CHAPTER IV

RESULT AND DISCUSSION

A. Results SHABAR Index with Standardized Normalization Approach

$$SHABAR\ Index_t = 0{,}07(Pressure\ Index)_t - 0{,}75(Interm.Index)_t + 0{,}19(Efficiency\ Index)_t \quad (17)$$

$$Pressure\ Index_t = 0{,}18(NPF)_t - 0{,}59(CAR)_t - 0{,}07(ROA)_t - 0{,}16(\Delta Liquidity)_t \quad (18)$$

$$Intermediation\ Index_t = -0{,}23(SFTD)_t + 0{,}04(GAP\ FDR)_t + 0{,}02(Financing/GDP)_t + 0{,}71(Gap\ GDP) \quad (19)$$

$$Efficiency\ Index_t = -(0{,}07(NOM)_t - 0{,}49(BOPO)_t - 0{,}35(CIR)_t - 0{,}09(OHC/PO)_t \quad (20)$$

SHABAR Index formation, with a based year approach to statistical normalization of monthly time series data from January 2010 to December 2016. This is modified by the availability of existing data. After determining the Index normalization method, the selection of indicators, then finally it is obtained specific weight for each dimension forming SHABAR Index. It is shown in Formula (17) to (20) above.

Based on formula (17), pressure index contribute positively 7% to SHABAR index, while intermediary index contribute negetively 75% and efficiency index contribute positively 19%. In the formula (18), NPF contribute positively 18% to the pressure index, while CAR contribute negetively 59%, ROA contribute negatively 7%, and Δliquidity contribute positively 16%. In the formula (19), SFTD contribute negatively 23% to the intermediary index, while GapFDR contribute positively 4%, F/GDP contribute positively 2%, and

Δliquidity contribute positively 71%. formula (20) shows negative contribution of NOM in the level of 7% to the efficiency index, BOPO contribute negatively 49%, CIR contribute negatively 35%, and OHC/PO contribute negatively 9%.

B. Result of Accuration Test of SHABAR Index

1. Composite Index

TABLE 4.1

Test Accuration of SHABAR Index with Upper Treshold

	Items		Threshold		
			1,3	**1,7**	**2**
Upper Threshold	**Loss**	24 month	0,169109	0,086907	0,09198
		12 month	0,005556	0,033437	0,048758
		6 month	0,046784	0,057019	0,070779
		3 month	0,08538	0,080128	0,092788
		current year	0,106322	0,103241	0,109259
	QPS		73,80952	73,80952	70,2381
	GSB		94,33107	92,50283	91,14229

TABLE 4.2

Test Accuration of SHABAR Index with Lower Treshold

	Items		Threshold		
			1,3	**1,7**	**2**
Lower Threshold	**Loss**	24 month	0,077193	0,016667	0,016667
		12 month	0,021131	0,019591	0,019591
		6 month	0,02284	0,022121	0,022121
		3 month	0,02284	0,022121	0,022121
		current year	0,02284	0,022121	0,022121
	QPS		88,09524	94,04762	94,04762
	GSB		99,94331	99,64569	99,64569

a. The smallest loss value for Upper threshold is 0,005556 occurs at 12 month prediction month with threshold 1,3.

b. The smallest Loss value for the Lower Threshold is 0.016667 occurs on the 24 month prediction month with the threshold of 1.7 and 2
c. The smallest loss value for the threshold is 0,005556 occurs at prediction month 12 months with threshold 1,3
d. The largest percentage of QPS for Upper threshold that is 73,80952 occurs at threshold 1,3 and 1,7
e. The largest percentage of QPS for the Lower threshold of 94.04762 occurs at the threshold of 1.7 and 2
f. The largest percentage of GSB for Upper threshold is 94.33107 occurs at threshold 1.3
g. The percentage of GSB is the same for each level (1.3, 1.7 and 2) in the Lower threshold

2. Dimension Index

TABLE 4.3

QPS and GSB of Dimention Index

Category	NO	Indicator	Trend	Loss (1,3)	Threshold 1,3 Lamdha=1600 (Bank Indonesia)	Accuracy and Calibration	
Dimension Index (μ = 0,5)	2.1	Pressure Index	One Side HPF	0,021	Upper Threshold	QPS	82,14
						GSB	99,65
			One Side HPF	0,08	Lower Threshold	QPS	69,05
						GSB	91,84
	2.2	Intermdiary index	One Side HPF	0,073	Upper Threshold	QPS	65,48
						GSB	95,90
			One Side HPF	0,017	Lower Threshold	QPS	85,71
						GSB	97,96
	2.3	Efficiency Index	One Side HPF	0,06	Upper Threshold	QPS	82,14
						GSB	99,31
			One Side HPF	0,117	Lower Threshold	QPS	80,95
						GSB	99,94

Table 4.3 shows the result of accuration test of every dimension index constructing SHABAR index. The red color show the accuracy below the standard, while the other are in it track. Generally, all constucted dimention

index shows good accuracy performance more than 66,67%. The dimension index that shows less accuracy performance is intermediary index which has QPS level only 65,48%.

3. Single Index

TABLE 4.4

QPS and GSB of Single Index

Category	NO	Indicator	Trend	Loss	Threshold 1,3 Lamdha=1600 (Bank Indonesia)	Accuracy and Calibration	
Single Index (μ = 0,5)	3.1	NPF	One Side HPF	0,048	Upper Threshold	QPS	91,66667
						GSB	99,30556
		NPF	One Side HPF	0,074	Lower Threshold	QPS	89,28571
						GSB	99,98583
	3.2	ROA	One Side HPF	0,061	Upper Threshold	QPS	78,57143
						GSB	97,95918
		ROA	One Side HPF	0,09	Lower Threshold	QPS	72,61905
						GSB	93,75
	3.3	CAR	One Side HPF	0,022	Upper Threshold	QPS	95,2381
						GSB	99,94331
		CAR	One Side HPF	0,25	Lower Threshold	QPS	46,42857
						GSB	84,56633
	3.4	ΔL	One Side HPF	0,036	Upper Threshold	QPS	80,95238
						GSB	98,58277
		ΔL	One Side HPF	0,098	Lower Threshold	QPS	75
						GSB	94,88379
	3.5	SFTD	One Side HPF	0,094	Upper Threshold	QPS	66,66667
						GSB	90,4195
		SFTD	One Side HPF	0,025	Lower Threshold	QPS	84,52381
						GSB	97,60488
	3.6	GapFDR	One Side HPF	0,095	Upper Threshold	QPS	83,33333
						GSB	98,58277
		GapFDR	One Side HPF	0,122	Lower Threshold	QPS	63,09524
						GSB	94,88379
	3.7	GDP	One Side HPF	0,025	Upper Threshold	QPS	98,80952
						GSB	99,98583
		GapGDP	One Side HPF	0,017	Lower Threshold	QPS	100
						GSB	100
	3.8	GDP	One Side HPF	0,081	Upper Threshold	QPS	63,09524
						GSB	88,08107
		GapGDP	One Side HPF	0,021	Lower Threshold	QPS	82,14286
						GSB	99,30556
	3.9	NOM	One Side HPF	0,058	Upper Threshold	QPS	76,19048
						GSB	99,94331
		NOM	One Side HPF	0,108	Lower Threshold	QPS	66,66667
						GSB	90,4195
	3.10	BOPO	One Side HPF	0,088	Upper Threshold	QPS	80,95238
						GSB	97,22222
		BOPO	One Side HPF	0,027	Lower Threshold	QPS	77,38095
						GSB	95,9042
	3.11	CIR	One Side HPF	0,033	Upper Threshold	QPS	73,80952
						GSB	99,4898
		CIR	One Side HPF	0,033	Lower Threshold	QPS	77,38095
						GSB	97,60488
	3.12	OHC/PO	One Side HPF	0,021	Upper Threshold	QPS	90,47619
						GSB	99,09297
		OHC/PO	One Side HPF	0,08	Lower Threshold	QPS	65,47619
						GSB	88,08107

Table 4.4 shows the result of accuration test of every single index constructing SHABAR index. The red color show the accuracy below the standard, while the other are in it track. Generally, all indicators shows good accuracy performance more than 66,67%. The single indices that show less accuracy performance are lower threshold of CAR, GapFDR, NOM, and OHC/PO, while the upper one is SFTD. CAR has QPS level only 46,43%, GapFDR 63%, NOM 66,67%, and OHC/PO 65,48%. SFTD has only QPS level 66,67%.

C. Resilience Level of SHABAR Index

1. Composite Index

TABLE 4.5

Resilience Level of Composite Index (CI)

NO	Indicator	Probability of Systemic Risk (C & B)	Threshold (index)		Resilience Level
1.1	SHABAR Index/CI	0,03	Upper	4,4	0,994
1.2	SHABAR Index/CI	0,07	Lower	3,2	0,979

Table 4.5 shows the resilience level of SHABAR Index. For SHABAR Index (IC) itself, Resilience level exist in the range level of 0,979 to 0,994 with upper threshold 4,4 and lower threshold 3,2. Probability level of systemic risk happen only reach 3% for upper threshold and 7% for lower threshold of all crisis possibilities based on sample.

2. Dimention Index

TABLE 4.5

Resilience Level of Dimension Index

NO	Indicator	Probability of Systemic Risk (C & B)	Threshold (index)		Resilience Level
2.1	Pressure Index	0,07	Upper	0,1	0,979
	Pressure Index	0,42	Lower	0,0	0,920
2.2	Intermdiary index	0,33	Upper	6,3	0,927
	Intermdiary index	0,03	Lower	4,4	0,983
2.3	Efficiency Index	0,20	Upper	-0,3	0,945
	Efficiency Index	0,23	Lower	-1,7	0,974

Table 4.6 shows the resilience level of dimension index constructing CI. Resilience level of Pressure index exist in the range level of 0,920 to 0,979 with upper threshold 0,0 and lower threshold 0,1. Probability level of systemic risk happen reach 7% for upper threshold and 43% for lower threshold of all crisis possibilities based on sample.

While resilience level of intermediary index exist in the range level of 0,927 to 0,983 with upper threshold 4,4 and lower threshold 6,3. Probability level of systemic risk happen reach 33% for upper threshold and 3% for lower threshold of all crisis possibilities based on sample.

And the last, resilience level of efficiency index exist in the range level of 0,945 to 0,974 with upper threshold -1,7 and lower threshold -0,3. Probability level of systemic risk happen reach 20% for upper threshold and 23% for lower threshold of all crisis possibilities based on sample.

3. Single Index

TABLE 4.7

Resilience Level of Single Index

Components of Pressure Index				
NO	**Indicator**	**Probability of Systemic Risk (C & B)**	**Threshold (index)**	**Resilience Level**
3A	NPF	0,10	0,4	0,953
3A	NPF	0,15	-0,7	0,926
4A	ROA	0,25	0,4	0,939
4A	ROA	0,28	0,0	0,910
5A	CAR	0,08	-0,7	0,978
5A	CAR	0,50	-0,9	0,750
6A	ΔL	0,08	0,5	0,964
6A	ΔL	0,35	-0,4	0,902
Components of Intermediary Index				
	SFTD	0,33	-0,3	0,906
	SFTD	0,17	-0,6	0,975
	GapFDR	0,22	0,4	0,905
	GapFDR	0,23	0,1	0,878
	F/GDP	0,05	1,8	0,975
	F/GDP	0,03	-0,8	0,983
	GapGDP	0,18	8,9	0,919
	GapGDP	0,07	6,3	0,979
Components of Efficiency Index				
	NOM	0,20	0,7	0,942
	NOM	0,45	0,6	0,892
	BOPO	0,30	0,2	0,912
	BOPO	0,27	-0,4	0,973
	CIR	0,07	-1,1	0,967

	CIR	0,07	-4,3	0,967
	OHC.PO	0,07	-0,3	0,979
	OHC.PO	0,23	-0,6	0,920

Table 4.7 shows the resilience level of single index constructing CI. From pressure's side, sesilience level of NPF exist in the range level of 0,926 to 0,953 with upper threshold 0,4 and lower threshold -0,7. Probability level of systemic risk happen reach 10% -15% of all crisis possibilities based on sample.

Resilience level of ROA exist in the range level of 0,910 to 0,939 with upper threshold 4,4 and lower threshold 6,3. Probability level of systemic risk happen reach 25% -28% of all crisis possibilities based on sample.

Resilience level of CAR exist in the range level of 0,950 to 0,978 with upper threshold 0 and lower threshold -0,7. Probability level of systemic risk happen reach 8% -50% of all crisis possibilities based on sample.

Resilience level of ΔL exist in the range level of 0,902 to 0,964 with upper threshold 0,5 and lower threshold -0,4. Probability level of systemic risk happen reach 8-35%% of all crisis possibilities based on sample.

From intermediari's side, resilience level of SFTD exist in the range level of 0,906 to 0,975 with upper threshold -0,6 and lower threshold -0,3. Probability level of systemic risk happen reach 17-33%% of all crisis possibilities based on sample.

Resilience level of GapFDR exist in the range level of 0,878 to 0,905 with upper threshold 0,4 and lower threshold 0,1. Probability level of systemic risk happen reach 22% -23% of all crisis possibilities based on sample.

Resilience level of F/GDP exist in the range level of 0,975 to 0,983 with upper threshold 1,8 and lower threshold 0,8. Probability level of systemic risk happen reach 3% -5% of all crisis possibilities based on sample.

Resilience level of GapGDP exist in the range level of 0,919 to 0,979 with upper threshold 8.9 and lower threshold 6,3. Probability level of systemic risk happen reach 7-18%% of all crisis possibilities based on sample.

From efficienci's side, resilience level of NOM exist in the range level of 0,892 to 0,942 with upper threshold 0,7 and lower threshold 0,6. Probability level of systemic risk happen reach 20-45%% of all crisis possibilities based on sample.

Resilience level of BOPO exist in the range level of 0,912 to 0,973 with upper threshold 0,2 and lower threshold -0,4. Probability level of systemic risk happen reach 27% -30% of all crisis possibilities based on sample.

Resilience level of CIR exist in the level of 0, with upper threshold -1,1 and lower threshold -4,3. Probability level of systemic risk happen reach 7% of all crisis possibilities based on sample.

Resilience level of OHC/PO exist in the range level of 0,920 to 0,979 with upper threshold -0,3 and lower threshold -0,6. Probability level of systemic risk happen reach 7%-23% of all crisis possibilities based on sample.

4. Threshold Single Index

TABLE 4.8

Upper and Lower Treshold of Indicators

No.	Indicator	Upper Threshold			Lower Threshold		
		Th 1,3	Th 1,7	Th 3	Th 1,3	Th 1,7	Th 3
1.	NPF	0,38	0,55	0,68	-0,71	-0,88	-1,00
2.	ROA	0,38	0,44	0,48	0,04	-0,02	-0,06
3.	CAR	-0,67	-0,63	-0,61	-0,88	-0,92	-0,94
4.	ΔL	0,46	0,59	0,69	-0,41	-0,54	-0,64
5.	SFTD	-0,29	-0,24	-0,20	-0,62	-0,67	-0,71
6.	Gap FDR	0,44	0,49	0,52	0,14	0,09	0,06
7.	F/GDP	1,83	2,24	2,54	-0,81	-1,21	-1,52
8.	Gap FDR	8,95	9,36	9,66	6,28	5,88	5,57
9.	NOM	0,69	0,70	0,70	0,63	0,62	0,61
10.	BOPO	0,19	0,28	0,35	-0,40	-0,49	-0,56
11.	CIR	-1,14	-0,66	-0,30	-4,25	-4,73	-5,09
12.	OHC/PO	-0,32	-0,27	-0,23	-0,65	-0,70	-0,74

From the above, we can see the result of upper and lower threshold of every single indicator constructing SHABAR index. Threshold 1,3 used as basic to determined resilience level because it is the most low threshold which contribute to the loss level in Sharian Banking.

D. Trace Back by Using Heat Map

One of the weaknesses in the Indexation of the indicators is difficult, to do trace back to see the source of the pressure on the Index. Heat map is one of the best visualization tools for dense point data. They are also useful for doing cluster analysis or hotspot analysis. I this study, Heat map or chart indicators with color indication as manual vulnerability level of the indicator. Heat map of

SHABAR Index show the entire Index results in terms of pressure, intermediation and banking efficiency.

For each composite Index will be composed of the composite Index constituent, presence Heat Map make easy see the source of vulnerability. The use of variation color in the Heat Map refers to the threshold (treshold). Overall there are three colors on the Heat Map SHABAR Index, green depicts normal conditions, with color indicator stands at a better value than the first treshold. Yellow color depicts the standby state, the indicator value in these conditions is between treshold first and second treshold. The orange color, the standby state, the indicator on this color is at a value between.

TABLE 4.9
Heat Map SHABAR Index
(January 2010 - December 2016)

Indicator	Parameter	2010											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Agt	Sep	Oct	Nov	Des
	SHABAR	9,84	8,67	6,78	5,61	6,06	6,48	-1,72	2,75	2,37	2,13	1,30	1,00
	Pressure	-0,24	0,28	1,59	1,27	-2,16	-0,74	-0,48	-0,85	-0,07	0,05	0,25	-0,58
	Intermediary	12,93	11,44	9,30	7,63	7,13	8,29	-2,66	3,21	2,82	2,54	1,47	0,87
	Efficiency	1,03	0,56	-1,51	-0,98	4,68	1,81	1,61	2,19	1,45	1,27	0,99	2,07
Pressure Index	NPF (%)	2,33	3,28	2,74	2,60	3,33	1,19	1,80	1,70	1,34	1,34	1,43	-0,92
	CAR (%)	-2,91	-2,82	-3,01	-2,46	-2,36	-2,06	-1,14	-1,36	-1,18	-0,57	-0,75	-0,31
	ROA (%)	-1,59	-0,79	1,92	1,41	-4,51	-1,52	-1,44	-1,74	-0,71	-0,57	-0,27	-1,44
	ΔLiquidity	3,01	2,18	1,11	0,88	0,41	0,55	0,80	-0,23	1,18	1,15	1,31	2,88
Intermediary Index	SFTD	1,22	1,62	-1,44	-2,63	0,71	2,49	2,17	-2,37	0,00	2,20	0,45	0,79
	Gap FDR	-2,39	-1,39	0,39	0,62	1,10	0,87	0,55	2,08	0,59	0,32	0,62	-1,88
	F/GDP	-3,63	-3,65	-3,31	-3,16	-3,00	-2,71	-2,53	-2,24	-2,19	-1,99	-1,67	-1,44
	Gap GDP	18,05	15,76	13,63	11,66	9,83	10,89	-4,40	5,24	4,00	2,90	1,94	1,11
Effisiency Index	NOM	2,97	2,97	0,66	-0,71	-0,49	-0,09	-0,62	0,88	0,88	0,62	1,46	0,93
	BOPO	7,03	1,80	-1,73	-0,83	7,97	2,06	1,84	2,44	1,16	0,99	-0,27	2,62
	CIR	-6,30	-0,17	-0,79	-0,51	3,12	2,81	2,50	2,90	2,54	2,23	2,90	1,99
	OHC/PO	-4,69	-5,27	-4,78	-3,86	-3,09	-1,98	-1,35	-0,96	-0,82	-0,51	0,04	0,31

Heat Map SHABAR Index Continuation

The above heat map are presented based on the single, dimension, and composite index data that have been formulated in the previous chapter. This heat map describes the condition of banking in Indonesia in 2010 after the enactment of Act Number 21 of 2008 Republic of Indonesia. Based on the above heat map it appears that the trend of banking conditions in Indonesia is beyond the threshold limit of its ideal level of resilience. Based on business cycle theory it possible happen if in the business implementation of sharia banking is too excessive (above upper threshold) or too defensive whereas looking for a safe level (below ideal resistance level).

The average indicator shows its resilience level near the end of 2010. CAR and BOPO are at their ideal resilience level in November, while Gap FDR and OHC/PO in October. NPF and F/GDP are at warning level in December. While ΔLiquidity successively is within its ideal resilience level in May and August, NOM indicator is in the most frequently alert horizon in 2010 compared to the other variables in May, June, and October. Other yellow horizon indicators occur in CIR and OHC/PO respectively in March and November. Pressure on banks is at its ideal level of resilience in October. Indicator such as Gap GDP, SFTD, and ROA is out of it's ideal level of resilience based on threshold 1,3. When it comes to lower economic growth compare to its trend, it could impact to the banking system. Moreover, sharia banking performance seems play in save area looking at lack contribution of ROA to the SHABAR index.

Heat Map SHABAR Index Continuation

Indicator	Indicator	Parameter	2011											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Agt	Sep	Oct	Nov	Des
		SHABAR	0,22	0,37	-0,15	-0,18	-0,41	-0,39	-0,51	-0,25	-0,26	0,10	0,40	1,03
		Pressure	1,95	-0,17	0,64	0,38	0,08	-0,13	0,06	-0,48	-0,36	-0,82	-0,79	-0,36
		Intermediary	0,51	0,34	-0,22	-0,42	-0,77	-0,60	-0,63	-0,31	-0,30	0,20	0,67	15,30
		Efficiency	-1,54	0,71	-0,15	0,59	0,87	0,38	-0,22	0,08	-0,03	0,05	-0,26	-0,49
Indicator	**Pressure Index**	NPF (%)	-0,29	0,63	0,49	0,95	0,88	0,37	0,85	0,32	0,24	-0,70	-1,60	-2,13
		CAR (%)	1,77	-0,87	-0,14	1,58	1,43	-0,48	-0,48	-0,53	-0,34	-0,80	-1,02	-0,11
		ROA (%)	2,87	-0,42	0,75	0,24	-0,20	-0,20	-0,05	-0,42	-0,49	-0,86	-0,64	-0,57
		ΔLiquidity	1,14	0,17	0,76	-0,28	-0,39	-0,27	-0,16	-1,58	-0,57	-0,80	-0,31	2,29
	Intermediary Index	SFTD	1,16	1,86	0,85	0,66	-0,48	0,23	-0,32	-0,19	-1,33	-1,07	-1,31	-0,06
		Gap FDR	-0,89	0,48	-0,37	0,46	0,31	0,31	-0,03	1,75	0,24	0,32	-0,09	-2,49
		F/GDP	-1,30	-1,14	-0,85	-0,72	-0,43	-0,48	-0,21	0,43	0,64	1,06	1,34	1,66
		Gap GDP	0,43	-0,12	-0,53	-0,81	-0,94	-0,93	-0,78	-0,48	-0,03	0,58	1,34	2,27
	Effisiency Index	NOM	-0,09	0,66	1,28	-0,05	0,26	1,02	-0,27	0,13	0,62	0,22	-2,18	-1,60
		BOPO	-2,26	1,62	-0,34	0,83	1,10	0,17	-0,85	-0,32	-0,43	0,07	-0,05	0,45
		CIR	-1,40	-0,12	0,07	0,59	0,98	0,80	0,75	0,77	0,57	-0,24	-0,45	-2,31
		OHC/PO	0,73	-0,94	-1,05	-0,25	-0,32	-0,59	-0,50	-0,47	-0,68	0,98	0,76	2,34

Based on the above heat map it appears that the trend of banking conditions in Indonesia has increased its resilience compare to previous year. Sharia banking stack in the ideal level of its resilience means it is not too excessive (above upper threshold) or too defensive (below ideal resistance level). Moreover it is entering 3 years after pass the enactment Number 21 of 2008. The socialization and implementation of regulation seems showing positive result.

The average indicator shows its resilience level near the end of 2011. CAR and BOPO are at their ideal resilience level in November, while Gap FDR and OHC / PO in October. NPF and F / GDP are at warning level in December. While ΔLiquidity successively is within its ideal resilience level in May and August, the NOM indicator is in the most frequently alert horizon in 2010 compared to the other variables in May, June, and October. Other yellow horizon indicators occur in CIR and OHC / PO respectively in March and November. Pressure on bank is at its ideal level of resilience in October.

The contribution of each indicator to the resilience of sharia banking in Indonesia appears to spread evenly throughout 2011. The most isgnificant is the F / GDP indicator which is almost at its ideal resilience level from April to December. Followed by NPF and BOPO indicator that experienced 5 period of resilience. The most minimal indicators contributing to banking resilience are CAR, ROA, and CIR. Even the GDP GDP does not show the resiliencenya level at all.

Heat Map SHABAR Index Continuation

Indicator		Parameter	2012											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Agt	Sep	Oct	Nov	Des
Indicator		SHABAR	12,46	4,13	5,17	5,67	5,97	6,90	6,71	7,33	7,62	7,96	8,18	7,98
		Pressure	-2,16	-0,34	-0,39	-0,74	0,01	0,39	0,18	0,08	0,12	0,24	0,13	0,45
		Intermediary	16,15	6,43	78,90	8,60	9,12	10,46	10,25	11,07	11,48	11,99	12,28	12,11
		Efficiency	2,85	-3,52	-3,79	-3,82	-4,53	-5,11	-5,18	-5,12	-5,20	-5,51	-5,39	-5,89
	Pressure Index	NPF (%)	-1,74	-1,40	-1,55	-1,33	-1,14	-1,26	-1,16	-1,50	-1,60	-1,99	-2,18	-2,86
		CAR (%)	-0,30	-0,48	-0,79	-0,98	-1,79	-0,38	-0,38	-0,63	-2,01	-1,20	-1,05	-1,41
		ROA (%)	-3,71	-0,57	-0,27	-0,57	0,90	1,33	1,33	1,26	1,48	1,77	1,63	1,99
		ΔLiquidity	2,24	1,75	0,63	-0,61	-1,14	-0,91	-2,34	-2,17	-2,02	-2,26	-2,29	-0,73
	Intermediary Index	SFTD	-0,70	-3,99	-0,38	-0,67	-1,23	2,12	-1,23	0,10	-0,30	0,08	-0,59	-3,03
		Gap FDR	-3,27	-1,94	-3,45	0,04	1,07	1,27	1,76	2,15	2,52	1,89	1,94	1,33
		F/GDP	1,78	1,95	2,50	2,40	2,79	3,25	3,55	3,92	4,44	4,94	5,37	6,07
		Gap GDP	23,11	10,40	11,36	12,26	13,10	13,89	14,63	15,33	15,99	16,62	17,22	17,79
	Effisiency Index	NOM	0,71	-0,89	0,31	-0,85	-0,09	1,19	0,53	-0,54	2,30	0,75	-0,14	2,12
		BOPO	8,40	0,43	-0,20	-0,20	-1,76	-2,27	-2,13	-2,11	-2,57	-2,98	-2,72	-3,27
		CIR	-3,00	-10,50	-10,69	-10,60	-11,07	-11,76	-12,02	-11,74	-11,90	-11,97	-11,84	-13,27
		OHC/PO	-2,99	0,04	0,26	0,54	2,29	0,33	0,43	0,67	0,67	0,93	1,02	2,32

The above heat map are presented based on the single, dimension, and composite index data that have been formulated in the previous chapter. Based on the above heat map it appears that the trend of banking conditions in Indonesia is beyond the threshold limit of its ideal level of resilience. Based on business cycle theory it possible happen if in the business implementation of sharia banking is too excessive (above upper threshold) or too defensive whereas looking for a safe level (below ideal resistance level).

The average indicator shows its resilience level near the beginning of 2012. It shows that in February sharia banking is able to reach its resilience level. Main contribution comes from intermediary dimension by its F/GDP indicator shown alert horizon and same with OHC/PO. While intermediary contribute to resilience of sharia banks significantly, pressure dimension shows constant and the most frequently reach resilience level.

In this year, there is quite significant decrease in NPF role toward the contribution to SHABAR index. It is also happened to ROA and Gap FDR which does not significantly contribute to SHABAR index throughout 2012. Generally, indicators contribute to SHABAR index exist in the beginning of 2012 from January to May.

Heat Map SHABAR Index Continuation

Indicator	Indicator	Parameter	2013											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Agt	Sep	Oct	Nov	Des
		SHABAR	9,60	9,71	10,06	10,67	10,24	10,17	10,83	10,37	10,03	9,87	9,36	9,22
		Pressure	2,08	1,12	1,69	1,16	0,26	0,23	-0,15	-0,01	0,04	-0,35	-0,27	-0,07
		Intermediary	14,80	14,74	15,10	15,85	15,27	14,91	15,73	15,04	14,58	14,22	13,50	13,33
		Efficiency	-8,64	-7,44	-7,24	-6,76	-6,43	-5,31	-4,92	-4,69	-4,65	-3,96	-3,82	-3,93
	Pressure Index	NPF (%)	-2,21	-1,65	-1,57	-1,33	-1,16	-1,84	-1,57	-0,94	-1,45	-1,07	-0,77	-1,89
		CAR (%)	-0,81	-0,86	-1,33	-1,11	-1,34	-1,33	-0,81	-1,11	-1,38	-1,38	-2,41	-1,26
		ROA (%)	4,77	3,09	3,82	3,09	1,48	1,70	1,11	1,04	1,26	0,53	0,68	0,97
		ΔLiquidity	-1,77	-2,17	-1,20	-2,13	-1,93	-2,21	-2,94	-2,38	-2,16	-2,32	-2,25	-1,34
Indicator	**Intermediary Index**	SFTD	0,10	-1,60	-1,04	1,59	-1,07	-2,66	1,43	-0,40	-1,07	-0,75	-1,57	0,63
		Gap FDR	1,51	2,08	2,18	2,29	1,77	2,71	2,81	1,75	2,01	1,85	1,61	0,60
		F/GDP	6,22	6,62	7,28	7,44	7,77	8,10	8,36	8,29	8,50	8,62	8,71	8,96
		Gap GDP	20,55	20,98	21,28	21,47	21,54	21,48	21,29	20,98	20,52	19,93	19,18	18,28
	Effisiency Index	NOM	3,45	2,92	3,23	3,05	2,04	2,17	2,97	0,93	-0,45	-0,05	-0,31	1,15
		BOPO	-7,67	-6,01	-5,11	-4,09	-1,11	-1,82	-1,87	-0,10	0,02	1,11	0,64	0,25
		CIR	-13,81	-12,68	-13,76	-13,66	-15,73	-12,31	-11,26	-12,61	-12,45	-12,06	-10,94	-11,48
		OHC/PO	-3,18	-2,91	-1,67	-2,13	-5,79	-2,94	-3,05	-3,26	-3,02	-3,15	-3,14	-1,30

Based on the above heat map it appears that the trend of banking conditions in Indonesia is beyond the threshold limit of its ideal level of resilience even categorized as *red zone* compare to the other years.. Based on business cycle theory it possible happen if in the business implementation of sharia banking is too excessive (above upper threshold) or too defensive whereas looking for a safe level (below ideal resistance level).

The average indicator shows its resilience level near the end of 2013. Intermediary dimension show its lack contribution throughout 2013.Contribution comes from NPF, CAR, SFTD, NOM, BOPO mainly in the end of the year. While rest indicators does not have any green even yellow area at all, means those are lack of conribution. When it comes to lower economic growth compare to its trend, it could impact to the banking system. Moreover, sharia banking performance seems play in save area looking at lack contribution of ROA to the SHABAR index.

Heat Map SHABAR Index Continuation

Indicator		Parameter	2014											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Agt	Sep	Oct	Nov	Des
Indicator		SHABAR	5,60	5,14	6,23	11,50	9,58	4,35	5,27	5,43	4,58	4,95	3,67	2,63
		Pressure	-8,27	-7,84	-3,49	-3,69	-3,24	-3,36	-3,56	-3,88	-3,62	-3,69	-3,84	-4,18
		Intermediary	8,25	7,42	7,37	15,38	11,73	4,33	5,54	6,36	5,07	5,02	3,76	2,28
		Efficiency	-0,08	0,59	5,10	1,33	5,52	7,17	7,35	5,02	5,55	7,72	5,98	6,46
	Pressure Index	NPF (%)	-0,94	0,32	-0,43	0,22	1,51	1,21	2,19	2,86	3,08	3,28	3,54	2,26
		CAR (%)	-0,04	-0,07	-0,33	-0,08	0,01	-0,33	-1,09	-1,10	-1,17	-0,83	-0,62	-0,57
		ROA (%)	-13,07	-12,70	-5,17	-5,68	-5,39	-5,46	-5,98	-6,85	-6,56	-6,93	-7,29	-7,80
		ΔLiquidity	-2,41	-2,46	-2,08	-2,31	-2,06	-2,04	-2,20	-1,72	-1,38	-0,81	-0,81	0,39
	Intermediary Index	SFTD	-3,43	-3,94	-0,99	-3,83	12,19	12,69	4,25	11,37	9,32	12,99	11,87	9,93
		Gap FDR	0,46	1,29	1,37	-1,53	0,17	0,77	0,40	0,04	0,38	0,11	-1,72	-3,02
		F/GDP	8,62	8,58	8,83	9,04	9,15	9,41	9,43	9,34	9,52	9,44	9,54	9,56
		Gap GDP	12,46	11,41	10,37	22,73	12,30	1,68	6,14	5,01	3,83	2,59	1,29	-0,10
	Effisiency Index	NOM	-0,49	-3,06	-0,80	-0,49	-2,80	-3,20	-3,15	-3,90	-3,90	-5,01	-4,17	-3,59
		BOPO	2,12	5,91	14,19	6,65	14,11	13,78	13,89	15,00	21,98	19,76	18,71	19,35
		CIR	-0,71	-3,70	-3,85	-4,18	-0,98	4,27	4,92	-3,24	-11,58	-2,00	-5,70	-5,14
		OHC/PO	-9,35	-8,83	-4,95	-4,80	-9,48	-9,42	-10,70	-10,32	-9,85	-10,09	-10,02	-10,74

The above heat map are presented based on the single, dimension, and composite index data that have been formulated in the previous chapter. Based on the above heat map it appears that sharia banking has 2 times experiences of conditions in Indonesia is beyond the threshold limit of its ideal level of resilience. Based on business cycle theory it possible happen if in the business implementation of sharia banking is too excessive (above upper threshold) or too defensive whereas looking for a safe level (below ideal resistance level). For the following year, resilience level mostly existed in 2015.

Heat Map SHABAR Index Continuation

Indicator		Parameter	2015											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Agt	Sep	Oct	Nov	Des
Indicator		SHABAR	5,29	5,29	5,56	4,16	4,21	4,73	4,02	4,30	4,32	4,20	-3,52	-2,77
		Pressure	-2,64	-2,84	-2,74	-3,03	-2,94	-3,97	-5,36	-5,52	-5,32	-5,33	-5,30	-5,27
		Intermediary	6,41	6,43	7,57	5,87	5,84	6,19	6,26	6,57	6,38	6,19	-3,92	-2,71
		Efficiency	3,59	3,60	0,48	-0,13	0,25	1,98	-1,61	-1,29	-0,49	-0,40	-1,30	-2,13
	Pressure Index	NPF (%)	3,57	4,13	3,42	2,96	3,30	3,30	4,61	4,61	4,22	4,27	4,20	3,49
		CAR (%)	-1,40	-1,28	-1,26	-1,22	-1,29	-1,43	-1,24	-0,93	-0,88	-0,98	-1,32	-0,95
		ROA (%)	-5,25	-5,83	-5,39	-5,76	-5,68	-7,15	-10,00	-10,29	-10,07	-9,92	-9,85	-10,07
		ΔLiquidity	-0,59	-0,34	-0,51	-0,49	-0,58	-1,52	-1,27	-1,32	-0,49	-1,06	-0,94	0,67
	Intermediary Index	SFTD	9,29	9,69	14,82	7,57	7,43	8,76	8,66	9,74	8,63	7,38	9,19	8,20
		Gap FDR	-2,06	-1,86	-1,67	-1,63	-1,34	-0,49	1,11	1,14	0,90	0,78	1,17	-0,11
		F/GDP	9,31	9,26	9,48	9,48	9,63	9,76	9,57	9,59	9,72	9,61	9,65	9,93
		Gap GDP	5,88	5,76	5,68	5,63	5,62	5,63	5,68	5,76	5,87	6,01	-8,83	-6,75
	Effisiency Index	NOM	-6,70	-8,74	-5,77	-6,30	-4,88	-3,11	-4,44	-4,79	-4,61	-4,48	-4,39	-4,61
		BOPO	17,14	16,56	18,34	19,06	18,88	19,36	12,39	12,99	13,09	12,93	12,52	10,25
		CIR	-9,44	-8,19	-20,25	-22,91	-21,98	-18,12	-18,65	-18,47	-16,37	-15,84	-17,72	-17,00
		OHC/PO	-11,48	-11,57	-11,32	-11,23	-10,80	-10,53	-9,33	-9,48	-9,45	-9,80	-10,31	-9,77

Heat Map SHABAR Index Continuation

Indicator	Parameter	2016											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Agt	Sep	Oct	Nov	Des
	SHABAR	-2,81	-1,85	-0,13	1,97	8,61	5,82	8,36	11,40	4,45	5,07	5,26	6,03
	Pressure	-2,94	-3,68	-3,37	-3,75	-6,23	-3,99	-4,52	-5,07	-4,83	-5,38	-4,49	-4,59
	Intermediary	-0,72	12,20	3,31	5,70	15,09	11,17	14,63	18,79	9,53	10,57	10,73	11,05
	Efficiency	-11,18	-13,52	-12,76	-10,96	-12,12	-12,18	-12,25	-12,44	-12,63	-13,32	-13,24	-10,36
Pressure Index	NPF (%)	5,00	5,31	4,73	5,05	6,72	5,53	4,66	5,22	3,08	3,40	3,11	2,48
	CAR (%)	-0,90	-0,73	-1,01	-0,74	-1,07	-1,11	-1,03	-1,03	-0,74	-0,82	-0,55	-0,46
	ROA (%)	-6,27	-7,73	-7,22	-7,80	-12,48	-8,32	-9,05	-10,14	-9,34	-10,29	-8,75	-9,05
Intermediary Index	ΔLiquidity	-0,47	-0,18	0,69	0,01	0,03	0,01	0,32	0,27	1,13	0,86	0,97	2,11
	SFTD	9,40	9,37	8,74	8,44	7,89	7,11	7,91	10,44	10,14	12,80	11,58	10,81
	Gap FDR	0,09	-0,50	-0,08	-0,42	-1,16	-0,54	-1,04	-1,37	-1,36	-1,18	-1,47	-1,43
	F/GDP	9,68	9,64	9,73	9,65	9,96	10,26	10,00	9,94	11,14	11,23	11,44	12,01
Effisiency Index	Gap GDP	-4,33	-1,57	1,56	5,05	18,49	13,17	17,82	22,89	9,90	10,49	11,13	11,80
	NOM	-1,60	-2,75	-2,49	-2,49	-6,16	-3,46	-3,86	-4,57	-4,04	-4,70	-3,64	-3,90
	BOPO	3,88	-0,93	0,36	4,04	2,21	1,59	1,35	1,06	0,54	-0,71	-0,80	4,97

CIR	-34,02	-33,85	-33,76	-33,78	-33,83	-33,81	-33,60	-33,63	-33,64	-33,71	-33,75	-33,75
OHC/PO	-11,86	-11,43	-10,50	-10,48	-10,39	-9,83	-9,77	-9,70	-9,36	-9,42	-8,66	-7,86

Source: Data Analysis Result