Journal of
Finance & Financial Services
ISSN: 2289-6597

UKM-GSB
GRADUATE SCHOOL OF BUSINESS
UNIVERSITI KEBANGSAAN MALAYSIA
The National University of Malaysia

Investor Sentiment and Bank Deposits in Malaysia: Do Bank Managers Time the Market while Pricing Deposits?

Fauzias Mat Nor[*#], Mamunur Rashid[**], Izani Ibrahim[*]& Bai Yunyi[**]

[*] *Graduate School of Business, Universiti Kebangsaan Malaysia, Malaysia*

[**] *Nottingham University Business School, The University of Nottingham Malaysia Campus*

Abstract

Financial market activities increase during high sentiment in Malaysia. Overly optimistic behavior is one of the reasons behind the escalation which influences flows of deposit to commercial banks. This study discusses the influence of investor sentiment on bank deposits and investigates any potential causal relationships among deposits, sentiment and other fundamental variables. An investor sentiment index is constructed using two - attitude based sentiment proxies, namely consumer sentiment index and business condition index, the Bursa Malaysia stock market turnover, and the ASEAN FTSE composite index. The VECM test found the sentiment index to positively influence deposit flows in banks in Malaysia in the long run. Partial short-run significance was revealed from the first lag of sentiment proxies, which was positive as well. Among other variables, output (GDP), money supply and interest rate showed a positive long-run relationship on bank deposits whereas currency did have a negative impact on deposits. Output (GDP), money supply and sentiment Granger caused bank deposits, whereas deposits and interest rate showed bi-directional causal relationships. The study lends support to the argument that higher sentiment increases stock and bank market activities primarily when the financial market is bank-dependent. Bi-directional causal relationships signify that the conventional demand-supply mechanism is active in pricing deposits. Banks set higher interest rates to attract large amounts of deposits during a low sentiment period and vice versa. Similarly, banks can offer a low interest rate on deposits during a high sentiment period assuming that deposits will automatically flow though the banking channel in a bank-dependent financial market. This argument connotes the presence of timing effect in deposit pricing within the bank financial market.

Key words: Bank deposits, causality, deposit pricing, Malaysia, sentiment, timing effect, VECM
JEL classification: G02, G21

1. Introduction

Investor sentiment influences stock market, currency market, bank deposits and the flows of foreign direct investment (Brown & Cliff, 2004; Burdekin & Redfern, 2009b). Investor

[#]Correspondence: Fauzias Mat Nor; Email: *fauzias@ukm.my*

sentiment index (ISI) familiarises the use of sentiment in finance and economics by combining a number of theories and data sources (Baker, Wurgler, & Yuan, 2010; Brown & Cliff, 2004). Extant studies conducted on the United States' market report psychological biases as the major determinants of investor sentiment (Bandopadhyaya & Jones, 2006; Barberis, Shleifer, & Vishny, 1998; Beaumont, Daele, Frijns, & Lehnert, 2006;. Brown & Cliff, 2005; Qiang & Shu-e, 2009; Qiu & Welch, 2006). More recent studies on other developed financial markets such as the United Kingdom and Germany have borrowed similar U.S. models and proxies of investor sentiment to explain changes in bank deposits, terrorist activity and corporate disclosure (Bergman & Roychowdhury, 2008; Burdekin & Redfern, 2009a; Drakos, 2010).

Investors speculate, invest in highly volatile markets, target small firms and take advantage of (or become victims of) the lack of market regulations (Barberis et al., 1998;. Brown & Cliff, 2004; Brown, Harlow, & Tinic, 1988; Daniel, Hirshleifer, & Subrahmanyam, 1998, 2001; Daniel, Hirshleifer, & Teoh, 2002; Daouk, Lee, & Ng, 2006). Emerging countries are full of small-cap firms with a volatile price record, inferior management quality and infrequent dividend pay-out (Baker & Wurgler, 2006). Emerging financial markets are found to be contagious (Ibrahim, 2004; Ruzita, Abu Hassan Shaari, & Agus Harjito, 2006; Sharma & Wongbangpo, 2002; Wongbangpo & Sharma, 2002). Hence, new investigations should be conducted to examine the influence of investor sentiment in emerging countries (Bekaert & Harvey, 2002, 2003).

Studies on investors' decision-making process are not new in financial literature. Tversky and Kahneman (1974) examined the presence of a pattern in investors' decision making process and named it as 'representativeness'. Barberis et al. (1998) add conservativeness as another characteristic of individual investors. Baker, Wurgler, and Yuan(2009) find investors' optimism and pessimism behind over-and under-valuation before and after stock market crashes. Investor sentiment determines the behavioural changes among the investors due to their optimistic or pessimistic expectations (Baker et al., 2010). Berberis et al. (1998) argue that investor sentiment is the representation of investors' taste for speculation. Kurov (2010) borrowed this definition, in which the bull-to-bear ratio represents the sentiment in the market. Hirshleifer (2001) and Daniel et al. (1998) explained investor sentiment from psychological biases, limited attention, and limited skill of the investors. Various key words used in defining investor sentiment include over-and-under reaction, over-and under-confidence, pessimism and optimism, self-attribution, conservatism, representativeness and limited skills and attention in trading (Hirshleifer, 2001).

Investor sentiment has been measured using investor sentiment index. The index is an aggregate representation of the movement in investor behavior in an economy. The index is created using various proxies. Theoretical bases behind investor sentiment claim variations into the proxies being used. Historically, the investor sentiment index was created using financial market (trading) variables such as turnover, under-pricing of initial public offerings, number of initial public offerings and option volume (Baker & Wurgler, 2007;. Baker & Wurgler, 2006; Baker et al., 2009; Brown & Cliff, 2004; Lee, Shleifer, & Thaler, 1991; Qiu & Welch, 2006). Other studies included survey-based proxies such as the Michigan Consumer Sentiment Index, that fitted with the theory of over-confidence and optimism-pessimism (Schmeling, 2007; 2009). Recently, a mixture of cross-section and time series proxies was used in literature to construct investor sentiment (Finter, Niessen-Ruenzi, & Ruenzi, 2012).

Investor sentiment is one of the major forces in financial and economic activities of any country. The retail investors move the stock market in Malaysia (BM, 2009). As a result, any information or predictions, positive (negative) to retail investors, will positively (negatively) influence the market. Studies have reported relationships between stock market and bank markets. Ibrahim (2007) presents that financial market development closely interacts with output growth in Malaysia and financial volatility adversely affects output growth. However, the study concludes with little evidence that the financial sector cannot harmonize the loss in the banking sector; the study shows limited relationship between these two interrelated sectors. Various studies employed investor sentiment index as a predictor of future stock prices and reported that sentiment is a contrarian predictor of stock return in the short run (Baker & Stein, 2004; Baker et al., 2009).

Grossman, Ozuna and Simpson (2007) report that the prices of American Depository Receipt (ADR) and that of the underlying assets are driven by U.S. consumer sentiment. Similar results were reported by Burdekin and Redfern (2009a) for the Chinese ADR market. Investor sentiment adversely affected the supply of Chinese saving deposits (Burdekin & Redfern, 2009a; 2009b). Their study extended the results to include the time deposit market, and found a significant negative relationship between investor sentiment and Chinese time deposit growth during the years 2003-2007. Consequently and theoretically, countries with higher financial liberalization should see a negative change in the deposit market while the investor sentiment in stock market is rising.

The above results are not robust and appear discriminating with respect to theories considered for short- and long-run relationships. Moreover, similar relationships may not stay stagnant when we bring emerging nations into the picture. In addition, sentiment may also cause and be caused by other variables. Existing studies have completely ignored this truth. This study fulfils these gaps by conducting short- and long-run estimations of the relationships between investor sentiment and total bank deposits of Malaysia in the presence of other macroeconomic and fundamental determinants of bank deposit. In addition, the study reports the potential causality in Granger sense to elaborate the relationship further. The study is conducted on Malaysia, as it is an emerging country in Southeast Asia, and a strong economic power in ASEAN.

2. Sentiment Index and Bank Deposits

Despite the theoretical importance of investor sentiment in Malaysia as an emerging economic power, there is no sentiment index available. A number of constraints appear while visualising the creation of an investor sentiment index for Malaysia. Firstly, existing studies mainly considered a cross-section of corporate financial variables to create the index, and therefore, have employed the index to the stock market only. It would be theoretically possible to connect investor sentiment with corporate and non-corporate financial performance in an economy only if the index is constructed using corporate and non-corporate proxies. Additionally, the index has to consider a combination of survey and non-survey data. Secondly, in order to observe a time-dependent impact, there has to be a time-series investor sentiment index constructed from time-series proxies. Finally, if investor sentiment influences asset pricing, it can be used for bank deposit growth and currency value as well.

Similar to the study of Ajzen and Driver (1992), this study assumes that attitude is the basis of human decision-making. Attitude towards financial markets can be measured through a time series sentiment survey. Based on recent studies, this study also assumes that i nvestor trading in the market profoundly influences each other. To construct investor

sentiment, a combination of survey and non-survey market trading based proxies should be employed. Investor attitude is a macro construct. When investors are asked about bank deposit growth, they not only look into banks' performance in the economy but also other macroeconomic indicators. Therefore, the use of an attitude-based proxy will allow the investor sentiment index to be flexible in explaining the changes in bank deposits.

Optimism and pessimism are the symptoms of investor sentiment. Excessive optimism (pessimism) increases (decreases) bank deposit flow. Noise trader theory argues that it is costly for the arbitrageurs to weigh out the influence of noise traders (DeLong, Shleifer, Summers, & Waldmann, 1990; Shleifer & Summers, 1990). Therefore, the impact of investor sentiment is expected to be long run in general. Sentiment influences stock returns in the short run (Brown & Cliff, 2004). However, the time frame (short- and/or long-run) relationships between investor sentiment and non-stock market performance, such as the bank deposit flow, are largely unknown.

Bank deposit flow is positively connected to output growth (growth in GDP) and increasing interest rate in banks. A stronger home currency may induce foreign investors to put money in international investment offered by local banks and earn the currency rate difference while remitting the benefit to their country. Higher money supply, especially looking it from the money supply control mechanism of the central banks, has great influence on bank deposit supply. A tight money supply policy will surely reduce bank deposit flow in local banks. Figure 1 shows the conceptual framework of the study.

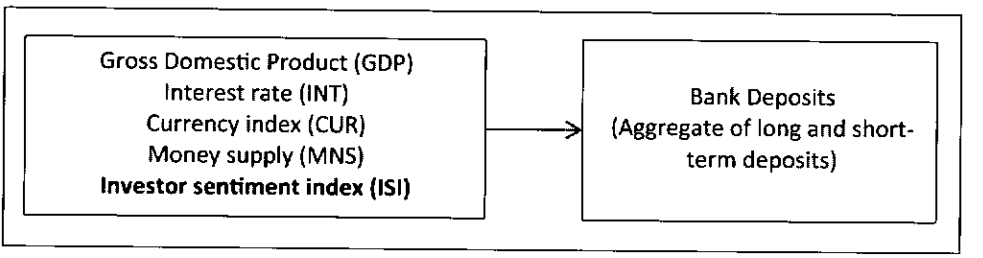

Figure 1. Conceptual framework

Investors, who want a safe investment, in safety and amid crisis, may still want to keep their savings in the bank, which eventually will increase bank deposits during higher sentiment both in the short run and in the long run. Depositors are scared of crises. Conservative depositors are over-confident during a crisis and over-pessimistic in post-crisis periods. It is therefore more logical to say that sentiment will increase bank deposits in the long run and may also have the same impact or no impact in the short run. If the market is bank dependent, eventually all financial transactions pass through banks in the long run. From that view, a higher volume of transactions in the stock market (representing optimism) would have a positive impact on bank deposits in the long run. A similar situation is hypothesised for attitude and market trading based sentiment. These two indices would positively influence bank deposits in the long run and would have either positive or no impact in the short run. The study intends to test the following hypotheses:

Hypothesis 1: Investor sentiment positively influences bank deposits in the long run.

Hypothesis 2: Investor sentiment positively (or has no influence) influences bank deposits in the short run.

3. Data and Methodology

The focus of this study is to create and utilise investors sentiment index (ISI) in order to explain the role that sentiment plays in the bank deposit market in the short and long run. Sentiment is a psychological construct. A number of proxies were used to construct the sentiment index. Among these proxies are the attitude based surveys conducted by Malaysian Institute of Economic Research (MIER, 2010). Two surveys were used: the consumer sentiment index and the other, the business condition index. In both cases, the surveys comprised a number of socio-economic questions that influence financial planning of individuals, either individual investors or individual managers as a representatives of a business firm. Use of consumer sentiment index (CSI) as a proxy for investor sentiment is supported by various studies (Schmeling, 2009). Questions asked in the surveys are listed in Table 1.

Table 2 describes the variables used to test the hypothesis. Natural log of the total commercial bank deposit (in billion Ringgit) was used to proxy deposit market performance (LDEP). LDEP is the dependent variable of this study. Natural log of CPI-adjusted currency index of Malaysian Ringgit to United States Dollar was considered as proxy for exchange

Table 1
Consumer Sentiment Index and Business Condition Index

Consumer Sentiment Index	
SL	Questions/Issues
1	Household income
2	Expected financial condition
3	Expected employment condition
4	Inflation expectation
5	Expected investment in real estate or automobiles
Business Condition Index	
SL	Questions/Issues
1	Current and expected level of production
2	Level of sales
3	New job offerings
4	Level of inventory
5	Level of new orders placed

Source: MIER (2010)

Table 2
Description of the Variables

Variables	Descriptions	Mean	Jarque-Bera*	Prob
ISI	Composite investor sentiment index	-0.212	1.945	0.378
LCUR	Log natural of the currency index	4.393	0.79	0.73
LDEP	Log natural of the bank deposit	4.63	3.89	0.14
LGDP	Log natural of GDP	4.875	4.17	0.12
LMNS	Log natural of the money supply	6.43	4.6	0.10
LINT	Log natural of the interest rate	1.261	4.69	0.10

Notes: Time frame: Q1 1998 to Q4 2011. *Null hypothesis: Data is normal

Table 4
Unit Root Tests

	Level		1st Difference		Remarks	
	ADF	PP	ADF	PP	ADF	PP
LSI	-2.8650	-3.0277	-10.257**	-10.2449**	I(1)	I(1)
LGDP	-2.365	-4.0009^	-4.5464**	-10.6153**	I(1)	I(0)^
LCUR	-1.8388	-1.8779	-6.5679**	-6.5971**	I(1)	I(1)
ISI	-3.1877	-3.0623	-7.0121**	-7.0164**	I(1)	I(1)
LINT	-2.2985	-1.8914	-5.0939**	-5.0578**	I(1)	I(1)
LMNS	-0.8745	-0.9266	-6.9248**	-7.1948**	I(1)	I(1)
LDEP	-2.4755	-2.5476	-6.6899**	-7.0624**	I(1)	I(1)

Notes: ^KPSS at level = 0.1327; at 1st Diff = 0.1687**; ** Significant at 5% level. The test equations included both intercept and trend terms. The lag order of the ADF and PP tests were based on Schwarz Info Criterion (SIC) and Bartlett-Kernel methods respectively.

Table 5
Lag Length Selection

Lag	AIC	SIC	Auto-correlation of the error term						
			LSI	LDEP	LCUR	ISI	LGDP	LINT	LMNS
1	-11.25	9.77		(11)	(9)	(8)	(8)	(12)	(13)
2	-12.33	10.01		(all lags)	(all lags)	(all lags)	(all lags)	(all lags)	(all lags)

Notes: There is no auto-correlation up to ( )th lag. Separate analyses were conducted for LSI and LDEP. Maximum by default number of lags was 35.

Table 6
Co-integration Tests

Test statistics	Null hypotheses			
	r = 0	*r = 1*	*r = 2*	*r = 3*
Trace	92.91**	21.11	6.41	0.96
Max EV	79.63**	17.02	5.25	0.79
		Critical Values (5%)		
Trace	*47.85613*	*29.79707*	*15.49471*	*3.841466*
Max EV	*27.58434*	*21.13162*	*14.2646*	*3.841466*

Note: ** Significant at 5%.

integrating vectors. Trace and maximum eigenvalue techniques are reported along with their respective test statistics and critical values. Critical values were found in MacKinnon (1991). Tests for co-integration showed only one possible co-integrating vector while both the trace and the maximum Eigen value statistics are far above the critical values.

Table 5 reports the lag length selection tests. When the co-integration analysis was conducted using lag 2, 'no auto-correlation in the error term' was found. Co-integration tests reported in Table 6 presents the possibility of one co-integrating vector. Test statistics of the null hypothesis r = 0 are higher than the critical value in trace and maximum Eigen

Table 7
Long-run Interactions – VECM Estimates

Independent variables	Bank deposits (LDEP)
ISI	**0.23*** **
LGDP	3.67***
LMNS	0.76***
LCUR	-2.79***
LINT	0.92***
C	1.03
R2	0.566517
Adj. R2	0.337735

Note: *** = significant at 1%, ** = significant at 5%, LDEP = natural log of bank deposit

value tests. The null hypothesis was rejected, which means that there can be at most one cointegrating equation. Table 7 shows that investor sentiment is positively related to bank deposits in the long run. It means higher (lower) sentiment increases (decreases) bank deposit flow to commercial banks in Malaysia.

Among other fundamental variables, higher output growth (GDP), money supply (MNS), and interest rate (INT) show positive connections to bank deposit. A strong Malaysian exchange rate will decrease Malaysian deposit flow to banks, which is quite contrary to the theory but possible. The plausible reason behind the negative relationship between currency index and bank deposits can be explained with an example. If there is an opportunity cost involved between stock and bank market while stock market offers higher return in a high sentiment period when compared to the deposit market, international customers who are saving in Malaysian banks will move to the stock market. Reduction in bank deposits in a high sentiment period, with respect to the higher currency index value, may result in a negative relationship between currency value and deposit flow to banks. However, it requires further study and cross-country examinations.

The short-run relationships between sentiment and bank deposits are quite interesting. Table 8 shows the possibility of error correction in the deposit model. Investor sentiment in the first lag significantly positively influences bank deposits. Explanations of the short-run VECM estimations are sometime difficult to relate to theory. Granger causality results in Table 9 can help in explaining the relationships. Sentiment, GDP, money supply and interest rate Granger cause bank deposits. Higher sentiment, output growth and interest rate motivate investors to put their money in banks. Expansionary money supply will also increase the flow of deposits to banks. A major question in this regard is 'how does higher sentiment increase stock market as well as bank deposits' as these two markets are complementary from the investment standpoint. This argument will not stand in a bank-dependent financial market where a major portion of stock market activity passes through bank deposits, causing the deposit volume to go up or down.

On the other side, bank deposits Granger cause interest rate. Currency and GDP Granger cause each other. It means deposits and interest rates reveal a bi-directional causal relationship. Hence, the connection between interest rates and deposits becomes a policy variable, which depends on the demand and supply of bank deposits. A higher deposit supply will reduce the interest rate and vice versa.

Table 8
Error Correction Terms and Short-run Interactions of Bank Deposits

	Error correction					
	D(LDEP)	D(ISI)	D(LCUR)	D(LINT)	D(LGDP)	D(MNS)
	0.052062	0.035795	-0.000617	0.136259	0.054566	-1.512029
	[-4.6113]	[0.08393]	[-0.03946]	[1.86379]	[4.39769]	[-4.20603]
	Short-term Interactions					
D(LDEP(-1))	-0.157877	-0.698917	0.021564	-0.204071	-0.010295	0.85383
	[-0.78939]	[-0.92509]	[0.77882]	[-1.57566]	[-0.46836]	[1.34070]
D(LDEP(-2))	-0.24949	-1.166326	-0.049311	0.043589	-0.013284	0.24459
	[-1.30999]	[-1.62115]	[-1.87026]	[0.35343]	[-0.63462]	[0.40332]
D(ISI(-1))	**0.125061**	0.037009	-0.008008	0.075038	0.021706	0.45107
	[2.56465]	[0.20091]	[-1.18627]	[2.37627]	[4.05013]	[2.90495]
D(ISI(-2))	0.040904	-0.047379	0.009525	0.047872	0.022416	0.301361
	[0.67401]	[-0.20667]	[1.13369]	[1.21813]	[3.36078]	[1.55948]
D(LCUR(-1))	-0.449556	1.055646	0.346534	-0.908925	0.030032	1.62243
	[-0.56240]	[0.34960]	[3.13148]	[-1.75590]	[0.34184]	[0.63741]
D(LCUR(-2))	-0.212633	0.576126	-0.204334	-1.07512	0.006707	4.341497
	[-0.25753]	[0.18471]	[-1.78761]	[-2.01075]	[0.07390]	[1.65128]
D(LINT(-1))	-0.167765	-0.148029	0.018227	0.390434	0.053963	0.525269
	[-0.71966]	[-0.16810]	[0.56478]	[2.58633]	[2.10622]	[0.70762]
D(LINT(-2))	-0.205468	-0.701683	0.028839	0.300115	-0.015026	-0.286851
	[-0.85659]	[-0.77439]	[0.86845]	[1.93209]	[-0.56999]	[-0.37556]
D(LGDP(-1))	1.239318	-1.622989	-0.344442	1.222517	-0.60917	-3.396941
	[1.35849]	[-0.47095]	[-2.72727]	[2.06936]	[-6.07560]	[-1.16937]
D(LGDP(-2))	0.98112	-0.934973	0.048819	0.524742	-0.636015	0.534432
	[1.23857]	[-0.31245]	[0.44517]	[1.02295]	[-7.30540]	[0.21188]
D(MNS(-1))	0.023527	0.392803	-0.003225	-0.089115	-0.026173	-0.267735
	[0.30708]	[1.35721]	[-0.30410]	[-1.79616]	[-3.10830]	[-1.09744]
D(MNS(-2))	-0.100029	0.374742	-0.002316	-0.015628	-0.008237	-0.35213
	[-1.47084]	[1.45867]	[-0.24598]	[-0.35486]	[-1.10197]	[-1.62604]
C	-0.005264	0.068512	0.00749	-0.028248	0.030629	0.015179
	[-0.19447]	[0.67002]	[1.99883]	[-1.61151]	[10.2955]	[0.17611]
R-squared	0.566517	0.46365	0.513872	0.633294	0.888116	0.832121
Adj. R-sqd.	0.337735	0.180577	0.257305	0.439755	0.829067	0.743518

Table 9
Granger Causality in a Bank Deposit Model

Dependent variable: D(LDEP)			Dependent variable: D(LGDP)		
Excluded	Chi-sq	Prob.	Excluded	Chi-sq	Prob.
D(ISI)	**9.830**	**0.007**	D(LDEP)	2.277	0.320
D(LCUR)	2.050	0.359	**D(ISI)**	**11.492**	**0.003**
D(LGDP)	**7.221**	**0.027**	**D(LCUR)**	5.437	**0.066**
D(LINT)	**13.334**	**0.001**	D(LINT)	2.156	0.340
D(LMNS)	**7.868**	**0.020**	D(LMNS)	2.134	0.344
All	**46.473**	**0.000**	**All**	**39.963**	**0.000**
Dependent variable: D(ISI)			Dependent variable: D(LINT)		
D(LDEP)	3.781	0.151	**D(LDEP)**	**7.624**	**0.022**
D(LCUR)	0.888	0.642	D(ISI)	2.743	0.254
D(LGDP)	1.014	0.602	D(LCUR)	3.629	0.163
D(LINT)	1.663	0.435	D(LGDP)	1.396	0.498
D(LMNS)	3.163	0.206	D(LMNS)	0.528	0.768
All	**17.735**	**0.060**	**All**	**18.969**	**0.041**
Dependent variable: D(LCUR)			Dependent variable: D(LMNS)		
D(LDEP)	0.996	0.608	D(LDEP)	0.639	0.727
D(ISI)	2.919	0.232	D(ISI)	0.060	0.970
D(LGDP)	**4.841**	**0.089**	D(LCUR)	0.574	0.750
D(LINT)	3.259	0.196	D(LGDP)	0.407	0.816
D(LMNS)	1.586	0.453	**D(LINT)**	**7.204**	**0.027**
All	13.614	0.191	All	14.222	0.163

Notes: Granger causality in VECM test follows Chi-squared distribution. Null hypothesis: X does not Granger cause Y.

5. Concluding Remarks

This study investigated the influence of investor sentiment on bank deposits in Malaysia. In order to fulfil the objective, the study constructed an investor sentiment index by using principal component analysis. The index combined four variables, two of which were attitude based survey proxies, that is, the Consumer sentiment index (CSI) and Business condition index (BCI) which were collected from MIER. The other two proxies were stock market turnover (TURN) and the ASEAN composite FTSE index (ASEAN). The study examined the short and long run relationships between the sentiment index and bank deposits. The vector error correction model was used to achieve the results. The study revealed strong long-run and weak short-run relationships between sentiment and bank deposits. Among other variables, output growth, money supply and interest rate were also found to have a positive influence on bank deposits. Currency index showed a negative influence on bank deposits, which can be explained from the perspective of opportunity cost principle that exists between stock and bank markets in a bank-dependent financial market.

In order to extend the relationships, the study conducted Granger causality tests. Sentiment, output (GDP) and money supply presented a strong causal influence on bank deposits. Interest rate and bank deposits revealed a bi-directional causal influence, which can be substantiated using the basic demand and supply principle. Policymakers can use the results to make policy changes in order to attract more deposits into banks. It may so

happen that during a period of higher sentiment, banks can offer a low interestrate but can still attract a higher amount of deposits as no bi-directional causality was found between sentiment and interest rate. During a period of low sentiment, interest rate can work as a positive factor to bring new deposits to banks. These findings strongly support the timing theory in finance but in deposit pricing, bank managers can time the market while pricing the deposits. During high sentiment they can offer less interest rate and vice versa.

References

Ajzen, I., & Driver, B. L. (1992). Application of the theory of planned behaviour to leisure choice. *Journal of Leisure Research, 24*(3), 207-224.

Akaike, H. (1974). A new look at the statistical model identification. *Automatic Control, IEEE Transactions on, 19*(6), 716-723.

Baker, M., & Stein, J. C. (2004). Market liquidity as a sentiment indicator. *Journal of Financial Markets, 7*(3), 271-299.

Baker, M., & Wurgler, J. (2007). Investor sentiment in the stock market. *Journal of Economic Perspectives, 21*(2), 129-151.

Baker, M. P., & Wurgler, J. (2006). Investor sentiment and the cross-section of stock returns. *Journal of Finance, 61*(4), 1645-1680.

Baker, M. P., Wurgler, J. A., & Yuan, Y. (2009). Global, Local, and Contagious Investor Sentiment. *SSRN eLibrary*.

Baker, M. P., Wurgler, J. A., & Yuan, Y. (2010). Global, local, and contagious investor sentiment. *Journal of Financial Economics, 104*, 272-287.

Bandopadhyaya, A., & Jones, A. L. (2006). Measuring investor sentiment in equity markets. *Journal of Asset Management, 7*(3), 208-215.

Barberis, N., Shleifer, A., & Vishny, R. (1998). A model of investor sentiment. *Journal of Financial Economics, 49*(3), 307-343.

Beaumont, R., Daele, M. V., Frijns, B., & Lehnert, T. (2006). *On individual and institutional noise trading.* Paper presented at the PFN 2006 Conference Faculty of Economics, University of Porto.

Bekaert, G., & Harvey, C. R. (2002). Research in emerging markets finance: looking to the future. *Emerging Markets Review, 3*(4), 429-448.

Bekaert, G., & Harvey, C. R. (2003). Emerging markets finance. *Journal of Empirical Finance, 10*(1-2), 3-55.

Bergman, N., & Roychowdhury, S. (2008). *Investor sentiment and corporate disclosure*. Available at SSRN: *http://ssrn.com/abstract=1104444*. Retrieved from *http://ssrn.com/paper=1104444*

BM. (2009). Bursa Malaysia annual report. Kuala Lumpur: Bursa Malaysia.

Brown, G. W., & Cliff, M. T. (2004). Investor sentiment and the near-term stock market. *Journal of Empirical Finance, 11*(1), 1-27.

Brown, G. W., & Cliff, M. T. (2005). Investors sentiment and asset valuation. *Journal of Business, 78*(2), 82-90.

Brown, K. C., Harlow, W. V., & Tinic, S. M. (1988). Risk aversion, uncertain information, and market efficiency. *Journal of Financial Economics, 22*(2), 355-385.

Burdekin, R. C. K., & Redfern, L. (2009a). Sentiment effects on Chinese share prices and savings deposits: the post-2003 experience. *China Economic Review, 20*(2), 246-261.

Burdekin, R. C. K., & Redfern, L. (2009b). Stock market sentiment and the draining of China's savings deposits. *Economics Letters, 102*(1), 27-29.

Daniel, K., Hirshleifer, D., & Subrahmanyam, A. (1998). Investor psychology and security market under- and overreactions. *Journal of Finance, 53*(6), 1839-1885.

Daniel, K., Hirshleifer, D., & Subrahmanyam, A. (2001). Overconfidence, arbitrage and equilibrium asset pricing. *Journal of Finance, 56*(3), 921-965.

Daniel, K., Hirshleifer, D., & Teoh, S. H. (2002). Investor psychology in capital markets: Evidence and policy implications. *Journal of Monetary Economics, 49*(1), 139-209.

Daouk, H., Lee, C. M. C., & Ng, D. (2006). Capital market governance: How do security laws affect market performance? *Journal of Corporate Finance, 12*(3), 560-593.

DeLong, J. B., Shleifer, A., Summers, L. H., & Waldmann, R. J. (1990). Noise trader risk in financial markets. *Journal of Political Economy, 98*(4), 703-738.

Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association, 74*(366), 427-431.

Drakos, K. (2010). Terrorism activity, investor sentiment, and stock returns. *Review of Financial Economics, 19*(3), 128-135.

Field, A. P. (2005). *Discovering statistics using SPSS.* London: Sage.

Finter, P., Niessen-Ruenzi, A., & Ruenzi, S. (2012). The impact of investor sentiment on the German stock market. *Zeitschrift für Betriebswirtschaft, 82*(2), 133-163.

Grossmann, A., Ozuna, T., & Simpson, M. W. (2007). ADR mispricing: Do costly arbitrage and consumer sentiment explain the price deviation? *Journal of International Financial Markets, Institutions and Money, 17*(4), 361-371.

Hirshleifer, D. (2001). Investor psychology and asset pricing. *Journal of Finance, 56*(4), 1533-1597.

Ibrahim, M. H. (2004). Response asymmetries in the linkage of ASEAN-5 equity prices. *Capital Markets Review, 12*(1&2), 17-34.

Ibrahim, M. H. (2007). The role of the financial sector in economic development: The case of Malaysia. *International Review of Economics, 54*, 463-483.

Johansen, S. (2002). A Small sample correction for the test of cointegrating rank in the vector autoregressive model. *Econometrica, 70*(5), 1929-1961.

Johansen, S., & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration: with applications to the demand for money. *Oxford Bulletine Economics Statistics, 52*(2), 169-210.

Johansen, S., & Juselius, K. (1992). Testing structural hypotheses in a multivariate cointegration analysis of the PPP and the UIP for UK. *Journal of Econometrics, 53*(1-3), 211-244.

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39*(1), 31-36.

Kurov, A. (2010). Investor sentiment and the stock market's reaction to monetary policy. *Journal of Banking and Finance, 34*(1), 139-149.

Lee, C. M. C., Shleifer, A., & Thaler, R. H. (1991). Investor sentiment and the closed-end fund puzzle. *Journal of Finance, 46*(1), 75-109.

MacKinnon, J. G. (1991). Critical values for cointegration tests. *Long-run economic relationships: Readings in cointegration*, 267-276.

MIER. (2010). Malaysian Institute of Economic Research. Retrieved July 11, 2010, from *http://www.mier.org.my/surveys*

Nunnally, J. C. (1978). *Psychometric theory*. New York, NY: McGrew-Hill.

Perron, P. (1989). The great crash, the oil price shock, and the unit root hypothesis. *Econometrica: Journal of the Econometric Society, 57*(6), 1361-1401.

Qiang, Z., & Shu-e, Y. (2009). Noise trading, investor sentiment volatility, and stock returns. *Systems Engineering - Theory and Practice, 29*(3), 40-47.

Qiu, L. X., & Welch, I. (2006). *Investor sentiment measures*. Brown University and NBER. Working Paper Retrieved from *http://ssrn.com/paper=589641*

Ruzita, A. R., Abu Hassan Shaari, M. N., & Agus Harjito, D. (2006). Stock market linkages in the asean-5 region and implications on seasonality effect. *Capital Markets Review, 14*(1&2), 65-80.

Schmeling, M. (2007). Institutional and individual sentiment: smart money and noise trader risk? *International Journal of Forecasting, 23*(1), 127-145.

Schmeling, M. (2009). Investor sentiment and stock returns: some international evidence. *Journal of Empirical Finance, 16*(3), 394-408.

Schwarz, G. (1978). Estimating the dimension of a model. *The Annals of Statistics, 6*(2), 461-464.

Sharma, S. (1996). *Applied multivariate techniques*. New York: John Wiley & Sons Inc.

Sharma, S. C., & Wongbangpo, P. (2002). Long-Term trends and cycles in ASEAN stock markets. *Review of Financial Economics, 11*(4), 299-315.

Shleifer, A., & Summers, L. H. (1990). The noise trader approach to finance. *The Journal of Economic Perspective, 4*(2), 19-33.

Tversky, A., & Kahneman, D. (1974). Judgement under Uncertainty: heuristics and biases. *Science, 185*, 1124-1131.

Wongbangpo, P., & Sharma, S. C. (2002). stock market and macroeconomic fundamental dynamic interactions: ASEAN-5 countries. *Journal of Asian Economics, 13*(1), 27-51.

Scope of the Journal

The Journal of Finance and Financial Services will publish only original quality manuscripts (empirical, theoretical, practical, survey and synthesis research). The manuscripts can be from academicians, industrialists and research scholars in the following fields:

- Risk Management
- Banking & Financial Institutions (Islamic & Conventional)
- Corporate Finance
- Financial Markets & Portfolio Management
- Initial Public Offerings & Private Equity
- Wealth Management & Finance Literacy
- Financial Services Management
- Financial Services Marketing
- Financial Reporting
- Islamic Finance

Submission Guidelines

These are the guidelines applicable to contributions:

- The contents of the manuscript submitted shall be the sole responsibility of the authors and publication shall not imply the concurrence of editors or publishers
- To submit a paper, please send a copy in the form of an MS Word file, clearly indicating the area of specialisation to the following email: *firec.ukmmgsb@ukm.edu.my*
- Both theoretical and applied manuscripts will be considered for publication. Theoretical manuscripts must provide a clear link to important and interesting application.
- Submission of a manuscript will be held to imply that it contains original unpublished work and is not being submitted or considered for publication elsewhere.
- All manuscripts shall be subject to an editorial pre-screening process to assess suitability for the journal.
- On submission , the Editor will acknowledge the receipt of the manuscript, with a serial number which hould be cited in all future correspondence.

Abstract preparation guidelines :

- The abstract (200-250 words) should reflect the conceptual content of the article. In the abstract the author should give a brief overview of research importance, describe the subject matter and the aim of research, its methodology as well as highlight the most significant results of research.
- Journal of Economic Literature (JEL) classifications that can be found at http://www.aeaweb.org/journal/jel_class_system.html, are necessary.
- Font - Times New Roman; text size - 12 pts, line-spacing - one-and-a-half.

Main body preparation guidelines :

- The paper should present the results of an independent original research undertaken by the author; it should not contain data previously published as a whole paper.
- The paper should contain a clear description of research objectives and its subject.
- The methodology of research should be described in detail.
- The author's personal scientific contribution must be grounded in the paper.
- The paper should contain basic suggestions on how to solve the problem under study.

The structure of the paper

- The title of the paper and the name of the author should appear on the first page. Reference to the author's name should be made at the bottom of the page with a footnote marked by asterisk ("*"). The reference should contain information about the author's academic qualifications, position and the place of work as well as contact details (phone number, job or/ and personal e-mail).
- The text of the abstract follows.
- Next comesthe abstract, keywords and JEL classification.
- This is to be followed by the main body of the paper .
- Next comes the references.
- References contain the list of literature referred to arranged in alphabetical order.
- All figures and tables should not be located inside the papers' main body.

References in the text

- citations to references in the text are as follows: (Myers, 2000; Lee,Shleifer, & Thaler,1991), the former being the name(s) of the author, the latter, the publication year.
- Examples of references in the reference list:

  Lee, C. M. C., Shleifer, A., & Thaler, R. H. (1991). Investor sentiment and the closed-end fund puzzle. *Journal of Finance, 46*(1), 75-109.

  Sharma, S. (1996). *Applied multivariate techniques*. New York: John Wiley & Sons Inc.

  Bank Negara Malaysia(BNM)(2010). *Monthly Statistical Bulletin*; June. Kuala Lumpur: BNM.

  Pinto B. & S. Van Wijnbergen (1955). Ownership and corporate control in Poland: Why State firms defied the odds. CEPR Discussion Paper, 42 p.

Abbreviatons

Any word or words to be abbreviated should be written in full when first mentioned followed by the abbreviation in parentheses.

Illustrations & Tables

All illustrations should be a good laser printout and submitted as sequentially numbered figures. Illustrations should not be inserted in the manuscript but supplied. Tables should be numbered and headed with short titles.

Acknowledgements

Acknowledgements should appear at the end of the text before references

Manuscript length

The paper should not be less than 2000 words and should not exceed 6000 words.

Reviewing process

All papers will be reviewed prior to : acceptance as is, without any alteration / accepted with minor revision / rejected, but encouraged to re-write and re-submit / rejected without further consideration. When a paper is accepted for publication, the Editor will inform the author about the expected volume and issue of the journal the paper could be published. The decision of the editorial board is final.

Subscription

Journal of Finance and Financial Services (JFFS) is published in March and September of each year.

Please enter my subscription to **Journal of Finance and Financial Services** volume_____

Subscription rates per year

	Malaysia	Other countries*
Individual	RM 60.00	USD 30.00
Institution	RM 90.00	USD 50.00

* Please add USD 5.00 per issue for airmail surcharge

Payment

Cheques (Malaysia only) or bank drafts should be made payable to **Journal of Finance and Financial Services** and addressed to:

Name: Universiti Kebangsaan Malaysia

Bank: CIMB bank Berhad; Account no. 8002240869

Note: Proof of payment payment should be sent to UKM-GSB via fax: 0389213161

Enquiries relating to subscriptions should be addressed to:

Managing Editor
Journal of Finance and Financial Services
Finance and Financial Services Research Excellence Centre (FiReC)
UKM- Graduate Schoo l of Business, Universiti Kebangsaan Malaysia
43600 UKM, Selangor Darul Ehsan, Malaysia
Tel: 03 89214960; Fax: 0389213161
Email: *firec.ukmgsb@ukm.edu.my*