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YEMEN BANKS DURING TURMOIL: AN ANALYTICAL STUDY

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ABSTRACT

The financial crisis is a phenomenon that affects the stability of the country. In addition, the long-term functionality of a nation and its bank is also impacted by the financial crisis. This study investigates the effects of turmoil on the performance of Yemen banks by using liquidity ratios, current and cash ratios, and the Return on Equity (ROE) framework to analyze profitability. The analysis performed on a sample of six Yemeni banks, over the period from 2011 to 2016. The banks were National Bank of Yemen, Cooperative and Agricultural Credit Bank (CAC), Yemen Bank for Reconstruction and Development, Shamil Bank of Yemen and Bahrain, Yemen Kuwait Bank for Trade and Investment, and Saba Islamic Bank. There are three main findings of this study. First, turmoil has negatively affected banks' liquidity, the effect varied according to the system followed by the bank, where it affected commercial banks more than Islamic banks. Second, results reveal that banks' profitability has decreased during turmoil because of increase in expenses associated with decrease in banks' ability to generate income. Finally, the third result discloses that the heaviest effect of turmoil on Yemen banks is due to inflation.

INTRODUCTION

Many have been overwhelmed by the global banking crisis that has occurred only a few years ago around the world [1]. What at first appeared to be a constrained emergency on the subprime contract market immediately spread across the globe to monetary business sectors, inducing huge scope of government bailout tasks in the budgetary segment [2]. Recollections of past emergencies have been blurred in the run-up to the financial storm. At the point when the emergency was ejected, it developed at a very rapid rate, contaminating most of the monetary business sectors around the world [2].

Banking crises are similar to periodic conditions, which happens surprisingly [3]. Banking emergencies are ruining the real economy by shortening credit

and causing costly liquidations. Banking emergencies are also occurring in obscure areas. However, banking crises have been a typical wonder since the beginning [3]. The recurrence of banking emergencies has increased over the years following the budgetary advancement of the 1980s. There are certainly many shared characteristics between current emergency situations and past emergency situations. Banking emergencies are commonly preceded by credit blasts and resource value bubbles, followed by government action to spare the budgetary framework [4].

The reasons for banking crises have been discussed for quite some time. Previously, a set of hypotheses depicts banking emergencies as investor alarms portrayed by ridiculous withdrawals of contributors that place unjustifiable weight on the bank's liquidity position. Such an investor may cause illiquidity in banks that are inherently dissolvable [4]. At a time when it is serious, such liquidity weights will constrain the bank to sell resources, conceivably at the cost of a fire deal, and may ruin the bank. Banking disappointments can become fundamental, if not prevented through strategy, and can cause frenzy and infection with negative externalities [5]. In addition, contributors withdrawing assets fully anticipating financial declines that will reduce the estimation of bank resources and increase the likelihood that banks will not be able to meet their obligations can also set off bank emergency [6].

Studies carried out to analyze the performance of banks in the pre-crisis, post-crisis and post-crisis periods. According to Okazaki [7], in Japan, during the early years of the war, Bank of Japan (BOJ) was faced with an exchange-off between a stable financial system and the systemic risk of banks. Furthermore, BOJ tends to be more careful and selective when it comes to lending money to other banks or the private sector. Likewise, a study that analyzed the situation of the German economy after World War II revealed that the improper financial policy pursued by the German Government led to the collapse of the German economy [8]. The main reason for the collapse is the rapid decline in the value of the German currency and its purchasing power, in other words inflation. In the case of the United Kingdom's economic performance in the post-World War II period and based on the analysis of real GDP growth and inflation in its three measurements, the study shows that the inflation rate was at its highest level in the period immediately after the Second World War [9]. In addition, real GDP growth was at its lowest percentage compared to the post-World War II decade [9].

Similar trends were also observed among the banks in the Arab region. An analytical study on the performance of banks in post-war Lebanon found that, although the return on assets (ROA) of Lebanese banks was high, representing the profitable status of Lebanese banks, they were actually low in profitability among other similar countries in the region during the 1993-2000 period [10]. Similarly, after the collapse of the Iraqi government in 2004, the Iraqi economy experienced a historic drop in the performance of its bank [11]. The Iraqi Central Bank has reported a loss of 22 billion dollars on its account, losses on its accounts in other banks outside Iraq, which amounted to 2,995 billion dollars plus 44 billion dollars as a result of the loss of war [11]. In addition, a financial analysis was carried out to measure the performance of

Palestinian banks in the period prior to the financial crisis, during and after the financial crisis (2005-2009) [12]. The study found that the Palestinian banking industry had been negatively affected by the global financial crisis, where its average ratios decreased during and after the financial crisis than before [12].

According to a study, the efficiency of Yemeni banks in the period 1998-2011 was between 74.5% and 85.5% [13].Moreover, high and unstable inflation is seen as a threat to the economy and stability of the country as a whole. Yemen has faced high and unstable inflation from 1995 to 2007 as a result of multiple factors, mostly external shocks [13]. Prior research looked at the performance of banks in Yemen using asset returns, equity returns and bank margins, with a view to comparing Islamic banks with conventional banks [13]. It shows, however, that Islamic banks were outperforming among their competitors in 2002 to 2004, while the performance between Islamic and conventional banks was competitive from 2004 to 2008 and the difference was minimal, while the profitability of Islamic banks declined in all measures in 2012 [14]. Although many studies have been conducted to analyze the performance of banks in the event of turmoil or war, varying in the tools used and the time period covered, no research has been conducted to study the performance of Yemen banks in the recent turmoil (2011-2016) or to analyse the liquidity and profitability of Yemen banks.
Thus, this paper presents has investigated the effects of turmoil on the performance of Yemen banks over the period of 2011 to 2016.

METHODOLOGY

This study was conducted based on quantitative research method. The sample used in this study have been chosen based on the availability of their financial statements in the study period (2011-2016) are consist of 6 major banks operate in Yemen. The sample banks are National Bank of Yemen, Cooperative and Agricultural Credit Bank (CAC), Yemen Bank for Reconstruction and Development, Shamil Bank of Yemen and Bahrain, Yemen Kuwait Bank for Trade and Investment, and Saba Islamic Bank. The study period chosen started in 2011 because it was the beginning of the turmoil and since then the decline in Yemen never returned to its normal state, and ended in 2016 when the turmoil did not stop but the publication of the financial statements for most of the banks stopped due to the sensitivity of the situation and the risk to the bank. The investigation focused on the effects on Yemeni banks on two main aspects, the first on the liquidity of the bank and the second on the profitability of the bank.

Result And Discussion

This section discussed and analyzed the different financial ratios to determine the effects that turmoil has had on the entire Yemeni banking system. In addition, the main ratios analyzed are the liquidity ratios and the profitability ratios. In addition, each main ratio was examined in three ways: before turmoil (2011-right before 2014), before turmoil (2014) and after turmoil (end of 2014-2016).

Liquidity

Liquidity plays an important role in revealing the ability of the bank to meet its short-term obligations. Based on Figure 1, According to the calculations of the current ratio for Yemen banks, it appears that the liquidity of banks increased over the period 2011-2012, showing a high liquidity ratio means that banks were able to pay for their short-term obligations. However, the rapid increase in liquidity from 2011-2012 followed by a decrease in the current ratio in 2012-2013, which, according to the calculations, was markedly reduced. On the other hand, the two banks have shown the opposite behaviour of the Yemen Bank for Reconstruction and Development and the Cooperative and Agricultural Credit Bank (CAC Bank). During 2011-2012, their liquidity appears to have decreased slightly, while CAC Bank's liquidity continued to decline in 2012-2013, while Yemen Bank for Rec. Dev. Liquidity began to increase. In 2013-2014, the signs of new turmoil were floating around, which is why the liquidity of Yemen banks remained declining but at a lower margin, with the exception of CAC Bank and Shamil Bank of Yemen and Bahrain. Moreover, in the heart of the turmoil, Saba Islamic Bank had the highest liquidity ratio among other banks at 2.6, while CAC Bank had the lowest liquidity ratio at 1.046. However, as shown in Figure 1, even the lowest liquid bank still has the ability to pay for its short-term obligations. In addition, in 2014-2015, we can see that Yemen's Kuwait Bank for Trade and Investment and the National Bank of Yemen suffered a significant drop in their liquidity ratio, while Yemen 's Bank for Rec and Dev suffered a significant decline. In addition the Islamic Bank of Saba has maintained a low percentage decline. CAC Bank and Shamil Bank of Yemen and Bahrain, on the other hand, have shown an increase in their liquidity ratio. Furthermore, in 2015-2016, banks were acting in two ways, three banks appearing to be able to manage their liquidity ratio and increase it, while the other three banks experienced a decline in their liquidity, but were still able to pay for their short-term obligations. It has become apparent that there has been no trend over the years, which is very reasonable because Yemen has been in unstable conditions since 2011, so every bank has been struggling to survive a day in this unstable economy.

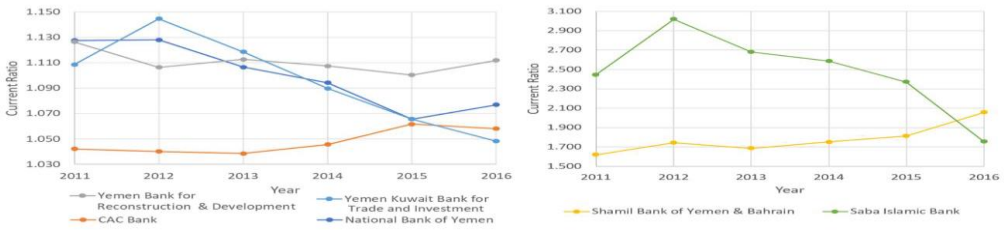

Figure 1. Current Ratio for Yemen Banks (2011-2016)

Figure 2 shows the current cash ratio. In a healthy economy, a cash ratio of 0.5 to 1 would be preferred, but as can be seen in the Figure 2, the range of all banks is from 0.086 to a maximum of 0.408, which is expected under such conditions. Shamil Bank and Saba Islamic Bank were both on top of the other banks, Shamil Bank appears to have some ups and downs with the highest

cash ratio of 0.408 in 2015, since having cash in turmoil is considered weak, and it is very reasonable that it should immediately fall to 0.170 in the following year. As for Saba Islamic Bank, it was the highest liquidity bank in 2011 with a cash ratio of 0.363, and then decreased for two years until it was very stable in 2013-2016. On the whole, however, it seems that all banks have avoided having cash on hand in their bank and rather invest it than sticking to it and facing the risk of losing it or its value. Overall, it is no wonder why Yemen banks are performing in this way, since they did not trust the conditions to keep cash on hand that could cover almost all of their short-term obligations.

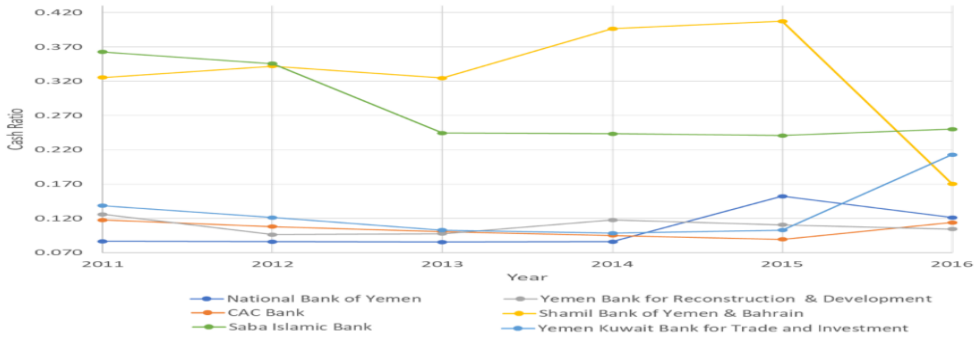

Figure 2. Cash Ratio for Yemen Banks (2011-2016)

Profitability

One of the main performance measurements is profitability. In terms of Return on Equity (ROE) framework, based on Figure 3, it seems that prior to 2014 turmoil majority of banks were able to slightly increase their ROE regardless of 2011 instable economy. One bank has shown more stable ROE than its competitors throughout the years, which is Cooperative and Agricultural Credit (CAC) Bank. This performance may consider as an indirect result of the merge of two banks, The Agricultural Credit Bank and The National Cooperative Bank. This merger had increased the assets of CAC Bank in addition to high amount of financial investments. At that time CAC bank had more than 46 branch all over Yemen, which made it one of the most efficient banks in term of the ability of facing turmoil, also it led CAC Bank to have less variation between banks. Even though some banks did an effort to face both 2011 unstable events and 2014 turmoil they were unable to maintain positive ROE, they either had zero or suffer from losses.

Bank	2011	2012	2013	2014	2015	2016
National Bank of Yemen	35.8%	38.2%	15.3%	0.6%	-22.5%	37.3%
CAC Bank	23.9%	30.9%	48.4%	29.8%	21.6%	26.3%
Yemen Bank for Reconstruction & Development	45.3%	47.1%	39.8%	17.3%	16.0%	22.3%
Shamil Bank of Yemen & Bahrain	0.0%	0.0%	0.2%	6.7%	7.8%	0.0%
Yemen Kuwait Bank for Trade and Investment	0.0%	33.7%	36.7%	21.9%	16.1%	-13.2%
Saba Islamic Bank	29.5%	-2.1%	0.7%	1.0%	-22.6%	-12.4%

Figure 3.ROE for Yemen banks

Next, terms of Return of Assets (ROA) and Equity Multiplier (EM), based on Figure 4, although that some banks had relatively high equity multiplier, their

ROA had acted in two different ways, for example, CAC bank had high EM throughout years but also managed to have less fluctuation of ROA. In contrast, Saba Islamic Bank had similar high EM, but it seems to be affected by both 2011 and 2014 events. Moreover, National Bank of Yemen and Yemen Bank of Rec. and Dev both had similar high ROA in 2011, 2012 but it seems when it started to decrease National Bank of Yemen was more affected by turmoil, the decrease of ROA of it was associated with increase of EM which may indicate higher solvency risk than others. On the other hand, majority of banks has shown fluctuation in both side, positive and negative side except for Shamil Bank of Yemen and Bahrain. It seems that it suffers from losses for the period of 2011-2016 and only increased in 2014 and 2015.

Bank	ROA						EM					
	2011	2012	2013	2014	2015	2016	2011	2012	2013	2014	2015	2016
National Bank of Yemen	4.9%	5.0%	1.7%	0.1%	-1.8%	3.3%	7.3	7.6	8.8	9.7	12.5	11.4
CAC Bank	1.3%	1.4%	1.8%	1.2%	1.3%	1.6%	18.5	21.4	26.6	24.4	16.4	16.5
Yemen Bank for Reconstruction & Development	5.5%	4.9%	4.4%	1.9%	1.7%	2.5%	8.3	9.7	9.0	9.1	9.6	9.0
Shamil Bank of Yemen & Bahrain	0.0%	0.0%	0.0%	0.8%	1.0%	0.0%	5.3	7.7	8.5	8.6	7.5	8.0
Yemen Kuwait Bank for Trade and Investment	0.0%	4.8%	4.5%	2.1%	1.2%	-0.8%	9.2	7.0	8.1	10.3	13.0	17.2
Saba Islamic Bank	1.5%	-0.1%	0.0%	0.1%	-1.2%	-0.6%	20.2	15.0	16.0	19.2	18.9	21.3

Figure 4.ROA and EM for Yemen Banks

Furthermore, in terms of ROA and its components, Profit Margin Ratio (PM) and Asset Utilization Ratio (AU), based on Figure 5, banks were in serious unstable conditions throughout the years. Some banks hardly maintain their profit margin for one year; they either severely decreased or absolutely collapse. A high percentage of AU means that the bank is able to generate income using its assets. It seems that the ability of generating income from bank assets were decreasing throughout turmoil for most of Yemen banks. Although all banks were able to generate money, they were different in the level of UA which 67% of banks shows high UA whereas 33% of them showed relatively low AU. The banks with high level of UA also had high level of PM associated with it, which means they were able to control their expenses therefore, be more profitable. However, there was one bank that did not act in this way, despite its high AU it showed lower PM than its competitors which means that they were not able to control their expenses. On the other hand, banks with lower AU were having more fluctuation in their PM means that their expenses were either increasing over time or their earning were not enough to cover the expenses they had.

Bank	PM						AU					
	2011	2012	2013	2014	2015	2016	2011	2012	2013	2014	2015	2016
National Bank of Yemen	30.4%	34.3%	13.8%	0.5%	-20.7%	29.8%	16.0%	14.7%	12.6%	11.6%	8.7%	11.0%
CAC Bank	8.5%	11.2%	16.6%	10.3%	9.1%	12.5%	15.2%	12.9%	10.9%	11.8%	14.4%	12.7%
Yemen Bank for Reconstruction & Development	34.2%	35.0%	33.6%	15.6%	13.8%	18.8%	16.0%	13.9%	13.2%	12.2%	12.0%	13.2%
Shamil Bank of Yemen & Bahrain	0.0%	0.0%	0.5%	13.3%	16.3%	0.0%	5.9%	6.0%	5.3%	5.9%	6.4%	5.3%
Yemen Kuwait Bank for Trade and Investment	0.0%	31.5%	33.6%	18.6%	11.2%	-8.7%	11.1%	15.3%	13.5%	11.4%	11.0%	8.9%
Saba Islamic Bank	22.7%	-2.4%	0.8%	1.1%	-15.0%	-12.4%	6.4%	5.9%	5.0%	4.9%	8.0%	4.7%

Figure 5.PM and AU of Yemen Banks

Based on Figure 6, in terms of interest expense ratio, it appears that interest expense cost the bank more than any type of expenses, for majority of Yemen banks it is costly to earn interest since that the Yemeni banking sector is still immature and underdevelopment. Besides, every year the risk of giving loans and financing is increasing due to the ongoing events which made the process of earning interest extremely costly over time. Whenever the interest expense

increases this cause PM to decrease rapidly, as we see, that interest expense was one of the heaviest factors that affected PM over the turmoil. However, Shamil bank showed an interesting result where its interest expense ratio was low comparing with other banks over years while its PM was low at the same time, but when interest expense increased PM increased too, which may indicate that there were not taking risk and issue loans in turmoil.

Bank	Interest expense ratio					
	2011	2012	2013	2014	2015	2016
National Bank of Yemen	129.6%	148.0%	169.7%	213.1%	208.5%	120.8%
CAC Bank	171.0%	122.8%	127.4%	141.6%	101.1%	121.8%
Yemen Bank for Reconstruction & Development	119.5%	126.4%	129.7%	141.9%	122.7%	138.9%
Shamil Bank of Yemen & Bahrain	26.5%	32.2%	30.4%	38.4%	22.9%	19.2%
Yemen Kuwait Bank for Trade and Investment	154.7%	128.9%	154.6%	174.3%	185.0%	174.1%
Saba Islamic Bank	122.5%	121.0%	125.1%	144.2%	132.0%	101.2%

Figure 6 Interest expense ratios for Yemen Banks

In terms of noninterest expense, based on Figure 7, Noninterest expense comes after interest expense in term of its affect on PM of banks, the results shows high ratio but low if compared with interest expenses. This means that either bank did not invest in noninterest activities or they were well managing the cost of these activities. According to the calculations, most banks' noninterest expense ratio was increasing prior to 2014 and then started to decrease after, which shows the decreasing of bank's ability of managing these expenses resulting in decreasing PM.

Bank	Noninterest expense ratio					
	2011	2012	2013	2014	2015	2016
National Bank of Yemen	33.4%	47.2%	69.1%	84.9%	84.7%	48.2%
CAC Bank	79.8%	61.3%	59.3%	64.5%	62.7%	91.8%
Yemen Bank for Reconstruction & Development	39.3%	42.3%	45.0%	56.9%	47.4%	47.3%
Shamil Bank of Yemen & Bahrain	81.5%	69.1%	76.0%	75.5%	67.8%	77.5%
Yemen Kuwait Bank for Trade and Investment	51.3%	55.4%	51.7%	73.5%	78.0%	71.9%
Saba Islamic Bank	54.4%	71.9%	79.0%	82.0%	95.3%	45.2%

Figure 7.Noninterest expense ratio for Yemen bank

Next, for provision for loan loss ratio, based on Figure 8, The variation of provision for loan loss ratio represents the various expectations of losses to the management of banks, some banks were optimistic prior to 2014 which cause provision for loan loss ratio to decrease while some of them were pessimistic raising the ratio to its highest value. Further, after 2014 turmoil banks expectations of loan losses also change and it seems that it changed based on the type of the bank where we can see that majority of banks did raise reserve for loan loss while banks like CAC bank reduced it, this decrease may be a result of expectation of CAC bank's management of increase the number of branches and small loans issuing.

Bank	Provision for loan loss ratio					
	2011	2012	2013	2014	2015	2016
National Bank of Yemen	29.1%	10.3%	13.3%	14.5%	43.0%	16.2%
CAC Bank	9.4%	24.3%	16.5%	19.6%	24.0%	8.1%
Yemen Bank for Reconstruction & Development	16.0%	11.9%	11.4%	20.0%	32.1%	26.0%
Shamil Bank of Yemen & Bahrain	18.5%	30.9%	23.7%	6.0%	16.0%	23.7%
Yemen Kuwait Bank for Trade and Investment	44.6%	3.4%	1.6%	1.6%	7.9%	37.1%
Saba Islamic Bank	17.3%	31.9%	20.1%	16.5%	19.7%	67.2%

Figure 8. Provision for loan loss ratio for Yemen banks

In terms of tax ratio, based on Figure 9, the results show that most of banks were not paying taxes or paying low amount of taxes, which may indicate that the previous expenses could not be covered with the earnings banks were making. Some banks did manage their expenses at the beginning of turmoil and paid taxes whereas some could not control their expenses, which led them to have 0% tax ratio, which may indicate a loss of zero profit. As we can see after 2011, some of banks' tax ratio was increasing which means that they controlled their expenses over time, whereas starting from 2014 -major turmoil- tax ratio started to decrease till in some banks it reached zero. This is a natural result according to the previous ratios, since that their expenses were increasing in this period.

Bank	Tax ratio					
	2011	2012	2013	2014	2015	2016
National Bank of Yemen	7.6%	8.0%	4.1%	0.1%	0.0%	4.8%
CAC Bank	2.5%	3.2%	7.3%	5.6%	4.6%	1.2%
Yemen Bank for Reconstruction & Development	7.8%	7.9%	6.5%	3.7%	3.0%	4.3%
Shamil Bank of Yemen & Bahrain	0.0%	0.0%	0.1%	3.2%	4.1%	0.0%
Yemen Kuwait Bank for Trade and Investment	0.0%	7.3%	8.0%	6.4%	3.0%	0.0%
Saba Islamic Bank	5.6%	0.0%	0.1%	0.5%	0.0%	0.0%

Figure 9. Tax ratio for Yemen banks

Based on Figure 10, it seems that even though turmoil started in 2011 banks were able to generate the highest interest income during turmoil, but it started to decrease throughout the time until it reached its lowest in 2016. Some banks were able to maintain high stable interest income which made them able to pay for their expense while some banks a low stable interest income which made them unable to pay for their expenses. In general, interest income consider to be low in this situation, because banks' expenses were increasing and the risk associate with issuing loans also increasing making it more costly for banks, for that in return the income should be higher than these results, but it is very understandable because banks did not have the time to recover from 2011's event since that 2014's event started to arise without giving them time to manage the previous losses and expenses.

Bank	Interest income ratio					
	2011	2012	2013	2014	2015	2016
National Bank of Yemen	14.1%	13.0%	11.5%	10.5%	0.1%	0.0%
CAC Bank	13.7%	11.9%	10.4%	11.0%	13.5%	11.5%
Yemen Bank for Reconstruction & Development	14.2%	12.4%	11.6%	11.0%	10.7%	12.3%
Shamil Bank of Yemen & Bahrain	4.1%	4.4%	3.4%	4.1%	4.0%	3.2%
Yemen Kuwait Bank for Trade and Investment	10.4%	12.9%	11.6%	9.9%	9.7%	8.0%
Saba Islamic Bank	4.9%	5.0%	4.3%	4.2%	7.2%	3.9%

Figure 10. Interest income for Yemen banks

Based on Figure 11, Yemen banks did manage to generate income through noninterest activities in a very small percentage comparing with interest income. Turmoil has affected one of the main operations and money-making streams of Yemen banks which is the foreign currency transaction, where it started to decrease from 2011 till it reached its lowest level in 2016. In addition, Yemen banks tend to not invest in something big or risky especially in turmoil this decreased their noninterest income even more.

Furthermore, it seems that some banks were increasing their investments toward noninterest activities such as Shamil Bank of Yemen and Bahrain and

National Bank of Yemen. In the case of Shamil Bank they were able to generate noninterest income equals more than 50% of their interest income, which indicate a well management of their assets. However, the well management of a bank comes in the case of National Bank of Yemen where they were able to cover for their zero % of interest income with 11% of noninterest income raising their ROE from -22.5% to 37.3%

Bank	Noninterest income ratio					
	2011	2012	2013	2014	2015	2016
National Bank of Yemen	2.0%	1.7%	1.2%	1.0%	8.7%	11.0%
CAC Bank	1.5%	1.0%	0.6%	0.8%	0.9%	1.1%
Yemen Bank for Reconstruction & Development	1.8%	1.5%	1.7%	1.2%	1.3%	0.9%
Shamil Bank of Yemen & Bahrain	1.8%	1.6%	1.9%	1.7%	2.4%	2.0%
Yemen Kuwait Bank for Trade and Investment	0.8%	2.3%	1.8%	1.5%	1.2%	0.9%
Saba Islamic Bank	1.5%	0.9%	0.7%	0.7%	0.8%	0.8%

Figure 11 Noninterest income for Yemen bank

Overall Discussion

Since 2011, Yemen banks have suffered less investment, in addition to increasing the risk associated with any new projects, investments, loans and customer financing, which eventually led to lower profitability and liquidity, as stated earlier, than inflation has made it more difficult to achieve any improvement and development since they make little money and now have less value.

The analysis of the liquidity has shown that there was no trend during turmoil; however, commercial banks in Yemen seemed to be more affected by the turmoil than the Islamic banks. The results of current ratio and cash ratio has proven what previous literature have proposed that Islamic banks have more resistance in turmoil than non-Islamic banks [15], where Yemen Islamic banks have been in the top of banks in term of liquidity. In general, Yemen banks during turmoil were avoiding having cash in their accounts; they prefer to invest cash in less risky activity than just keeping it.

Moreover, the analysis of performance in term of profitability has shown that banks in general were having less ROE after 2014 than prior to it, where their ROE had become either zero or negative for most banks, except for two banks that showed more stable ROE than other banks. The further analysis of ROE has shown that banks that had relatively high EM, their ROA acted in two different ways some had low fluctuations in their ROA, and other banks were having high fluctuations in their ROA. However, majority of banks were suffering from the fluctuations of their EM and ROA where it reached in both positive and negative values many times during the turmoil in such small period.

After further analysis of the ROA, it was clear that the ability of banks to generate income from their assets has decreased throughout turmoil, where some banks were hardly making any profits and others were collapsing in term of their PM. In addition, banks with higher AU ratio appeared to have higher PM as well which indicate that these banks were able to control their expenses, where on the other hand, banks with lower AU ratio appeared to

have more fluctuations in their PM which indicate that these banks were not able to control their expenses during turmoil.

Nevertheless, the results confirm the previous studies that argues that interest expenses increases in post financial crisis due to the risk increase [16] where majority of Yemen banks had very high interest expense, in fact, it was the costliest type of expense for banks. Whereas, non-interest expense came in the second costliest expense for most banks, heavily affecting banks' PM.However, most banks' non-interest expense ratio was increasing prior to 2014, then decrease after the crisis.

The results shows that, some banks were optimistic about PLL prior to 2014 causing it to decrease, while other banks were pessimistic rising PLL to its highest value, in contrast, management expectations had changed after the crisis in 2014 where majority of banks had increased their PLL. However, after 2011, income tax ratio seemed to increase while it started to decrease after 2014, during turmoil most of Yemen banks were not paying income tax or paying low amount which consent with literature studies that stated that due to the increase in risk in financial crisis the profitability of bank decrease.

On the other hand, even though turmoil started in 2011, banks' ability to generate income from interest activities was in its highest levels, but unfortunately, this ability started to decrease until it reached its lowest level by end of 2016. In addition, turmoil has affected one of the main non-interest income streams in Yemen bank, which is foreign currency exchange transaction.
However, in turmoil, Yemen banks' tendency to invest in big/risky projects has decreased which confirm what literatures presented that in turmoil bank's ability of executing economic investments decreases [16]. The decrease of economic investments has led to the heaviest undirected effect of turmoil, which is inflation, which caused and still causing a lot of losses for Yemen banks.

CONCLUSION

This study has investigated the effects of turmoil on the performance of Yemen banks over the period of 2011 to 2016. The findings were discussed in terms of liquidity and profitability. Liquidity analysis showed that there was no trend during the turmoil, but commercial banks in Yemen seemed to be more affected by the turmoil than Islamic banks. Moreover, the performance review in terms of profitability showed that, after 2014, banks typically had fewer ROE than before, where their ROE had been either zero or negative for most banks, with the exception of two banks that had more stable ROE than other banks. For future works, the authors recommend to on the long-term effects of turmoil as soon as Yemen banks publish their annual reports and financial statements, because according to some in the long run the economy may act positively toward turmoil, which the current situation of Yemen banking industry may support this arguments

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