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Islamic and conventional bank market value: Manager behavior and investor sentiment

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Abstract: This paper studies the effect of bank manager behavior and investor behavior on market value of Islamic and conventional banks in the Middle East and North Africa region. Firstly, our analysis denoted the positive effect of discretionary behavior of manager on both types of banks on share prices since discretionary behavior transmits to investor a positive signal of future earnings' prospects. Also, we find that the conventional bank stock prices response is very high to negative signal compared with positive signal. This result is explained by prospect theory and loss aversion bias which specified that individuals are more sensitive to losses than gains of same magnitude. In particular, we discover that the negative effect of non-discretionary behavior is much lower on Islamic bank value since investors give more confidence to Islamic bank because they are motivated by the idea that Islamic banks are safer than conventional banks. Secondly, the results show that investor sentiment affects significantly both bank market prices. Thus, both Islamic and conventional banks' market value depends similarly on manager and investor behavior. The implication of this paper is that Islamic bank concentrations reveal a positive effect on their price values because of the recently increased investments in Islamic banks.

Subjects: Banking; Banking & Finance Law; International Finance

Keywords: Islamic and conventional banks; manager behavior; investor sentiment; bank concentration; performance

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PUBLIC INTEREST STATEMENT

The stock market value depends on various factors. This study investigates the effect of bank manager behavior and investor behavior on market value of Islamic and conventional banks in eight countries of the Middle East and North Africa region. The empirical findings of this paper show that the behavior of manager affects significantly the banks value. Indeed, discretionary behavior of manager transmits to investor a positive signal of future earnings' prospects. Moreover, conventional market bank value response is very high to negative signal compared with positive signal. Our results also indicate that the effect of investor sentiment on both bank market prices is also significant. Our paper highlights either an important implication that the limited number of Islamic banks presents a positive effect on Islamic market bank value.

1. Introduction

Banks as financial institutions play a crucial role to maintain financial stability in the stock financial markets. In this context, managers through their decisions and through the disclosures of provision are likely to have an effect on bank prices in financial markets. Indeed, bank managers transmit in the market positive and negative signals through Loan Loss Provision (LLP) which reflect the expected losses of portfolio lending affecting investors' perceptions of bank value. Therefore, LLP appears to reveal a signaling effect (Ahmed, Takeda, & Thomas, 1999; Grammatikos & Saunders, 1990; Hatfield & Lancaster, 2000) changing investor emotions and affecting their reactions toward bank stocks. Therefore, the effect of bank manager behavior and investor emotion on bank prices is an interesting issue worthy of investigation.

Bank manager transmitted positive and negative signals using bank accruals in financial markets which may affect prices since LLP comprises a discretionary (DLLP) and a non-discretionary (NLLP) component (Wahlen, 1994). In his paper, Wahlen (1994) has studied the effect of default risks on bank stock market values. He finds that the disclosures of discretionary component of unexpected provisions present a positive effect on investor despite that provisions is considered as a measure of expected losses. In the same context, Elnahass, Izzeldin, and Abdelsalam (2014) report a positive effect on share prices of an increase in provision due the discretion of bank manager. Beaver and Engel (1996) and Liu, Ryan, and Wahlen (1997) consider that investors positively appreciate an increase in Discretionary Loan Loss Provisions (DLLPs) since it is considered as a sign of strength. However, these authors find that the increased level of charge off and change in nonperforming loans (non-discretionary component) transmits a negative signal to the market since banks increase LLP to cover loan default. Consequently, each level of default risk increased may enlarge investor pessimism in financial market inducing them to sell bank stocks which may affect largely bank stock market values. Indeed, investor sentiment which can be defined as the feeling or the attitudes of investors toward a security or toward all financial markets can be transmitted to financial markets through its transactions and its choices.

In this context, the emotional psychology of investor represents an important factor which affects prices through optimistic or pessimistic vs. future market conditions. Indeed, when investors are optimistic due to the presence of positive returns, this reinforces investors to buy more equity increasing their prices. In contrast, investor pessimistic sentiment would generate the redemption of bank equity, which enforces investor to sell out stocks. Therefore, the discretionary and non-discretionary behaviors of the manager may affect the price and consequently affect the emotion of investor which is revealed in transaction volume, which may affect the confidence of investor in Islamic or conventional banks.

Therefore, it may be interesting to understand if bank value is driven mostly by bank characteristics and the discretionary behavior of managers or by external factors like investor sentiment and macroeconomic factors. In this context, it is important to indicate that a growing body of literature documents the single behavior for the discretionary behavior of manager. However, to our knowledge this is the first paper which investigates simultaneously the effect of manager behavior and the investor emotion on bank value.

Thus, this paper added multi to literature. First, it provides a refined analysis of the behavior of bank manger and the behavior of investor on financial markets by focusing on behavioral finance. Second, this study adds to the existing literature on Islamic finance because it analyzes the psychology of manager and investor and their behavior toward Islamic and conventional bank price. Third, it compares the effect of macroeconomic factors, specifically the effect of market concentration across Islamic and conventional banks' market value.

In this paper, firstly we study the effect of the behavior of bank manager on bank market value by focusing on the discretion of manager using LLP of 25 Islamic banks (IBs) and 45 conventional banks (CBs) during the period 2005–2013 by estimating Beaver and Engel (1996) and Ohlson (1995) mod-

els. Second, we examine simultaneously the effect of investor sentiment on Islamic and conventional banks' market price and the contribution of macroeconomic factors on bank value by estimating a model including lagged returns and trading volume as investor sentiment measures and Gross Domestic Product (GDP) and market concentration as macroeconomic factors.

This paper proceeds as follows. Section 2 presents the literature review and hypotheses. Section 3 contains the data and the methodology. The empirical results are discussed in Section 4. The final section is a conclusion.

2. Literature review and hypotheses

2.1. Manager behavior and Islamic and banks' market value

The field of behavioral finance is very relevant in a better study and understanding of human judgment and their effect in financial markets. The psychological parameters of the participants in the financial markets play a crucial role in the variation of bank market value. In this context, the discretionary behavior displayed by bank managers using LLPs may largely affect the investor sentiment and the bank market prices. This discretionary behavior is examined by several studies which indicate that bank managers by exercising discretionary behavior over LLP transmit in the market good news, about future prospects of banks. Beaver, Eger, Ryan, and Wolfson (1989) report that investors interpret the unexpected increases in LLP as a signal of a bank's financial strength. Scholes, Wilson, and Wolfson (1990) suggest that bank managers can lower their cost of capital by exercising discretion over LLP to convey their private information to investors. Shawtari, Saiti, Shaikh Hamzah, and Ariff (2015) find that the discretion magnitude is significantly lower in Islamic banks than conventional banks with some exceptions. Hansen and College (2015) have studied the managerial discretion during the financial crisis of 2007–2010. They find evidence that bank managers use loan reserve to improve the public's perception of bank performance.

Thus, the first and the second hypotheses to be tested are:

Hypothesis 1: Bank market value is positively related to loan loss provision.

Hypothesis 2: Bank market value is positively related to discretionary behavior of bank manager.

The LLP exhibit a discretionary behavior of bank manager. However, it also exhibits a non-discretionary behavior which is due to the increased level of charge off and changing in nonperforming loans. Elnahass et al. (2014) find that the increase of the non-discretionary component in Islamic and conventional banks is considered by investors as irrelevant valuation information.

The non-discretionary behavior due to default risk and bad debt information transmits negative signals in the market. Indeed, banks increase a Non discretionary Loan Loss Provision (NLLP) to cover loan. Consequently, each level's increase of default risk may enlarge investor pessimism in financial market which leads them to sell bank stocks which may affect largely bank stock market values.

Thus, the third hypothesis to be tested is:

Hypothesis 3: Bank market value is negatively related to non-discretionary behavior of bank manager.

The negative effect of non-discretionary component may exhibit a negative effect which can be higher in conventional banks compared to Islamic banks, since investors exhibit more confidence in Islamic banks which are considered stronger in facing risk than conventional banks especially during crisis period. Indeed, in the subprime financial crises, it has been proved that Islamic banks are weakly affected by this crisis compared with conventional banks. Zehri, Abdelbaki, and Bouabdellah

(2012) reports that during the 2007–2008 crisis, Islamic banks which adopted Sharia law are more stable than conventional banks. Bitar, Madiès, and Taramasco (2015) find that Islamic banks were more resilient in terms of capital and profitability than conventional banks during credit crisis of 2008. Beck, Demirgüç-Kunt, and Merrouche (2013) have compared the efficiency and the stability of Islamic and conventional banks during the subprime financial crisis. They note that Islamic banks perform better during crises in terms of capitalization and asset quality than conventional counterparts.

The fourth hypothesis to be tested is:

Hypothesis 4: The negative effect of non-discretionary behavior of manager is largely higher for conventional banks compared with Islamic banks.

2.2. Investor sentiment and banks' market value

The study of the impact of investor sentiment on price dynamics in financial markets is considered as a central focus in behavioral finance. The investor sentiment which can be defined by the feeling or attitudes of investors toward a security or toward all financial markets can be transmitted to financial markets through its transactions and its choices. Behavioral biases like loss aversion, pessimism, and herding can drive market during crisis period or tranquil period. The effect of investor sentiment on stock price in financial markets is well investigated. However, the question whether the sentiment or mood of investors has an impact especially on asset prices of banks has not been investigated to our knowledge.

A growing number of empirical studies (Baker & Wurgler, 2007; Fisher & Statman, 2000; Schmeling, 2009) mainly explore the relation between the investor sentiment and the returns. In fact, most studies suggest the existence of significant relation between the investor sentiment and the expected returns. Baker and Wurgler (2006) find evidence of significant effect of investor sentiment on the cross section returns. Quiang and Shu-e (2010) find that the fluctuation of investor sentiment asymmetrically affects the fluctuation of stock prices. Indeed, the change in stock prices depends on positive or negative investor sentiment changes. Kling and Gao (2008) find that the lagged positive returns lead optimism in the market. However, lagged negative returns lead pessimism in financial market.

Thus, lagged returns considered as investor sentiment measures may affect stock bank prices. Indeed, if the lagged return is positive we may anticipate that investor presents a certain level of optimism which may increase bank value. Benartzi and Thaler (1995) have found that the investor evaluates his portfolio annually based on prospect theory (behavioral theory). Thus, we suggest that the annual lagged return can affect the investment decision. If one year lagged return is positive, the investor will be optimistic about these stocks. However, if it is negative, he will be pessimistic about these stocks. Thus, we expect that lagged returns affect significantly the stock market prices.

The fifth hypothesis to be tested is:

Hypothesis 5: The investor sentiment measured by lagged returns significantly affects the bank market value.

In the same context, trading volume is considered as investor sentiment measure in many research papers (Baker & Wurgler, 2007; Karpoff, 1987; Rutledge, 1984; Scheinkman & Xiong, 2003; Westerfield, 1977; Ying, 1966). Al Samman and Al-Jafari (2015) find a significant positive effect of trading volume on stock returns.

We consider that when investor sentiment reveals optimism by a large trading volume, the price of bank value may increase. Thus, the increase in discretionary behavior of bank manager through

DLLP implies an increase in optimism of investor and thus an increase in market price of both Islamic and conventional banks.

The sixth hypothesis to be tested is:

Hypothesis 6: The investor sentiment measured by trading volume significantly affects the bank market value.

2.3. 3-GDP and market competitiveness conditions

Knowledge of external variables which significantly affect bank market value allows manager, investor and all other participants in financial market in taking the optimal decision. External variables like concentration and GDP are variables which are to be beyond the control of the management of a bank.

Clair (2004) finds that the increase in GDP is associated with an increase in higher returns earned by banks. Chun and Razak (2015) find that nominal GDP has significant impact on return on average asset, liquidity ratio, and equity to net loans. Moreover, several research papers report a positive relationship between GDP and profitability of the banks (Athanasoglou, Delis, & Staikouras, 2008; Kosmidau, Tanna, & Pasiours, 2008).

We consider that the positive conjuncture drives the investor to trade more and invest more in stocks which may imply an increase in stock market. However, if there is a negative conjuncture, this drives a decrease in prices in stock market.

Thus, the following hypothesis is:

Hypothesis 7: GDP positively affects bank market value.

The relation between market price variation and market concentration is an important point to investigate. Gallagher, Ignatieva, and McCulloch (2013) report that dominant companies operating in concentrated industries in Australia generate significant risk-adjusted excess stock returns and excess profits on sales (monopoly rents). However, Hou and Robinson (2006) find that firms in more concentrated industries experience lower returns. They explain this result by the fact these firms operated in concentrated industries are less risky because they engage less in innovation to the existence of barriers to entry in highly concentrated industries.

Generally, the relation between concentration and returns in financial markets is not well documented in previous research studies. Moreover, the relation between bank concentration and return has not been considered in previous studies, to our knowledge.

We consider that investors, and especially Islamic investors, desire more and more investing on Islamic banks which are actually limited in number. Thus, we can expect that the increase in Islamic stocks requested by investor drives an increase in stock market prices. However, conventional bank operates in markets because they exist in large number, thus their market value is independent of market condition.

The following hypotheses to be tested are:

Hypothesis 8: Market price of Islamic bank is significantly affected by market concentration.

Hypothesis 9: Market price of conventional bank is independent of market concentration.

3. Data and empirical models

3.1. Data

This study focuses on two panels of listed banks, Islamic and conventional banks from a group of eight countries in the MENA region (Saudi Arabia, Kuwait, Emirates, Qatar, Bahrain, Egypt, Jordan, and Turkey) for the sample period of 2005–2013.

The data used in this paper are extracted from balance-sheet and income statement data from Bankscope database. Market price, trading volume, and GDP come from Thomson database. Concentration data come from Bankscope database.

The full sample comprises 70 banks. Indeed, we select 25 Islamic banks (IBs) and 45 conventional banks (CBs). A balanced panel data-set is used. We excluded some countries in MENA region because of the unavailability of market data in Thomson and Bankscope database.

3.2. Empirical models

The identification of factors which mainly affect the bank market price is an important point to be considered since, the subprime crisis is due primarily to the dramatic decrease in bank market prices and which is transmitted to other stocks in US financial markets and to other financial markets around the world. In this paper, we focus on internal and external factors which may affect bank market prices by considering behavior finance.

Indeed, we firstly study the effect of the behavior of manager which exhibits a discretionary and a non-discretionary behavior using LLP on Islamic and conventional bank prices through estimating the following model (Beaver and Engel (1996) and Ohlson (1995) models):

$$P_{it} = \alpha_0 + \alpha_1 \mathrm{BV}_{it} + \alpha_2 \mathrm{ENI}_{it} + \alpha_3 \mathrm{TLLP}_{it} + \alpha_4 \mathrm{CO}_{it} + \alpha_5 \Delta\mathrm{NPL}_{it} + \alpha_6 \Delta\mathrm{LOAN}_{it} + \alpha_7 T_t + \alpha_7 C_j + \phi_{it} \quad (1)$$

where P_{it} represents the bank market value of bank i in financial markets measured three months after fiscal year-end t; BV_{it} represents the book value of bank i in year t; ENI_{it} represents the bank net income after excluding LLP of bank i in year t. TLLP represents total loan loss provision for bank i in year t. CO_{it} represents the net loan charge offs for bank i in time t. ΔNPL, the change in non-performing loans for bank i in time t measured by the difference between the bank's non-performing loans between year t and year $t-1$. Non-performing loans and net loan charge offs reflect the probable loan losses. $\Delta\mathrm{LOAN}_{it}$ represents the change in outstanding loan for bank i in time t. T_t and C_j represent the country-year fixed effects. Equation (1) is estimated to test Hypotheses 1, 3, and 4.

In order, to test the effect of manager discretion (DLLP) on bank market value (Hypothesis 2), we should decompose TLLP into NLLP and DLLP.

Thus,

$$\mathrm{TLLP}_{it} = \mathrm{NLLP}_{it} + \mathrm{DLLP}_{it} \quad (2)$$

where DLLP_{it} is the discretionary component of LLP for bank_i in year t and NLLP_{it} is the non-discretionary component of LLP for bank_i in time t.

To estimate determinants of the unobservable NLLP, we should estimate LLP with charge offs (CO_{it}), Change in non-performing loans ($\Delta\mathrm{NPL}_{it}$), and the change in total loans ($\Delta\mathrm{LOAN}_{it}$).

Thus,

$$\mathrm{TLLP}_{it} = \beta_0 + \beta_1 \mathrm{CO}_{it} + \beta_2 \Delta\mathrm{NPL}_{it} + \beta_3 \Delta\mathrm{LOAN}_{it} + \beta_4 T_t + \beta_5 C_j + Z_{it} \quad (3)$$

where Z_{it}(composite term) = $\mathrm{DLLP}_{it} + \varepsilon_{it}$ because ε_{it} is non-zero, this indicates that DLLP is measured with some error. Thus, in this paper, we consider that manager does not exhibit discretion when reporting these variables (Elnahass et al., 2014).

In order to assess the effect of manager's discretion on bank value, we insert DLLP determined from Equation (3) in the Equation number (4).

Thus, our value relevance model is defined as follows:

$$P_{it} = \lambda_0 + \lambda_1 \mathrm{BV}_{it} + \lambda_2 \mathrm{ENI}_{it} + \lambda_3 \mathrm{DLLP}_{it} + \lambda_4 \mathrm{CO}_{it} + \lambda_5 \Delta\mathrm{NPL}_{it} + \lambda_6 \Delta\mathrm{LOAN}_{it} + \lambda_7 T_t + \lambda_7 C_j + \phi_{it} \quad (4)$$

After testing the effect of manager behavior on bank market value, we focus on the behavior of investor against Islamic and conventional banks and its effect on bank market prices. Indeed, we test the effect of investor sentiment measured by one-year lagged returns and trading volume on bank value. In this model, we also added market condition variables (GDP, IHH) to this model. Thus, the value relevance model is as follows:

$$P_{it} = \delta_0 + \delta_1 \mathrm{RT}_{it} + \delta_2 \mathrm{VOL}_{it} + \delta_3 \mathrm{IHH}_{it} + \delta_4 \mathrm{GDP}_{it} + \varepsilon_{it} \quad (5)$$

where P_{it} represents the bank market value of bank *i* in financial markets measured three months after fiscal year-end *t*, RT_{it} represents the lagged one fiscal year equity returns. VOL_{it} represents the trading volume during lagged one fiscal year *t*. IHH represents the Index of Herfindahl–Hirshman measured as the sum of the squares of the market shares of bank_{it} competing in the market within the banks in the markets at the end of fiscal year, GDP represents the GDP at the end of fiscal year.

4. Results

Behavioral finance is relevant in explaining the trends and the variation of stock prices in financial markets based on the psychology of actors. In this paper, we study firstly the effect of manager discretion (internal factor) on bank market price using LLP. Secondly, we focus on the sentiment of investor (external factor) and its affect on both Islamic and conventional market prices. As external factors, we also study the effect of market conditions on bank prices and the difference of this effect between Islamic and conventional banks.

4.1. Internal factors: the effect of manager discretion non market value of Islamic and conventional Banks

In this part of study, we investigate the contribution of the behavior of bank manager using LLP on the bank market value. LLP is the amount of money reserved to offset future losses on bad loans. Bank manager exercises her discretionary behavior to estimate the necessary LLP. Firstly, we test the effect of bad debt levels which reflects the non-discretionary component of loss provision disclosures. Secondly, we test the effect of the discretion of manager on price market. Thus, we estimate Equation (1) which tests the effect of book bank value, net income, total LLP, net loans charge offs, Change in non-performing loans, and the change in outstanding loan. The net loan charge offs, Change in non-performing loans, and the change in outstanding loan represent the non-discretionary component of LLP. The results of the estimated Equation (1) are provided in Table 1.

The coefficients of all determinants exhibit the predicted signs. Total LLP has the predicted positive sign and is statistically significant, confirming Hypothesis 1 that manager increases TLLP in order to signal future prospect growth in both Islamic and conventional banks.

Manager uses LLP in many circumstances. One of these circumstances is that manager needs to revise upward the bank value when he considers that the bank value it is larger than value assessed in financial markets. So, he transmits in financial markets information that the bank is strong enough to absorb future potential losses through increasing the LLP. Increasing LLP is good news because

Table 1. Effect of manager behavior on bank market value

Model:

$$P_{it} = \alpha_0 + \alpha_1 BV_{it} + \alpha_2 ENI_{it} + \alpha_3 TLLP_{it} + \alpha_4 CO_{it} + \alpha_5 \Delta NPL_{it} + \alpha_6 \Delta LOAN_{it} + \alpha_7 T_t + \alpha_7 C_j + \phi_{it}$$

Variables	Islamic banks	Conventional banks
BV_{it}	0.21*	0.48*
	(2.17)	(31.71)
ENI_{it}	0.12*	0.058*
	(5.89)	(16.73)
$TLLP_{it}$	0.66*	0.16*
	(11.22)	(29.04)
CO_{it}	−0.16*	−0.98*
	(−3.79)	(−32.67)
ΔNPL_{it}	−0.02*	−0.09*
	(−13.43)	(−13.41)
$\Delta LOAN_{it}$	−0.42*	−0.66*
	(−13.04)	(−6.86)
Year-fixed effects	Yes	Yes
Country-fixed effects	Yes	Yes
No. of banks	25	45

*Significant at 1% level, *t*-statistic is reported in parenthesis.

the investor thinks that the prospects of future earnings are favorable, thus manager can take hits to current earnings. (Kanagaretnam, Lobo, & Yang, 2005; Skinner, 1994).

To study the effect of manager discretion on bank market price, we decompose total loan loss provision into DLLP and NLLP as explained in empirical models section. Estimation results of model 4 which comprise the DLLP and NLLP components are provided in Table 2.

Table 2. The effect of manager discretion on Islamic and conventional bank value

$$P_{it} = \lambda_0 + \lambda_1 BV_{it} + \lambda_2 ENI_{it} + \lambda_3 DLLP_{it} + \lambda_4 CO_{it} + \lambda_5 \Delta NPL_{it} + \lambda_6 \Delta LOAN_{it} + \lambda_7 T_t + \lambda_7 C_j + \phi_{it}$$

Variables	Islamic banks	Conventional banks
BV_{it}	0.21*	0.48*
	(4.17)	(17.21)
ENI_{it}	0.12*	0.08*
	(5.89)	(16.31)
$DLLP_{it}$	0.46*	0.68*
	(11.22)	(29.04)
CO_{it}	−0.25*	−0.93*
	(−3.79)	(−26.17)
ΔNPL_{it}	−0.21*	−0.83*
	(−13.43)	(−7.97)
$\Delta LOAN_{it}$	−0.19*	−0.20*
	(−10.77)	(−23.51)
Year-fixed effects	Yes	Yes
Country-fixed effects	Yes	Yes
No. of banks	25	45

*Significant at 1% level, *t*-statistic is reported in parenthesis.

The estimated regression coefficients of DLLP are positive and significant at 1% level. This result is consistent with the hypothesis that the discretionary behavior of bank managers exhibits a signaling effect, thus increasing bank market prices. Indeed, investor considers that both managers of Islamic and conventional banks increase LLP because they have a large margin to support future loss. So they disseminate favorable information that banks present a large capacity and future earning prospects. Therefore, investor positively appreciates the opportunistic increase in DLLP. Indeed, bank managers are well informed of loan portfolio default risk. Thus, they use this ability to exercise discretion and to transmit in the market positive signal.

Loan loss allowance has a negative significant association with the bank value at 1% level. Indeed, we find that variables like CO_{it} and ΔNPL_{it} used to proxy for NLLP are significantly negative indicating that investor negatively appreciates the increase in default credit risk. This result supports Hypothesis 3 that the increase in charge off and loan loss allowance transmits a negative signal to the markets and leads a decrease in market prices. This result confirms those obtained by Beaver and Engel (1996).

An important result found in this paper is that the conventional bank stock prices' response to negative signal (increase in charge off) is very high compared to the response to positive signal (increase in DLLP). This result confirms those obtained by Skinner (1994) in 93 NASDAQ firms. We can explain this result by prospect theory and behavioral bias. Prospect theory developed by Kahneman and Tversky (1979) suggests that the bias of loss aversion leads individuals to be more sensitive to losses than gains of the same magnitude. Thus, the price experiences a large decrease after bad news compared with the increase after good news. This result added to the literature of conventional banks. To our knowledge, this paper is the first that provides this result explained by behavioral finance theory.

We have found that coefficient for $DLLP_{it}$ is 0.6 and for NPL_{it} and CO_{it} is respectively −0.8 and −0.9 for conventional banks. However, for Islamic banks, DLLP is 0.4 and around −0.2 for negative news. Thus, the negative effect is higher on conventional stock market prices compared with Islamic stock market prices. This result is explained by the fact that investor has more confidence in Islamic banks than conventional banks because they consider that Islamic banks are safer than conventional banks, since subprime crisis has demonstrated that Islamic banks are less affected by this crisis compared with conventional banks which have experienced a dramatic decrease in market prices.

4.2. External factors: effect of investor sentiment and market conditions on Islamic and conventional bank market values

In the first part of this paper, we have tested the effect of manager behavior on bank market value. In this part, we study the effect of investor sentiment and macroeconomic conditions on bank value. Indeed, we estimate Equation (5) which includes proxies of investor sentiment like trading volume and lagged returns. Moreover, we have added the market condition variables of GDPs and bank competition variable of Index of Herfindahl–Hirshman.

Table 3 presents the estimated coefficients of Equation (5).

Results of Table 3 reveal that investor sentiment measured by one year lagged returns affect significantly the Islamic and conventional bank market values. Indeed, δ_1 is significant at 1% level for both bank types. This result can be explained by the fact that when lagged return is positive, investor presents a certain level of optimism which may increase bank value. However, the negative lagged return leads investor to be pessimistic about this stock. Thus, the sentiment of investor and their mood is considered as an important factor which affects significantly both types of bank market price.

Estimation results reveal that trading volume affects significantly the bank market value. Indeed, when investor sentiment reveals optimism associated with a large trading volume, the price of bank value experiences an increase. Thus, the increase in discretionary behavior of bank manager through

Table 3. The effect of investor sentiment and market condition variables on market bank value

$$P_{it} = \delta_0 + \delta_1 RT_{it} + \delta_2 VOL_{it} + \delta_3 IHH_{it} + \delta_4 GDP_{it} + \epsilon_{it}$$

Variables	Islamic banks	Conventional banks
RT_{it}	0.45*	9.42*
	(2.59)	(16.31)
VOL_{it}	0.14*	0.07*
	(13.21)	(13.10)
IHH_{it}	0.07*	−12.60
	(12.66)	(−0.46)
GDP_{it}	0.301*	0.23*
	(15.81)	(2.76)
Year-fixed effects	Yes	Yes
Country-fixed effects	Yes	Yes
No. of banks	25	45

*Significant at 1% level, *t*-statistic is reported in parenthesis.

DLLP implies an increase in investor optimism and thus an increase in market price of both Islamic and conventional banks. Thus, banks' manager must carefully consider the effect of investor sentiment in order to maximize the value of the bank.

Other contribution of this paper is that it adds to the literature the contribution of external variables like GDP and market conditions in explaining bank price variation.

Table 3 reports the positive effect of GDP on bank price value. This result confirms previous results on conventional banks which report a positive relationship between GDP growth and banking efficiency (Awdeh & El Moussawi, 2009). Thus, favorable macroeconomic conditions drive an increase in stock market, confirming Hypothesis 7.

Up to date, to our knowledge we have not a research paper focusing on the effect of competitively on bank market price. Thus, we search to cover this lack by examining the impact of competition on Islamic and Conventional market prices (IHH). Results of the effect of market conditions that govern the two types of banks (IHH) estimated by model 5 are reported in Table 4.

We find that market structure affects the variation of Islamic bank market price. Indeed, we find that the effect of monopolistic Islamic market IHH_{it} (δ_3 significant at 1% level) can drive an increase in bank market price. Indeed, we find that Islamic banks in monopolistic market register an increase in prices compared with those which operate in a competitive market, confirming Hypothesis 8. This result can be explained by the fact that the number of Islamic banks is relatively very small compared to the number of shares requested by investors and especially by Islamic investors. Thus, the monopolistic market where Islamic banks operate contributes an increase in its prices. It is important to note that we have estimated model 5 by panel data. Therefore, this result may be changed if we estimate this model by taking the effect of concentration separately for each bank, especially for turkey since having numerous Islamic banks. So, it is an important point to investigate in future studies.

Table 4. The effect of market conditions on market banks value

Variables	Islamic banks	Conventional banks
IHH	0.07*	−12.60
	(12.66)	(−0.46)
No. of banks	25	45

*Significant at 1% level, *t*-statistic is reported into parenthesis.

No significant effect is detected of the effect of market condition on conventional bank prices, confirming Hypothesis 9.

5. Conclusion

This paper adds to the literature by exhibiting new evidence to the contribution of behavioral finance in explaining the variation of Islamic and conventional bank market price. In this paper, we have tested the effect of internal and external factors on the bank market price. Indeed, we have studied both the manager behavior and investor sentiment and their effects on prices. Moreover, we have examined the effect of market condition on Islamic and conventional market values for eight countries of MENA region.

Our empirical evidences show that the discretion of manager is good news and it is positively appreciated by investor and contributes an increase of market price. However, the non-discretionary behavior of bank manager due to the increase in credit risk transmits in the financial market bad information.

An important result found in this paper is that conventional bank stock prices response to negative signal (increase in charge off) is very high compared to the response to positive signal (increase in DLLP). This result is explained by prospect theory and loss aversion bias which suggest that the negative news induce a largely negative effect in financial markets (variation of market price) than the effect of positive news (increase in DLLP). This result added to the literature of conventional banks. Moreover, we have found that the negative effect of NLLP is higher on conventional stock market prices compared with Islamic stock market prices since investors are more confident in Islamic banks than conventional banks. Indeed, investors consider that Islamic banks are safer.

Our paper emphasizes the importance of investor sentiment and their mood as factors affecting significantly both types of bank market prices. Moreover, the analyses of the effect of market structure on bank stock reveals that monopolistic Islamic market drives an increase in Islamic bank market price.

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