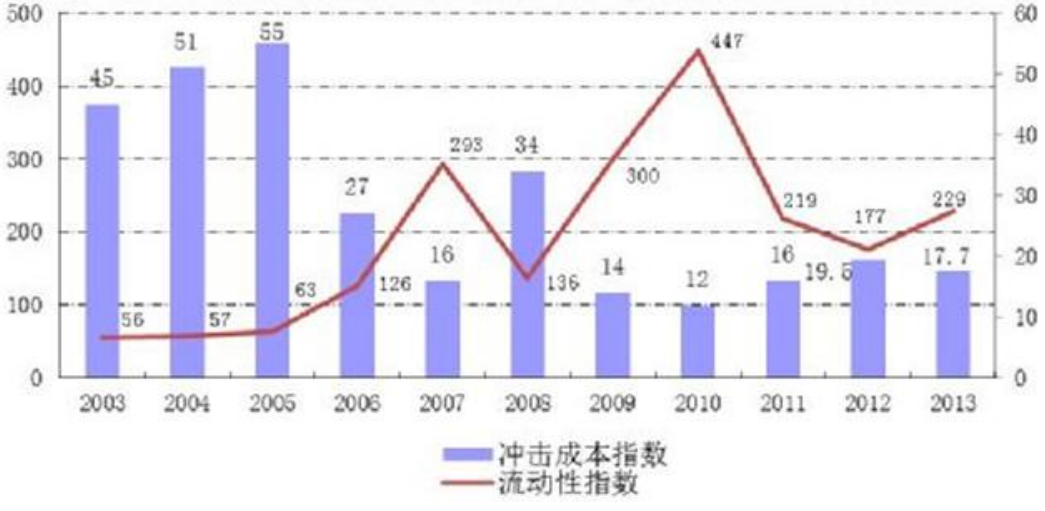


Figure 2: Liquidity Index of Shenzhen Market (RMB 10 thousand)

2. Changes in liquidity

In the past seven years (2007-2013), there was volatility in liquidity and the market movement pattern had a direct impact on market liquidity. The impact cost of Shenzhen A-shares fluctuated slightly along with market movement. In the seven years, the impact cost was 16, 34, 14, 12, 16, 19.5 and 17.7 basis points respectively, and the liquidity index was RMB 2.93 million, RMB 1.36 million , RMB 3 million, RMB 4.47 million, RMB 2.19 million, RMB 1.77 million and RMB 2.29 million respectively (Figure 3). The liquidity in 2013 was slightly higher than that in 2012.



Impact cost liquidity index

Figure 3: Impact Cost (basis point) and Liquidity Index (RMB 10 thousand) of Shenzhen A-shares

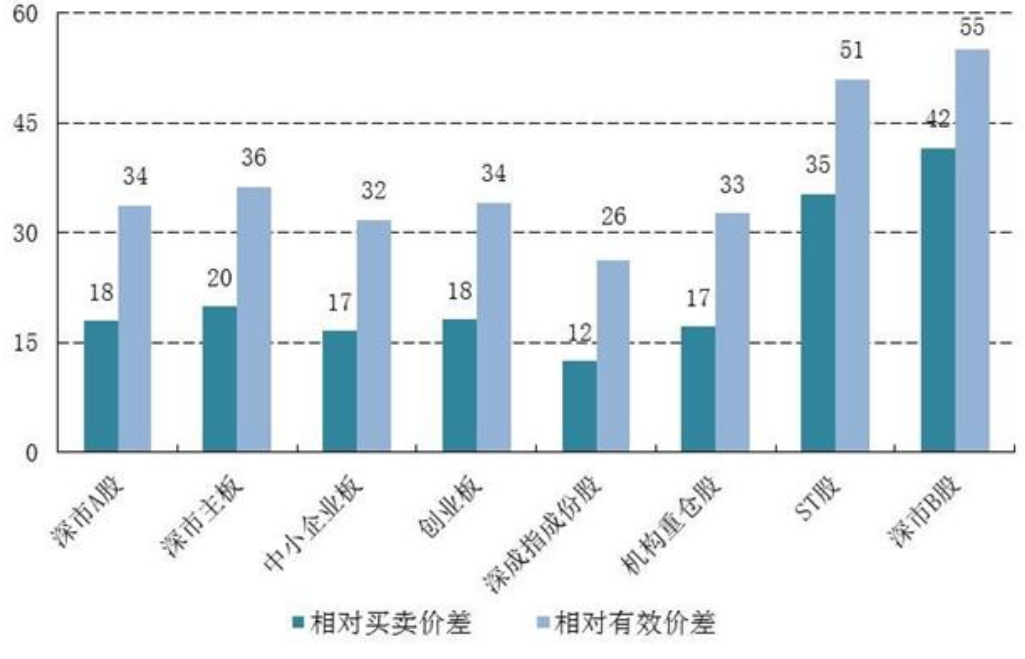
Bid-ask spread refers to the gap between the best bid price and best ask price. Effective

spread refers to the difference between the average execution price of orders and the mid-point of best quotes at the time of order arrival. The smaller the bid-ask spread and effective spread, the better the liquidity in breadth dimension. As relative values with the impact of absolute prices eliminated, the relative bid-ask spread and relative effective spread can more objectively measure the breadth dimension of the liquidity.

The relative bid-ask spread and relative effective spread of Shenzhen A-shares were 18 and 34 basis points respectively (Figure 4), both better than the levels in 2012 (21 and 39 basis points respectively), indicating that in terms of breadth, the liquidity of Shenzhen A-shares increased slightly in 2013.

In the past seven years (2007-2013), the breadth measure of liquidity changed along with market movement (relative spread was 18, 29, 16, 14, 18, 21 and 18 basis points respectively in the seven years). When the market was low, the breadth measure was relatively high, such as in 2008 and 2012.

With regard to different market segments, the breadth measure of liquidity of the SME Board and ChiNext Market recorded considerable increase in 2013. The relative bid-ask spread and relative effective spread of the SME Board dropped 10.5% and 13.5% respectively in 2013 from the levels in 2012, while the relative bid-ask spread and relative effective spread of ChiNext fell 21.7% and 20.9% respectively in 2013 from the levels in 2012.



Blue: Relative bid-ask spread Gray: Relative effective spread

Figure 4: Relative Spreads of Shenzhen Market (basis point)

Blue: Relative bid-ask spread Gray: Relative effective spread

Figure 5: Relative Spreads of Shenzhen Market during 2003-2013 (basis point)

3. Market Depth

Depth is the aggregate amount of the five best orders. The higher the depth, the better the liquidity in breadth dimension is.

The depth of Shenzhen A-shares was RMB 1.06 million (Figure 6), slightly higher than the level of RMB 0.91 million in 2012. In the past seven years (2007-2013), the depth indicator of the liquidity was generally stable (at RMB 1.35 million, RMB 0.95 million, RMB 1.44 million, RMB 1.17 million, RMB 0.97 million, RMB 0.91 million and RMB 1.06 million respectively). When the market was low, the depth measurement was relatively low, such as in 2008 and 2012(at RMB 0.95 million and RMB 0.91 million respectively)

The depth of the constituents of SZSE Component Index, Main Board and ST shares was RMB 6.27 million, RMB 1.85 million and RMB1.43 million respectively, all higher than the average level of Shenzhen A-shares (at RMB 1.06 million) and also higher than the corresponding levels in 2012 (at RMB 3.23 million and RMB1.65 million). With regards

to different market segments, the depth of the Main Board (at RMB 1.85 million) was better that of the SME Board (RMB 0.79 million) and ChiNext (RMB 0.55 million). In addition, market depth was size-specific and price-specific: the depth of large-cap, low-price stocks was better than that of small-cap, high-price stocks.

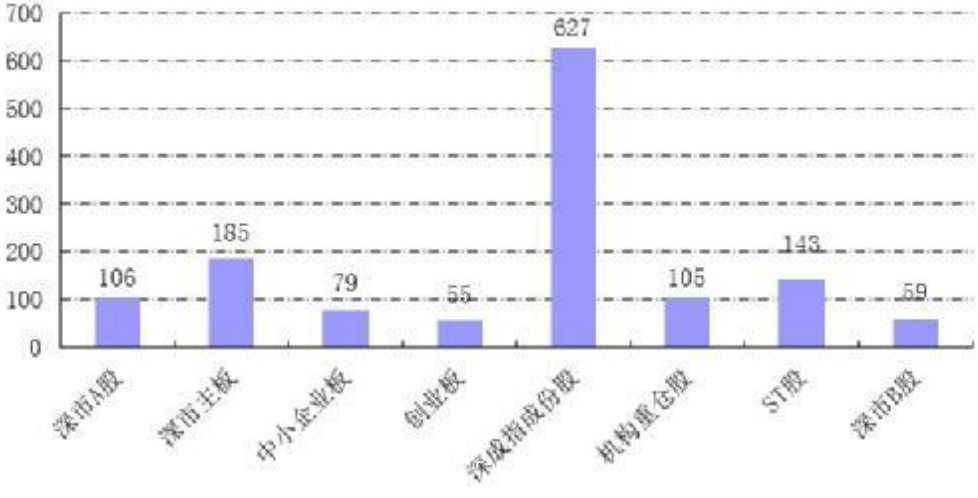


Figure 6: Depth of Shenzhen Market (RMB 10 thousand)

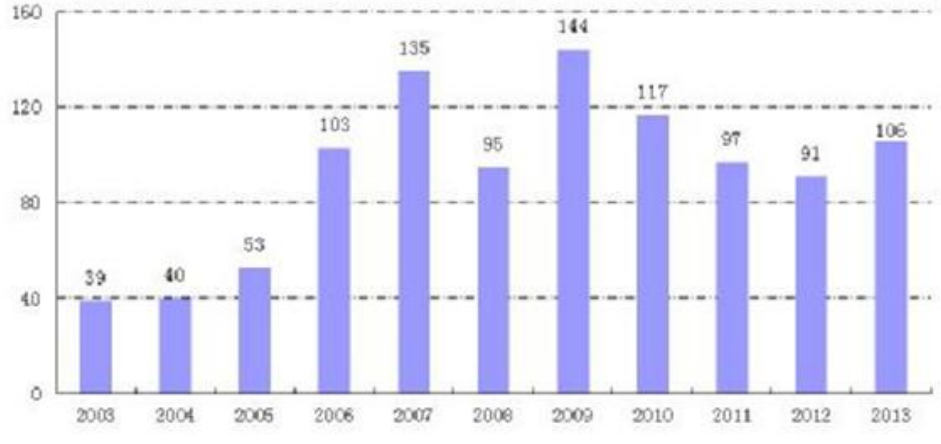


Figure 7: Depth of Shenzhen Market during 2003-2013 (RMB 10 thousand)

4. Large transaction impact cost

Large transaction impact cost refers to the level of impact of trading value of RMB 3 million on market prices. The bigger the indicator is, the higher the cost of large transactions is and the lower the liquidity is.

The large transaction (RMB 3 million) impact cost of Shenzhen A-shares was 179 basis points, obviously lower than the level of 262 basis points in 2012, but still higher than the

record low in the past few years (at 150 basis points in 2010) (Figure 8).

The large transaction impact cost of the constituents of SZSE Component Index was at the lowest (42 basis points), followed by the Main Board (at 152 basis points) and stocks heavily held by institutions (at 161 basis points). The large transaction impact cost of the SME Board (183 basis points), ChiNext Market (208 basis points) and ST Shares (184 basis points) was all higher than the average level of Shenzhen A-shares.

As in the past few years, the large transaction impact cost remained noticeably size-specific and institutional shareholding-specific: the larger the size and the higher the percentage of institutional shareholdings, the lower the large transaction impact cost was. However, correlation with stock prices was no longer evident. In the past, the higher the price, the lower the large transaction impact cost. At present, the large transaction impact cost of mid-price shares exceeded that of high-price shares.

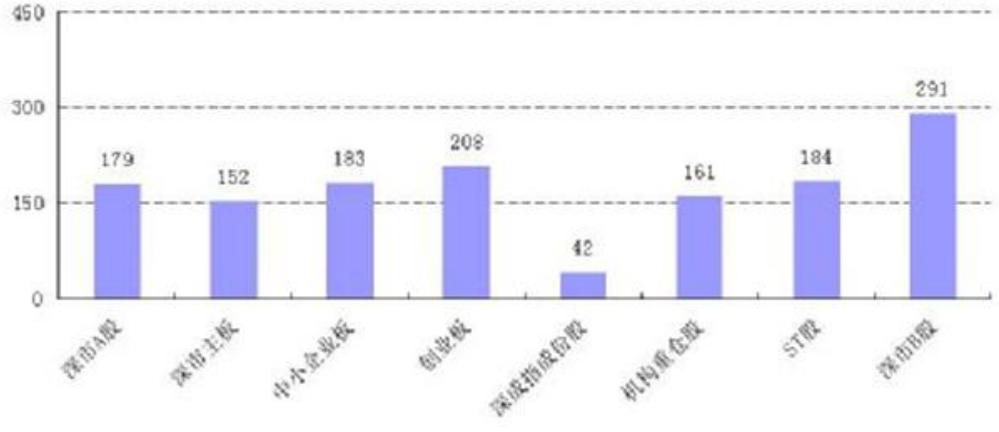


Figure 8：Large transaction impact cost of Shenzhen Market (basis point)

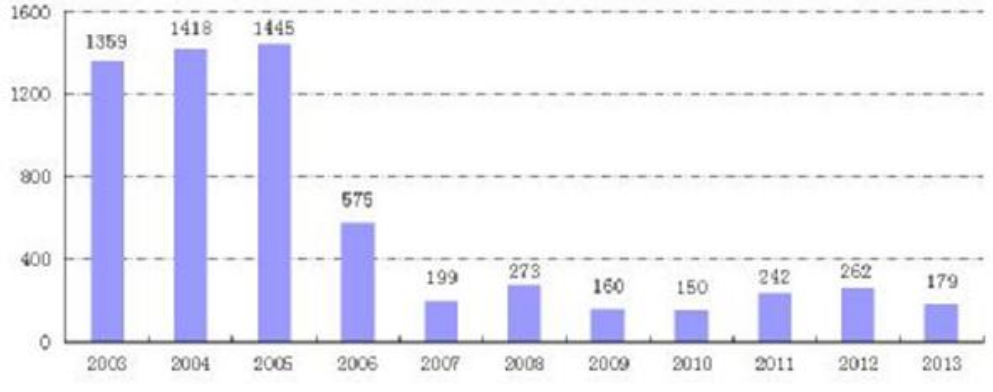


Figure 9：Large transaction impact cost of Shenzhen Market during 2003-2013 (basis point)

(II) The structural liquidity difference became even more obvious

The liquidity of Shenzhen market improved in 2013. However, the structural difference in liquidity of Shenzhen market was further heightened. Especially with the listing of a large number of enterprises, the liquidity of a few stocks became too low. We will use quantitative parameters to gauge the liquidity risk profile of China stock market so as to reduce its impact on the market and investors.

Firstly, in terms of liquidity, the impact cost of the most liquid 25 percent of Shenzhen A-shares was lower than 10.6 basis points while that of the most illiquid 25 percent was higher than 25.5 basis points, compared to 14.2 and 23.6 basis points in 2012. This means that the division in liquidity of individual stocks in 2013 was widened: the previously liquid stocks became more liquid and the previously illiquid stocks suffered even worse illiquidity.

Secondly, actively and frequently traded stocks had good liquidity. We divided all the stocks on SZSE into high, medium and low groups by turnover rate and found the three groups' impact cost (RMB 0.1 million) was 22, 18 and 17 basis points and their liquidity index (1%) was RMB 2.35 million, RMB 2.34 million, and RMB 3.02 million, respectively. Both the impact cost and liquidity index of the most frequently traded groups were better than those of the rest two groups. Furthermore, the average impact cost (15 basis points) of the 20 most frequently traded stocks (with an average turnover rate of 1219%) in 2013 was 2 basis points lower than the level of Shenzhen A-shares and their liquidity index (RMB 3.8 million) was higher than the level of RMB 1.51 million of Shenzhen A-shares.

Thirdly, liquidity risk was asymmetrical. For slight movement, the liquidity risk for price advances was higher than that for declines and for sharp movement, the liquidity risk for price declines higher than that for advances. When measured in liquidity risk value [1](a gauge of the level of liquidity risk, meaning that throughout the year, a stock has a 1 percent probability (roughly 8 to 12 hours) that its liquidity index is lower than such risk

[1] Liquidity risk refers to the risk of significant stock price or index changes under market impact due to the lack or insufficiency of liquidity in the market. In this paper, we use the liquidity risk value as a measure of liquidity risk and designed it by reference to the concept of value at risk (VaR). We calculated the liquidity index of the target stock during one minute as a section as well as the distribution of its liquidity index over the whole year. The leftmost 1st percentile (i.e., the 1st percent with the lowest liquidity index) was regarded as liquidity risk value. This measure can properly reflect the fragility of market liquidity. Specifically, the liquidity risk value of 1 percent (10 percent) advance represents the minimum amount of money needed, as a 1 percent probability event (roughly 8 to 12 hours in total), to push up the stock price by 1% (10 %) during the

value. The lower the liquidity risk value, the higher the liquidity risk is), the liquidity risk value for an average advance of 1% and 10% was RMB 0.158 million and RMB 1.994 million respectively, and the liquidity risk value for an average decline of 1% and 10% was RMB 0.225 million and RMB 1.445 million respectively. Similar situation were observed in different segments. This is probably due to the structural characteristics of orders in Shenzhen market. It is easier to slightly push up stock prices than to drive down stock prices, but the amount of money needed to sharply drive down stock prices to the daily down limit is less than to push up stock prices to the daily up limit.

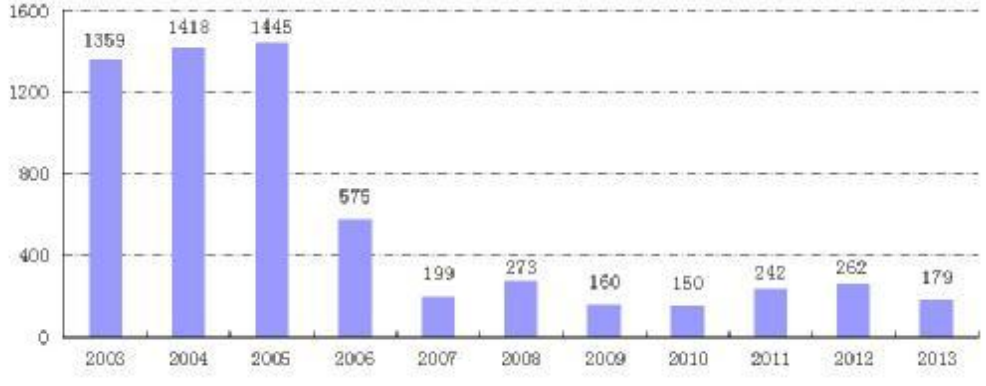


Figure 10: Liquidity Risk Value of Each Stock Group for 1 Percent Upward (Downward) Movement (RMB 1 million)

II. The Main Board and SME Board remained stable, ChiNext Market became more volatile

Volatility measures the short-term variation of the stock price change rate and the market's ability to adjust unbalance, generally defined as the frequency and range of price change. The lower the volatility, the more stable the market is. In this paper, we used return to volatility and short-interval volatility ratios to measure volatility. Return to volatility ratio is a gauge of price volatility measured by standard deviation of return. Short-interval volatility ratio is a gauge of price volatility over a short interval.

Volatility of Shenzhen A-shares was slightly higher than the level in 2012, but within the reasonable level. The high volatility was largely due to increase in the volatility of ChiNext, while the volatility of the Main Board and SME Board was close to the level in 2012. The return to volatility ratio was 45 basis points (Figure 11), higher than that in 2012 (43 basis points). The short-interval volatility ratio was 45 basis points, higher than that in 2012 as well (40 basis points).

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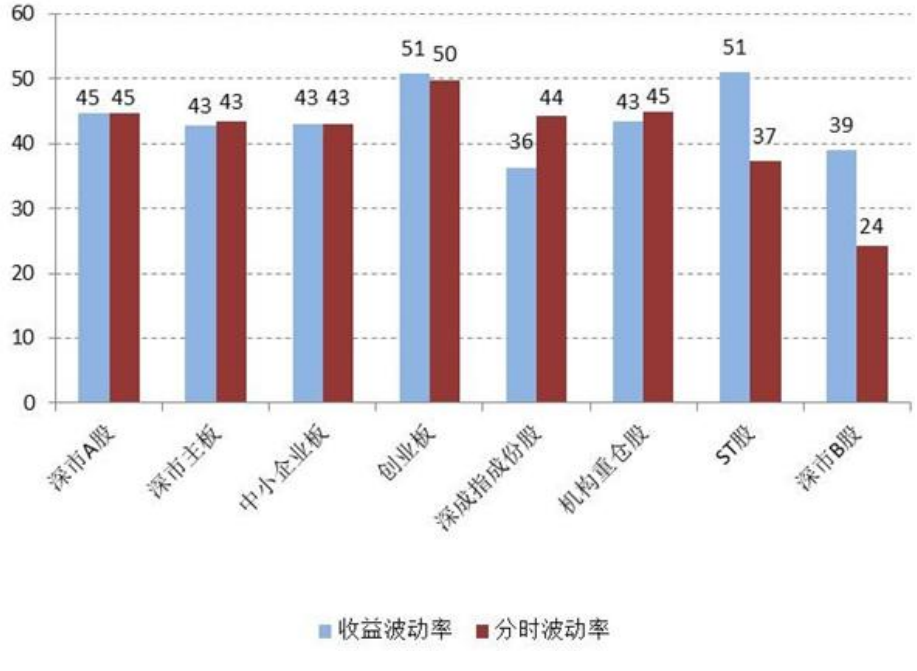
trading hours of the whole year. The smaller this measure, the higher the liquidity risk is.

With regards to different market segments, ChiNext was the most volatile market, with its return to volatility ratio at 51 basis points and short-interval volatility ratio at 50 basis points, compared with 46 basis points and 40 basis points respectively in 2012, or up by 10.9% and 25% respectively. The volatility of the Main Board (return to volatility ratio at 43 basis points and short-interval volatility ratio at 43 basis points), SME Board (return to volatility ratio at 43 basis points and short-interval volatility ratio at 43 basis points) and SZSE Component Index (return to volatility ratio at 36 basis points and short-interval volatility ratio at 44 basis points) was all lower than the average level of Shenzhen A-shares. The volatility of the Main Board (return to volatility ratio at 43 basis points) and SME Board (return to volatility ratio at 43 basis points and short-interval volatility ratio at 43 basis points) was close to the level in 2012 (return to volatility ratio was at 42 basis points for the Main Board and 43 basis points for the SME Board).

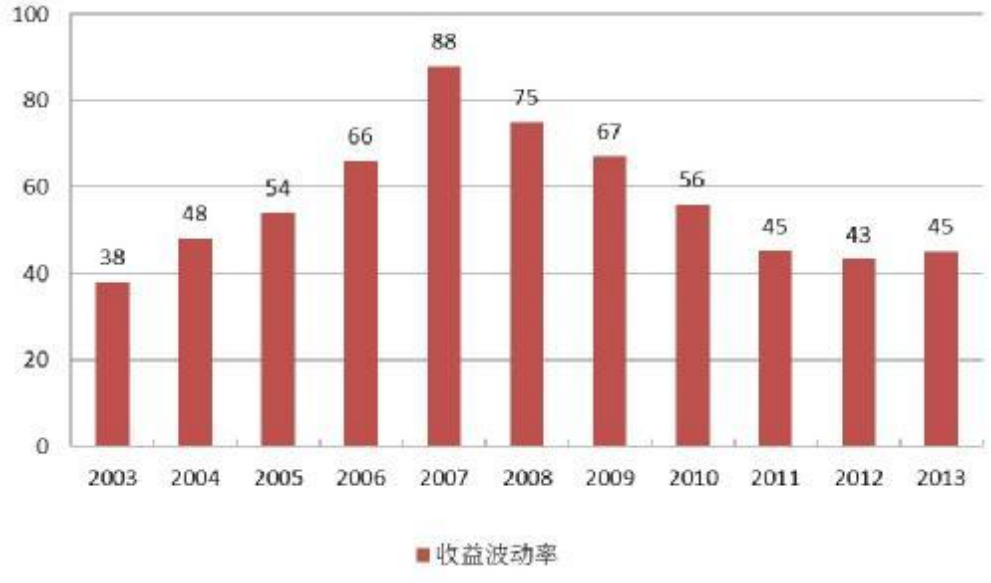
In the past few years, the overall volatility of Shenzhen A-shares has been on the decline. From 2007 to 2012, the return to volatility ratio fell continuously and operational stability rose steadily. In the six-year period, the return to volatility ratio was 88, 75, 67, 56, 45 and 43 basis points respectively. However, volatility increased slightly in 2013 due to market instability with the return to volatility ratio hitting 45 basis points (Figure 12).

The return to volatility ratio was size-specific, price-specific and institutional shareholding-specific, that is, the larger the size, the lower the stock price and the higher the institutional shareholdings, the lower the return to volatility was.



Blue: Return to volatility ratio Red: Short-interval volatility ratio

Figure 11: Volatility Measures of Shenzhen Market in 2013 (basis point)



Return to volatility ratio

Figure 12: The Return to Volatility Ratio of Shenzhen Market during 2003- 2013 (basis point)

III. Effectiveness of Shenzhen A-shares further improved

Market efficiency coefficient is the ratio of long-term variance of return to short-term variance of return (adjusted by amount of time). When the coefficient equals 1, prices move in a random walk and the market is effective. The more the coefficient derivates from 1, the lower the market efficiency is. In 2013, the market efficiency coefficient of Shenzhen A-shares was 0.93 (figure 13), close to random walk (theoretic coefficient is 1) and slightly higher than that in 2012 (0.90). With regards to different market segments, the market efficiency coefficient of Shenzhen B-shares (0.879) deviated far from random walk and the market efficiency coefficient of other three segments was 0.947, 0.918 and 0.928 for the Main Board, SME Board and ChiNext respectively, all at high levels.

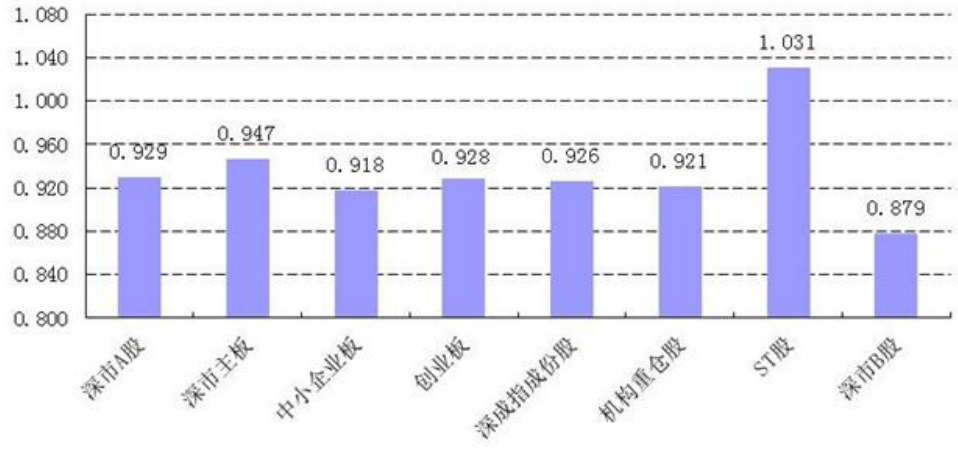


Figure 13: Efficiency coefficient of Shenzhen Market in 2013

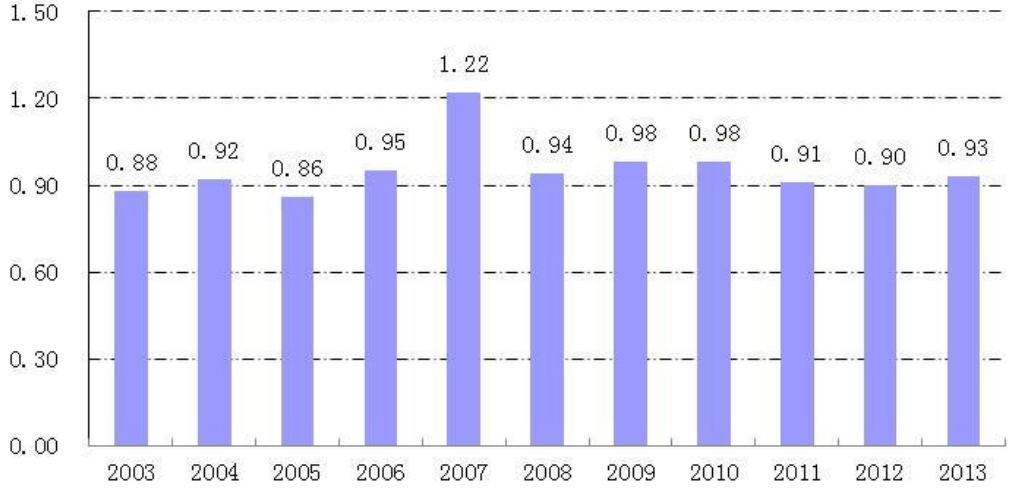


Figure 14: Efficiency coefficient of Shenzhen A-shares during 2003-2013

IV. Order quality and execution efficiency remained at high levels

Order quality of Shenzhen market remained at a high level and was close to that of the previous three years (Figure 15 and Table 1). When calculated in the number of shares, 60% of orders were executed, 35% were executed within 10 seconds after submission and 29% were cancelled. The percentage of market orders rose slightly to 0.33% in 2013 from 0.3% in 2012. 8.74% of orders were submitted by institutional investors.

The order execution efficiency of Shenzhen market was also at a high level: the average execution time for limit orders was 319 seconds (the time span from the arrival to execution of an order). The average execution time for market-to-limit orders and other limit orders were 36 and 774 seconds respectively (Figure 16). In the past seven years (2007-2013), the order execution time generally remained stable. For example, the

execution time of limit orders has been within the range between 260 and 360 seconds. Furthermore, the order execution time is closely related to market conditions. The order execution time will be extended in a market downturn because many orders cannot be executed immediately after arrival due to light trading and poor market depth. Such situation existed both in 2012 and 2008. In 2013, the stock market (especially the SME Board and ChiNext) recovered slightly and the execution time of limit orders decreased slightly from the level in 2012.

Blue: Percentage of orders executed at best prices Red: Percentage of orders executed at single prices

Figure 15：Percentages of Orders Executed at Best and Single Prices during 2003-2013 (%)

Table 1: Summary of Order Execution during 2006-2013 (%)

Item	2006	2007	2008	2009	2010	2011	2012	2013
Percentage of order execution	61	63	60	72	64	60	58	60
Percentage of order cancellation	29	27	29	20	27	29	30	29
Percentage of market orders	0.03	0.44	0.38	0.52	0.39	0.35	0.3	0.33
Percentage of orders from institutions	6	7	7.76	3.92	7.99	9.01	9	8.74
Percentage of orders executed within 10 seconds after submission	30	36	34	44	38	35	33	35

Source: SZSE Central Database

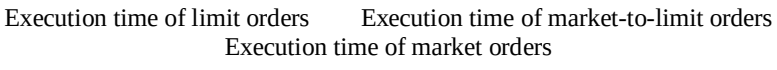


Figure 16: Order Execution Time of Shenzhen A-shares during 2003-2013 (second)