# Does Acquirer Bank Stable in Post-Merger and Acquisition? - Comparative Analysis of Islamic and Conventional Banks

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**Abstract**

Merger and acquisition plays an important role in developing banking sectors. This paper examines acquirer stability of Islamic and conventional banks. This paper employs panel data techniques; POLS, FE and RE to analyse a set of samples for 24 banks consisting of 10 Islamic banks and 14 conventional banks involved in M&As during 2004Q1 to 2020Q4 from 6 countries namely Saudi Arabia, United Arab Emirates, Qatar, Kuwait, Bahrain, and Pakistan. Stata package 14.2 is used to estimate results for 5 years pre and 5 years post-M&A. The results indicate that acquirer banks are not stable in post M&A. Moreover, there is no significant differences between stability of Islamic and conventional banks since the sign of the coefficient in pre and post is the same. It is recommended that Investors, bank management, M&A analyst, academic members and regulatory bodies need to wait for the long time to have an M&A impact on the stability of Islamic and conventional banks.

**Keywords:** Merger and Acquisition, Stability, Factors, Islamic and Conventional Banks.

## 1. Introduction

The importance of merger and acquisition (hereafter, M&A) in developing economy is immeasurable. And hence M&A plays remarkable roles in both financial and economic development. The role of M&A such good and better performance as well stability motivationalized the financial institution being involved in M&A. The combined performance is never be gained while parties are separated. By this way, bank stability can be ensured while less fragility exist. Being involved in merger and acquisition bank's become lower insolvency (Yusgiantoro, Soedarmono, & Tarazi, 2019). Bank mergers and acquisitions (M&A), on the other hand, are frequently promoted as enhancers of banking stability (Fotova, Lozić, & Guzovski, 2022). M&A in the banking sectors have been driven and promoted with a view to improving stability in the financial system (Du & Sim, 2015). Inversely   Cuestas, Lucotte, & Reigl (2020) found that competition (i.e., being demotivated for merger and acquisition) in the banking sector enhances financial stability.

Yusgiantoro, Soedarmono, & Tarazi (2019) pointed out that the implication of bank consolidation on financial stability is far less known. However, they have studied effect of consolidation on the financial stability of Indonesia. The study conclude that consolidation improve the financial stability of the banks. However, we have extended the analysis of acquirer banks (i.e., Islamic and conventional banks) stability in post-merger and acquisition into Asian country specially GCC and Pakistan.

The GCC countries have banking systems with relatively underdeveloped financial markets. The absence of extensive financial markets (and a limited non-banking financial sector) means that much of the emphasis on diversification has been placed on the banking sector. Banks play a central role in national economic diversification plans because they need to provide financing to support investments in a wide range of "new" and established sectors. They can also commit to diversification strategies by contributing to the development of non-bank financial activities. As such, it is important to see

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how the diversification of bank assets and income in the GCC region affects banking stability, not only from a financial sector perspective, but also from a planning perspective. national policy (Abuzayed, Al-Fayoumi, & Molyneux, 2018; Cevik, Teksöz, 2012).

Factors associated with M&As can strongly influence the stability of Islamic and conventional banks. George (2018) conducted the study and found that factors have significant influence on the bank stability being M&A. Kwenda, Oyetade, & Dobreva (2017) analyzed five factors such profit, growth, size, financing ratio, and financing system. In line with the literature, the paper analyze factors such as size, bank roles, method of M&A financing, bank specific variables as well as macroeconomic variables.

This paper applies panel data techniques, POLS and static model (e.g., fixed and random effects) for a sample of 24 banks comprising 10 Islamic and 14 conventional banks from 2004Q1 to 2020Q4 from the six countries namely, Saudi Arabia, United Arab Emirates, Qatar, Kuwait, Bahrain, and Pakistan.

The findings show that although factors impact bank stability, M&A does not improve the stability of Islamic and conventional banks (see descriptive statistics). The selected and listed factors affect the stability of being merger and acquisition. Based on the analysis of the paper, it is hope and expect that the paper will contribute significantly to the existing literature.

Bank's stability condition having M&A is the objective of the paper. To examine the objective, this paper has tested several factors namely bank size, intermediary roles (financial & non-financial), and modes of financing (cash or stock). In addition to these variables, we have included other controlled variables normally considered in the literature. bank specific variables (liquidity, capitalization & credit risk) and macro-economic variables (GDP & inflation).

## 2. Literature and Hypotheses

Bank size and its relation to financial stability is an issue that has taken a central stage in academic and policy debate. Researchers differ on the effect of bank size. Being involved in M&A, bank reaches a new equilibrium size, however, they get the benefit of economies of scale and scope and hence reduces the risk of the banks. Meanwhile, the fragility will be reduced (Paroush, 1995). From the stability point of view, Islamic banks need to be bigger (Ibrahim & Rizvi, 2017). More precisely, both "too big to fail" and "too small to have scale economies" theses hint on a potential non-linear relation between bank size and bank stability. Asif, Akhter, Zulfiqar, & Fiaz, (2022) find the size to be positively related to the Zscore, hence, small banks can improve their stability by expanding their size. Consequently, (i) *it is hypothesized that bank size is positively related to M&A, bank stability.*

A bank is a financial institution that acts as an intermediary between depositors and economic agents. Sufian, & Habibullah (2009) stated that economies of scope better than economies of scale. Ullah, Nor, & Seman (2021) founded economies of scale and scope strengthen the stability. Whereas M&A helps to improve the quality of portfolio and hence the probability of fragility is less (Focarelli, & Pozzolo, 2001). By having together, bank reduces their cost and hence enhance the stability. Therefore, it presents the hypotheses (i) *intermediary roles positively effects on bank stability.*

Some of the other bank-specific variables are used that are determining the bank stability. As found by the researchers, those variables have significant impact on the merger activity (Banal-Estanol & Ottaviani, 2007). Malatesta (1983) explained that negative influence being M&A. Sufian, & Habibullah (2009) also report same result as mention earlier. Capital adequacy as an effective cushion against the risk of bank failure has been long recognized (Paroush, 1995). Accordingly, Antoniadis et al. (2014) and Altunbaş & Marqués (2008) noted that loan and credit risk among the parties are conducive to higher stability. Therefore, the paper presents the research hypothesis that (i) Bank-specific variables (capitalization, liquidity & credit risk) have a significant impact o*n M&A and bank stability.*

The fragility of the financial sectors directly or indirectly depends on the soundness of the economy. Gross domestic product (GDP) and inflation have a significant impact on banking activities (Ibrahim & Rizvi, 2017; Salaber, Rao-Nicholson & Cao, 2016; Abbas, Hunjra, Azam, Ijaz, & Zahid, 2014; Kandil & Chowdhury, 2014; Gattoufi et al., 2014;

Sufian & Habibullah, 2009; Al-Sharkas, Hassan, & Lawrence, 2008). Macroeconomic variables like GDP and inflation are also used following Cortés, Agudelo, & Mongrut (2017) and Erel, Jang, Minton, & Weisbach (2017). Choi & Jeon (2011) said that GDP is the most important factor for the merger & acquisition. The variable is also used by Mohamed & Sidiropoulos (2010) Consequently, (i) *macro-economic variables have significant impact between M&A and bank stability.*

## 3. Variables and Empirical Strategy

### 3.1 Sample Data and Variables

In line with the literature, bank stability is represented by Z-score. Independent variables such as bank size (i.e., total assets, total deposits, operating income), the financial intermediary role is measured by the cost to income (economies of scale) & loan to deposit (economies of scope) and the non-financial intermediary role is measured by non-income to non-interest expenses. Modes of financing (cash or stock) use as a dummy variable while GDP and inflation use as macroeconomic variables. Credit risk (CR), liquidity (LIDY), capitalization (CAP) are used as other bank specific variables.

The paper uses unbalanced panel data of 24 banks including 10 Islamic banks and 14 conventional banks from 6 countries, 2004Q1 to 2020Q4. The country has been selected from where M&A of Islamic bank has been occurred in those elected periods. Data is collected from several secondary sources. In line with the previous study, data is divided into two categories namely pre-M&A deal (i.e., 5 years before M&A), and post-M&A deal (e.g., 5 years after M&A). Appendix Table A1.2 shows the list of variables.

### 3.2 Data Analysis

This research employs panel data approaches (fixed and random effects). Within estimator, least square dummy variable estimator, and covariance estimator are other names for FE. Fixed effects (FE) regression is used to account for variables that vary between instances but remain constant over time. This is the advantage of using FE to examine the effect of missing independent variables on the dependent variable.

Meanwhile, the random effect (RE) model is used to estimate omitted variables that are stable over time, change among cases, and others that may be fixed between cases but vary over time. The less restrictive estimator is used to choose between POLS and fixed effects, the Lim test between POLS and random effects, and the Hausman test between fixed effects and random effects. Stata package 14.2 is used to analyze panel data techniques (Acock, 2013; Venturini, & Mehmetoglu, 2019; Huber, 2014). Stata 14.2 package software is used for the estimation (Venturini, & Mehmetoglu, 2019).

### 3.1.2 Empirical Strategy

The following model is designed for the analysis of M&A.

$$Y_{nt} = \alpha_{nt} + \beta X_{nt} + \mathcal{E}_{nt} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(Eq 1)}$$

**Bank stability (Z-score)**

$$Z\text{-score}_{nt} = \alpha_{nt} + \beta_1 BSTA_{nt} + \beta_2 BSTD_{nt} + \beta_3 BSOI_{nt} + \beta_4 Escale_{nt} + \beta_5 Escope_{nt} + \beta_6 NFIR_{nt} + \beta_7 LIDY_{nt} + \beta_8 CAP_{nt} + \beta_9 CR_{nt} + \beta_{10} FIN_{nt} + \beta_{11} GDP_{nt} + \beta_{12} INF_{nt} + \mathcal{E}_{nt}$$

$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(Eq 2)}$$

### 3.3 Diagnostic test

Diagnostics test for the unbalanced panel data are conducted as well. As per three tests are checked namely multicollinearity, heteroskedasticity and autocorrelation test. The test results are multicollinearity (Vif = 8.10) which is less than 10 meaning that no problem of multicollinearity, heteroskedasticity (Chi2(19) = 6800.10; Prob>F = .005) which

said that there is problem of heteroskedasticity, and auto-correlation (F(1, 17) = 10.473, Prob > F = 0.0049) that imply that problem of auto-correlation. To solve the problems required measures are taken accordingly.

## 4. Results and Discussions

Table A1.1 states descriptive statistics while A1.2 imply correlation matrix. According to the descriptive matrix it is seen that stability does not differ between Islamic and conventional bank. While table A1.2 shows no multicollinearity among the variables.

### 4.1 Multivariate Results of M&A on Bank Stability (Z-score)

Table 1 implies M&A results on the stability for Islamic and conventional banks. The R-squared are 0.829 and 0.988 which explained the Z-score by the independent variables. A model is said to good when the R-squared is higher. By this way it can be said that both models are the good fit.

*In the pre-M&As scenario*, bank size states a significant effect on the M&A activity. As shown, the affects are 4.517 units and 0.386 units for Islamic and conventional banls that are statistically significant at 1% and 5% level, respectively.

Both banks are negatively affected by the intermediary roles. For example, the effects of Escale are 0.138 units and 0.012 units for both bank that is statistically significant at 1% level. While the effects of Escope are 0.020 units and 1.363 units which is statistically significant at 5% and 1% levels. On the other hand, NFIR are not statistically significant and left undiscussed.

*In the post-M&As scenario,* the R-squared (within) of Islamic and conventional banks' stability (Zscore) are 0.817 and 0.957, respectively. Indicating that Z-score explained by the independent variables.

Bank size (BSTA) signifies the relationship on bank stability. The coefficient of bank size is not significant and hence left undiscussed. While for conventional bank is shows positive effect meaning that 3.494 units at 5% significant level. Based on the result it is concluded that Islamic banks are less stable compare to conventional banks in terms of its size.

Based on the findings, 1 unit increase to economies of scope (financial intermediary role) would reduce the strength of Islamic and conventional banks by 0.050 units and 0.090 units, respectively, which is significant at 1% level. Comparatively, the impact is more by 0.04 units compared to conventional banks. While Escale and NFIR are not statistically significant and not discussed.

Other factors namely modes of financing also used as factors. The results conclude that cash financing impacts the stability of Islamic banks compared to stock financing. Inversely stability of conventional banks positively impacts by 1.699 units more compared to stock financing. A summary of bank specific variables are given at Table 2.

**Table 1: Multivariate results of bank stability (Z-score)**

| | Islamic bank Pre-M&A | | | Islamic bank Post-M&A | | | Conventional bank Pre-M&A | | | Conventional bank Post-M&A | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | POLS | FE | RE | POLS | FE | RE | POLS | FE | RE | POLS | FE | RE |
| BSTA | 4.517*** | 4.517*** | 4.517*** | -0.072** | 0.051 | -0.072** | 0.386** | 0.386** | 0.386** | 2.806*** | 3.494** | 2.853*** |
| | (0.000) | (0.000) | (0.000) | (0.034) | (0.126) | (0.029) | (0.016) | (0.015) | (0.015) | (0.000) | (0.015) | (0.000) |
| Escale | -0.138*** | -0.138*** | -0.138*** | 0.013 | -0.012 | 0.013 | -0.02*** | -0.01*** | -0.02* | 0.005 | 0.005 | 0.004 |
| | (0.000) | (0.000) | (0.000) | (0.411) | (0.318) | (0.407) | (0.000) | (0.000) | (0.000) | (0.900) | (0.943) | (0.895) |

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Escope | -0.020** (0.025) | -0.020** (0.023) | -0.020 (0.123) | 0.067 (0.938) | -0.05*** (0.002) | 0.067 (0.938) | -0.91*** (0.000) | -1.36*** (0.001) | -0.91** (0.000) | -0.109*** (0.000) | -0.09*** (0.000) | -0.108*** (0.000) |
| NFIR | -0.092 (0.491) | -0.092 (0.490) | -0.092 (0.490) | 0.155*** (0.000) | 0.0575 (0.150) | 0.155*** (0.000) | -0.049 (0.814) | 0.025** (0.013) | -0.049 (0.814) | 0.0157 (0.110) | 0.00957 (0.531) | 0.0156 (0.109) |
| LIDY | 0.024*** (0.005) | 0.024*** (0.005) | 0.024*** (0.005) | 0.034 (0.971) | 0.057** (0.043) | 0.032 (0.971) | 0.009 0.527 | 0.04 0.220 | -0.089 0.95 | 0.0365*** (0.000) | 0.009* (0.078) | 0.0365*** (0.000) |
| CR | 0.137 (0.413) | -0.137 (0.411) | 0.137 (0.411) | 0.085*** (0.000) | -0.006 (0.648) | 0.085*** (0.000) | 0.174** (0.031) | 0.242** (0.015) | 0.174** (0.030) | -0.081 (0.678) | 0.033 (0.875) | -0.064 (0.739) |
| CAP | 0.905*** (0.000) | 0.905*** (0.000) | 0.905*** (0.000) | 0.032** (0.013) | 0.044** (0.047) | 0.032*** (0.010) | 2.163*** (0.000) | 2.053*** (0.000) | 2.163*** (0.000) | 1.157*** (0.000) | 1.937*** (0.001) | 1.146*** (0.000) |
| GDP | -12.31* (0.101) | -12.31* (0.098) | -12.31* (0.098) | 0.559*** (0.000) | 0.0514*** (0.000) | 0.559*** (0.000) | -0.0815 (0.476) | -0.0185 (0.474) | -0.0815 (0.475) | -0.531 (0.123) | 2.196*** (0.002) | -0.540 (0.115) |
| INF | -1.816** (0.031) | -1.816*** (0.009) | -1.816*** (0.009) | 0.226 (0.509) | 0.246 (0.109) | 0.226 (0.506) | -0.13*** (0.001) | -0.068** (0.020) | -0.13* (0.001) | 1.095* (0.061) | 1.789 (0.196) | 1.095* (0.059) |
| FIN | | | | 0.324*** (0.000) | 0 (.) | 0.324*** (0.000) | | | | 2.023*** (0.003) | 0 (.) | 2.004*** (0.003) |
| _cons | -0.830 (0.920) | -0.830 (0.920) | -0.830 (0.920) | -2.228*** (0.009) | 0.999 (0.569) | -2.228*** (0.007) | 2.681* (0.071) | 1.957 (0.552) | 2.681* (0.070) | -19.03*** (0.000) | -33.46** (0.036) | -19.51*** (0.000) |
| Chow test: POLS vs FE 0.000 | | | | | | 0.000 | | | | 0.000 | | |
| LIM test: POLS vs RE 1.000 | | | | | | 1.000 | | | | 1.000 | | |
| Hausman test: FE vs RE 0.000 | | | | | | | | 0.000 | 0.000 | | 0.000 | |
| R-sq | 0.787 | | | 0.904 | | | 0.995 | | | 0.950 | | |
| R-sq within | | 0.829 | 0.795 | | | 0.816 | 0.530 | 0.988 | 0.982 | | 0.957 | 0.940 |
| R-sq between | | 0.233 | 0.822 | | | 0.166 | 0.889 | 0.990 | 0.997 | | 0.803 | 0.947 |
| R-sq overall | | 0.426 | 0.787 | | | 0.135 | 0.900 | 0.994 | 0.99 | | 0.895 | 0.948 |
| N | 136 | 136 | 136 | 64 | 64 | 64 | 200 | 200 | 200 | 149 | 149 | 149 |

p-values in parentheses *p<0.1 ** p<0.05,
***p<0.01

**Table 2:** Summary Of Findings On Bank Stability

| Variables | Islamic Banks (IBs) | | | | Conventional Banks (CBs) | | | |
|---|---|---|---|---|---|---|---|---|
| | Pre M&As | | Post M&As | | Pre M&As | | Post M&As | |
| | Relationship | Significant | Relationship | Significant | Relationship | Significant | Relationship | Significant |
| BSTA | positive | significant | positive | not significant | positive | significant | positive | significant |
| Escale | negative | significant | negative | not significant | negative | significant | positive | not significant |
| Escope | negative | significant | negative | significant | negative | significant | negative | significant |
| NFIR | negative | not significant | positive | not significant | positive | significant | positive | not significant |
| FIN | - | - | positive | significant | - | - | positive | significant |
| LIDY | positive | significant | positive | significant | negative | not significant | positive | significant |
| CR | positive | not significant | negative | not significant | positive | significant | positive | not significant |
| CAP | positive | not significant | positive | significant | positive | significant | positive | significant |
| GDP | negative | significant | positive | significant | negative | not significant | negative | significant |
| INF | negative | significant | positive | not significant | negative | significant | positive | not significant |

## 5. Conclusions and Policy Implications

This paper examines and analyses acquirer stability for Islamic and conventional banks. A number of factors are tested for example bank size, intermediary role, modes of financing, bank-specific variables and macroeconomic variables. Z-score use as a proxy for bank stability.

The findings imply that bank stability does not improve in post M&A. Based on the findings there is no difference between the stability of Islamic and conventional banks since the sign of the coefficient for both banks are the same. While Yusgiantoro, Soedarmono, & Tarazi (2019) found that strengthening consolidation that might increase the market power of larger private-owned banks could be a solution to strengthen financial stability.

The factors such as bank size show positive impact, intermediary role implies negative impact, bank specific variables; liquidity and capitalization show positive impact while credit risk shows negative impact. Modes of financing (cash) shows better stability compared to stock financing. Macroeconomic variables (GDP & INF) show differences between Islamic and conventional banks in pre and post M&A. Last but not least, based on the findings this paper offered policy recommendations. Since bank stability does not improve in the 5 years post M&A and hence it is suggested that policymakers, regulators, bankers, and other concerned parties need to wait for the longer time to have a better bank stability.

The number of observations in this paper remains a limitation. The number of banks and countries should be increased in future research by including more Islamic banks.

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**Appendix A**

**Table A1.1** Descriptive statistics of M&A in the Pooled, Islamic and conventional banks

| | Pooled | | Islamic banks (IBS) | | Conventional banks (CBs) | |
|---|---|---|---|---|---|---|
| | **Pre** | **Post** | **Pre** | **Post** | **Pre** | **Post** |

|  | M&A | M&A | M&A | M&A | M&A | M&A |
|---|---|---|---|---|---|---|
| **Bank stability** | | | | | | |
| **Zscore** | **25.568*** | **19.450**** | **22.824** | **19.620*** | **27.430** | **19.328*** |
| **Bank size** | | | | | | |
| BSTA | 8.861* | 7.880 | 6.855* | 6.587 | 10.223* | 8.812 |
| BSTD | 8.640 | 7.714 | 6.559 | 6.373 | 10.051 | 8.681* |
| BSOI | 6.987 | 5.858 | 5.161 | 4.565* | 8.226 | 6.790* |
| **Financial intermediary roles** | | | | | | |
| Escale | 40.570 | 39.602* | 38.492* | 35.237 | 41.980 | 42.748* |
| Escope | 10.186 | 23.574 | 26.118 | 21.342 | 0.228* | 21.975 |
| **Non-financial intermediary roles** | | | | | | |
| NFIR | -130.100* | -106.390 | -111.591* | -94.727 | -142.659* | -103.48* |
| **Control variables** | | | | | | |
| LIDY | 20.412 | 31.173 | 11.490* | 8.672* | 41.477 | 43.350 |
| CR | 1.182* | 1.634* | 2.157** | 0.793 | 0.383* | 1.752* |
| CAP | 13.833 | 12.774 | 15.355 | 13.036 | 12.801 | 12.586 |
| **Macro-economic variables** | | | | | | |
| GDP | 1.107 | 2.288 | 1.082* | 2.956* | 1.123* | 1.800** |
| INF | 1.316 | 1.109** | 1.699 | 1.385 | 1.062 | 0.907 |
| **Modes of financing** | | | | | | |
| FIN | 0.787** | 0.785 | 0.789 | 0.793** | 0.786* | 0.779 |
| N | 470 | 468 | 190 | 195 | 280 | 272 |

**Table A1.2; Variables Explanation**

| Variables | Definition |
|---|---|
| **Dependent:** | |
| Bank stability Z-score) | Bank Stability |
| **Independent:** | |
| Bank size | |
| BSTA | Bank size log of total assets |
| BSTD | Bank size log of total deposits |
| BSOI | Bank size log of operating income |
| | |
| Financial & non-financial intermediary roles | Loan to deposits; To measure the effect of lending activities of the bank, the loan ratio is used; loan to the total assets; lower ratio indicates excessive liquidity. |
| Escope | |
| Escale | Cost to income; The efficiency ratio implies how efficient the bank is. A lower or negative value indicates the better of the bank. |
| | Non-interest cost to non-interest income, to measure non-financial intermediary role. Lower is better. |
| NFIR | |
| | M&A is financed by stock or cash |
| **Modes of financing** | Liquid assets/total deposits; to know the liquidity position of the banks |
| FIN | Loan loss reserve to the gross loan is used to measure the credit risk of the bank. |
| **Bank specific variables** | |
| | Total equity to total assets; represents the financial condition of the banks especially the shareholder's portion. |
| LIDY | |
| CR | To measure M&As performances along with bank-specific factors, macro factors were also used. Gross domestic product is used to represent the economic size of the particular country |
| CAP | |
| | Inflation has been measured by the Consumer Price Index (CPI) |
| **Macro economics** | |
| GDP | |
| | |
| INF | |

Table A1.2; Correlation matrix of the key variables

| | Zscore | BSTA | BSTD | BSOI | Escale | Escope | NFIR | LIDY | CR | CAP | GDP | INF | FIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zscore | 1.000 | | | | | | | | | | | | |
| BSTA | 0.6391* | 1.000 | | | | | | | | | | | |
| BSTD | 0.6017* | 0.9950* | 1.000 | | | | | | | | | | |
| BSOI | 0.6345* | 0.9830* | 0.9777* | 1.000 | | | | | | | | | |
| Escale | 0.037 | 0.040 | 0.038 | 0.002 | 1.000 | | | | | | | | |
| Escope | -0.297* | -0.379* | -0.399* | -0.313* | 0.1057* | 1.000 | | | | | | | |
| NFIR | -0.152* | -0.169* | -0.162* | -0.157* | -0.223* | 0.0934* | 1.000 | | | | | | |
| LIDY | 0.2180* | 0.3806* | 0.3915* | 0.3717* | 0.070 | -0.147* | -0.053 | 1.000 | | | | | |
| CR | -0.145* | -0.247* | -0.306* | -0.281* | 0.029 | 0.1771* | 0.069 | -0.062 | 1.000 | | | | |
| CAP | 0.6394* | 0.1612* | 0.1293* | 0.1449* | 0.3998* | 0.1445* | -0.671* | 0.057 | 0.1638* | 1.000 | | | |
| GDP | -0.482* | -0.600* | -0.589* | -0.605* | -0.101* | 0.3238* | 0.1372* | -0.246* | 0.1210* | -0.146* | 1.000 | | |
| INF | -0.358* | -0.510* | -0.502* | -0.487* | 0.059 | 0.1669* | 0.023 | -0.10* | 0.1123* | -0.149* | 0.3196* | 1.000 | |
| FIN | 0.1385* | 0.057 | 0.061 | 0.051 | -0.044 | -0.071* | -0.058 | 0.0919* | -0.212* | 0.0712* | -0.021 | -0.004 | 1.000 |