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Identifying the Core Driver for the Islamic Banking Capital Adequacy Regulation

Penikas Henry[1]*, Stefanenko Valeria[2],

[1] Applied Economics Department of the National Research University Higher School of Economics (HSE University, Russia.

[2] School of Finance, the National Research University Higher School of Economics (HSE University), Russia.

*penikas@hse.ru

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Abstract

Introduction: COVID-19 pandemic raised the stability challenges for the modern banking systems. As a remedy, the regulators and investors turned their eyes to the Islamic Banking. Many people view it as a full substitute to the dominant conventional banking establishments. We hypothesized that the benefits of the Islamic Banking can be fully enjoyed if and only if it is accompanied with the robust regulatory framework. Such a framework could offer room for the national discretion to define 'alpha' parameter within the capital adequacy ratio. The novelty of our paper is the largest collected to date set of alpha value embedded in the Islamic Banking jurisdictions.

Purpose: This research paper aims to able to identify the core driver to locally determine the value of alpha. The credit-to-GDP ratio was shown to be such a driver. We demonstrated that the earlier academic research had offered the Vasicek-based theoretical models for the Islamic Banking that had implied right the opposite values of alpha.

Methodology: We have eight independent determinants with presenting the alpha values for 11 countries registered in 2007 and in 2016.Those are the four macroeconomic variables. we have collected the input data for the regression model.

Findings: The credit-to-GDP ratio was shown to be such a driver. We demonstrated that the earlier academic research had offered the Vasicek-based theoretical models for the Islamic Banking that had implied right the opposite values of alpha. Thus, the usage of the determinant revealed by us could be of

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Kampus 4
Universitas Ahmad Dahlan
Jl. Ringroad Selatan, Tamanan
Banguntapan, Bantul
Yogyakarta 55191
e-mail : ihtifaz@uad.ac.id

help to the central bankers when shaping the framework for Islamic Banking capital adequacy.

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INTRODUCTION

The Islamic Banking constantly attracts growing attention in the last decades. From one side, it has different legal principles of operation than non-Islamic ones. In essence, this means that the equity financing dominates the debt one for the Islamic Banks. Academicians conclude that Islamic Banks are more resilient than the conventional (non-Islamic) ones, see, e.g., (Pappas, Ongena, Izzeldin, & Fuertes, 2017). From another side, the COVID-19 pandemic stroke all the economies in 2020 disregarding the dominant banking arrangement: be it an Islamic or non-Islamic one. From this standpoint, it seems that we may agree with Beck, Demirgüç-Kunt, and Merrouchec (2013) that the Islamic and non-Islamic banks might be regarded as similar institutions.

Disregarding the negative economic consequences of the COVID-pandemics, in the end of 2020 the representative of the Islamic Banks assured that the Islamic Banks have enough capital to take on losses (Aramonte & Avalos, 2020). His statement is trustworthy for the two principal reasons. First, the Islamic Banks differ from the non-Islamic ones in the way they arrange the assets' bookkeeping and may allocate profits and losses. This is called a profit smoothing practice. Regulation-wise, the core stability indicator – the capital adequacy ratio (CAR) – reflects such a practice via the introduction of an "alpha" parameter. The closer alpha is to zero, the more risk the depositor takes acting as an investor. The closer it is to one, the more risk the bank takes on board instead of the depositor (IFSB, 2013).

Second, it is the local regulator who defines the alpha parameter. The Islamic Banking regulator (the Islamic Finance Stability Board, IFSB) learned a lot from its non-Islamic peer, the Basel Committee on Banking Supervision (BCBS), when publishing its guidelines (IFSB, 2013). The national discretions allow to properly reflect the risk profile of a particular jurisdiction. In the risk-management terms this means that diversification implies stability. However, such a solidity may be achieved when the regulatory framework is properly calibrated. Proper calibration implies the correct choice of alpha as a part of the CAR framework for the Islamic banks.

Thus, the objective of our research is to suggest a baseline model for the alpha derivation. We target central bankers who might readily utilize it when regulating the Islamic banks in one's home jurisdiction. The novelty of our research is twofold. First, we mostly twice expand the dataset of countries with the known alpha values. Second, due to

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the collected data we find the core macroeconomic indicator that is best associated with the alpha values.

LITERATURE REVIEW

Many papers discuss whether the Islamic Banks are more stable than the non-Islamic ones. The response to this question has a direct implication for regulation. If they are more solid, they may require less regulation. Otherwise, the Islamic Banking regulation should be tighter than for non-Islamic institutions. For instance, Beck, Demirgüç-Kunt, and Merrouchec (2013) argue that those two banking formats are similar in essence. This means that Islamic banks require no specific regulation. Same time they agree with Hussein (2010) and recognize that the Islamic Banks have larger capital as a proportion of assets all else being equal. Smaoui, Salah, and Diallo (2020) extend their idea by claiming that it is the higher quality of the institutes that imply higher share of the capital in the assets for the Islamic banks.

We should recall that Demirgüç-Kunt and Detragiache (1998) argued that it is the financial liberalization that implies the excessive risk-taking by the conventional banks. As for the Islamic banks, Sobarsyah, et al., (2020) warn that the more capital on the Islamic banking books leads to the excessive risk-taking. However, this contradicts to Bitar et. al. (2020) findings. They argue that the larger capital ratio makes a bank more stable. They also claim that being more consistent with the BCBS regulation implies larger capital for the conventional banks and to a less significant extent for the Islamic ones. Pappas et. al., (2017) also give an argument to support higher stability of the Islamic banks. Not least because of the larger capital cushion for the Islamic banks, they have lower probability of failure.

The above discussion has a core shortcoming. All the mentioned researchers process the available capital ratios without digging deeper into its composition. This is particularly important when benchmarking the Islamic banks to the non-Islamic peers. We may list three essential differences for these two modes of operandum.

First, the Islamic banks have a large share of the client funds in the form of so called "investment accounts". Such funds are assets under management for the conventional banks. The Islamic banks have the two such account types: restricted (RPSIA) and unrestricted (UPSIA) ones. The Islamic banks can invest UPSIAs funds not limited to the equity instruments (investment assets), but may commingle them with the other funds and invest into the financing assets specific to the Islamic banks, such as murabah (akin to mark-up sale settled on a deferred payment basis), ijarah (akin to leasing/rent), salam (akin to advance payment for deferred delivery) (Archer & Karim, 2013). The Islamic Banks treat them as a special asset type and add those to the total banking assets to obtain the total Islamic banking assets. This means that the composition of the risks taken, or the risk-weighted assets (RWA), may differ for the Islamic bank from the conventional one. This implies that there might be variations in the CAR denominators for the Islamic and non-Islamic banks all else being equal.

Second, the income flows for the handled assets also differ. The Islamic Banks obtain a portion of incomes from assets under management as a reserve fund. They use mudarabah/musharakah equity participation contracts to arrange such terms. Conventional banks would mostly often have these revenues in the form of a fixed rate against the asset base. This means that the conventional banks' revenues from assets under management might be less volatile, though also smaller in size than for the Islamic banks. As for the latter, such a practice is called profit and loss sharing (PLS) or profit smoothing Archer, Karim, and Sundararajan (2010), Taktak, Zouari, and Boudriga, (2010), Suandi (2017). Nowadays, the share of PLS investment assets to the total assets is only 5%, while financing assets like sales (murabahah) or lease-based (ijarah) contracts equals to 70% (Shabsigh, et al., 2017). In addition to a profit share, the Islamic banks may similarly reallocate a portion of risk and loss to the client funds. Pappas et. al., (2017) and Hassan and Aliyu (2018) consider such a property being the foundation of the Islamic banks higher resilience compared to their non-Islamic peers. The PLS implies that the numerator of the capital ratio may be different for the Islamic banks and the conventional ones all else being equal.

Third, the rule for the computation of the capital ratio reflects the Islamic banking assets and the profit smoothing practices. Let us look closer at how this differs from a conventional bank regulatory framework.

The BCBS introduced the standard capital (adequacy) ratio (CAR) in 1988 (BCBS, 1988), see formula.

$$CAR = \frac{K}{TRWA} \quad [1]$$

where is the bank's own funds (capital);

$TRWA$ – the total sum of the assets weighted by the credit, market and operational risks. For the conventional banks we may call this value as the amount of the self-financed risk-weighted assets (RWA_{SF}) in Islamic Banking terms.

The IFSB adopted this ratio with the following modification (IFSB, 2013, p. 67):

$$CAR = \frac{K}{TRWA - RWA_{RPSIA} + (1-\alpha) \cdot RWA_{UPSIA} + \alpha \cdot PER \,\&\, IRR_{UPSIA}} \quad [2]$$

where RWA_{RPSIA} are the assets financed by the profit-sharing investment accounts with the limitations on the investment goals (the restricted accounts) and affected by the credit and market risks;

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α is the share of the commercial risk arisen initially for an investment account holder (IAH), but covered by a bank when IAH and a bank are co-investing (aka displaced commercial risk, DCR);

RWA_{UPSIA} are the assets financed by the profit-sharing investment accounts with no limitations on the investment goals (the unrestricted accounts) and affected by credit and market risks;

$PER\,\&\,IRR_{UPSIA}$ stands for the reserves created against the credit and market risks of the UPSIA-financed assets; and

$$TRWA = RWA_{SF} + RWA_{UPSIA} + RWA_{RPSIA} \quad [3]$$

When we modify the capital ratio [2] by inputting the formula [3], we arrive at the following (Central Bank of Bahrain, 2015, pp. CA-1.1.17):

$$CAR = \frac{K}{RWA_{SF} + \alpha \cdot \left(RWA_{UPSIA} - PER\,\&\,IRR_{UPSIA}\right)} \quad [4]$$

The notation in [4] seems to be more illustrative for the concept of alpha parameter. As IFSB says, the closer alpha is to zero the more the depositor acts like an investor and takes on the commercial risk. In this case the CAR denominator is smaller for the Islamic bank compared to the situation when alpha is non-zero (IFSB, 2013, p. 68). When alpha equals to one, the CAR denominator rises for the Islamic bank. This reflects the idea that it is now the Islamic bank to take on the entire commercial risk and not the depositor any more.

Then a natural question comes as how to define the alpha value for a particular country. IFSB leaves this issue for the national discretion. However, Archer, Karim, and Sundararajan (2010) focus the reader's attention on the importance of the alpha proper setting. Wrong alphas may either imply insufficient amount of the capital held by an Islamic bank or may the deteriorate competition in the Islamic banking sector.

We were able to find only two papers discussing the alpha calibration issue. Archer, Karim, and Sundararajan (2010) propose a concept how to derive alpha, whereas Baldwin, Alhalboni, and Helmi, (2019) offer an implementation. Archer, Karim, and Sundararajan (2010) suggest to derive alpha from the knowledge of the unexpected losses (UL). Archer, Karim, and Sundararajan (2010) suggest that a data panel on banks may allow to obtain estimates of alpha. That is why the approach is called "population alpha". However, Archer, Karim, and Sundararajan (2010) do not present the alpha values in the paper. However, the described approach requires knowledge of the bank operations. For a bank to submit such a data it should be allowed to function. Getting permittance means that the "rules of the game" should be defined, i.e., alpha should already be set. This implies a vicious cycle that we need to set up alpha in order to obtain data to estimate the needed alpha.

To break this circle Baldwin, Alhalboni, and Helmi (2019) suggest a novel heuristic approach. They call it a "structural alpha". Baldwin, Alhalboni, and Helmi (2019) themselves recognize that estimating the alpha in their proposed a way requires the high-quality data on the return distributions, the types of assets, the amounts of the funds allocated to the Investment Risk Reserve (IRR) and the Profit Equalization Reserve (PER), contractual Mudarib's shares. The latter variables are especially important to estimate the bank propensity to utilize the smoothing practices. Additionally, Baldwin, Alhalboni, and Helmi (2019) notice that the theoretical "structural alpha" may exceed the value of one. Then it becomes a mere multiplier, but a regulator cannot interpret it as a proportion of assets any more. This brings one an obstacle to the "structural alpha" model implementation in practice. As we show below, the more important vulnerability is the material mismatch with the real-world data. This is not already a difficulty in the interpretation. The wrong alpha is in place may undermine the Islamic Banking system stability.

DATA AND METHODOLOGY

We departed from the Baldwin, Alhalboni, and Helmi (2019) paper. It is unique in presenting the alpha values for 11 countries. Later came an IMF (2020) survey capturing data on alpha for the six Arab countries. We look at the local regulation at other jurisdictions. We used our knowledge of Arab, English, French, Russian languages (we use the latter one for Kazakhstan). Thus, we were able to come with a list of 19 countries for which there are values of alpha, see **Table 1**. Notes to the table explain the rationale for the six cases where we assigned zeros or ones for the actual alpha.

Table 1. Our Dataset Has Twice More Observations Than Previously Considered

No	Country	IFSB	Struct.	Actual	Note	Source
1	Afghanistan	n/a	n/a	0	1	Central Bank of Afghanistan (2018a, pp. 11,the formula at the top of the page), Central Bank of Afghanistan (2018b, pp. 6, par. 4.2)
2	Bahrain	30	33	30		Central Bank of Bahrain (2015, pp. 1, CA-1.1.17b)
3	Bangladesh	n/a	n/a	0	2	Bangladesh Bank (2009, p. 11 Section IV)

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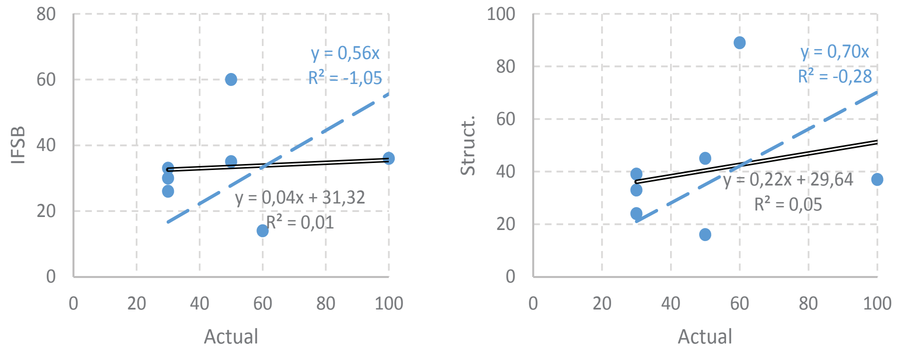
No	Country	IFSB	Struct.	Actual	Note	Source
4	Brunei Darussalam	n/a	n/a	0	3	Laws of Brunei (1999, pp. 10 Part 2 par.10(1c), 12 Part III par.14 (1a))
5	Egypt, Arab Rep.	n/a	n/a	100	4	Central Bank of Egypt (2016, p. 17تعريف الأنواع المختلفة للمخاطر)
6	Iraq	n/a	n/a	0	5	Central Bank of Iraq (2018, pp. 2, 12 par.3.5, 16.2.3)
7	Jordan	26	39	30		IMF (2020, p. 215)
8	Kazakhstan	n/a	n/a	0	6	(Law of the Republic of Kazakhstan No. 133-IV, 2009, pp. Article 52-1)
9	Kuwait	35	16	50		IMF (2020, p. 215)
10	Malaysia	n/a	n/a	100		Bank Negara Malaysia (2011, pp. 14, 7.1(ii))
11	Maldives	84	18	n/a		IMF (2020, p. 215)
12	Oman	33	24	30		IMF (2020, p. 215)
13	Pakistan	14	89	60		State Bank of Pakistan (2012, pp. 7, Appendix-I, line 8)
14	Qatar	36	37	100		IMF (2020, p. 215)
15	Sudan	60	45	50		IMF (2020, p. 215)
16	Syrian Arab Republic	45	53	n/a		IMF (2020, p. 215)
17	United Arab Emirates	n/a	n/a	35		Archer, Karim, and Sundararajan (2010)
18	West Bank and Gaza (Palestine)	15	60	n/a		IMF (2020, p. 215)
19	Yemen, Rep.	45	60	n/a		IMF (2020, p. 215)

We were unable to find data for some countries that Baldwin, Alhalboni, and Helmi (2019) mention. The common dataset has only seven countries. Generally, we may rush to state that the "population" Archer, Karim, and Sundararajan (2010) induced alphas and the "structural" (theoretical) Baldwin, Alhalboni, and Helmi (2019) ones strongly co-depend with the actually set alpha values. One may see that the R-squared for the blue dashed line equals to 70%, see **Figure 1**. However, this is the determination coefficient for the model without a drift (intercept). When we add it, we fail to observe the same strong co-dependence. The R-squared for the twin black line is around zero at **Figure 1**.

Figure 1. Theoretical and Actual Alphas Co-Depend If We Consider No Drift (see blue dashed line); Otherwise, They Are Not at All Aligned (see double black line)



(a) Population Archer, Karim, and Sundararajan (2010)   (b) Structural Baldwin, Alhalboni, and Helmi (2019)

This brought us to the first hint that the theoretical model of neither Archer, Karim, and Sundararajan (2010), nor Baldwin, Alhalboni, and Helmi (2019) may not be sufficient for its implementation in the real-world. That is why we wish to verify our hypothesis using the macroeconomic indicators and the regression setting.

GDP per capita, current account deficit to GDP, money multiplier and credittoGDP ratio are the typical macroeconomic drivers (Hilbers, Leone, Gill, & Evens, 2020; Financial stability review, 2005; Wong, Wong, & Leung, 2010; Kiley, 2021) see **Table 2**. We sourced all of them from the World Development Indicators Database launched by the World Bank (WB).

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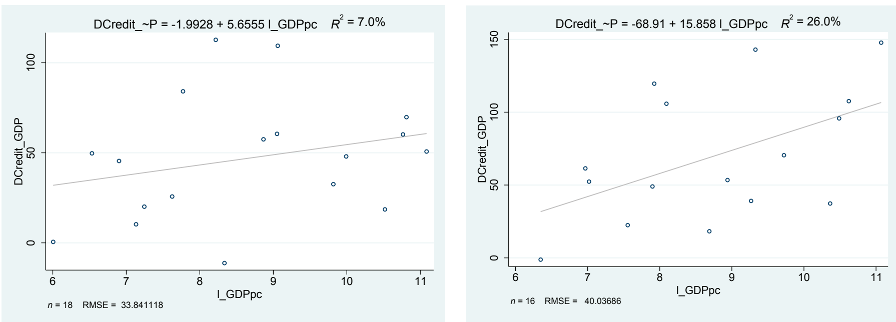
Table 2. The Macroeconomic Explanatory Variables

No	Variable	Notation	Measurement	W Series code
1	Domestic credit provided by financial sector	DCredit_ GDP	% of GDP	FS.AST.DOMS.GD.ZS
2	GDP per capita (constant 2010 US$)	l_GDPpc	natural log	NY. GDP. PCAP. KD
3	Current account balance	CA_GDP	% of GDP	BN.CAB.XOKA.GD.ZS
4	Broad money to total reserves	Money_ mult	ratio	FM.LBL.BMNY.IR.ZS

We wished to benchmark the available three types of alphas against these indicators. As one may see from **Table 1**, the alphas were set in the very different periods of time. The value for the United Arab Emirates dates to 2010, whereas for the Afghanistan the recent document has the 2018 publication year. As we do not have the reliable information on the primarily year when the particular alpha value was set, we decided to verify two-time snapshots as probable determinants. We took the year of 2007 as the pre-world-crisis 2007-09 level and a more recent one of 2016.

Figure 2 has two scatterplots for the co-dependence of the GDP per capita on the horizontal axis and the Credit-to-GDP on the vertical axis for the 2007 and 2016 data. We would notice that the correlation in-between the indicators rose during these ten years from 2007 to 2016. We may see the R-squared for the pairwise regression rising from 7% at the part (a) to 26% at the part (b). However, the measure of the association is still relatively weak. We will need this information further when comparing the Islamic banking capital regulation.

Figure 2. Credit-to-GDP and GDP per capita get more aligned from 2007 to 2016, though staying still quite dispersed



(a) 2007 (b) 2016

Thus, we have collected the input data for the regression model. We have three alphas for the dependent variables from **Table 1**. We have eight independent determinants. Those are the four macroeconomic variables from Table 2 registered in 2007 and in 2016. We run the baseline pairwise model as follows:

$$\alpha_i = \beta + \beta_i X_i + e_i \qquad [5]$$

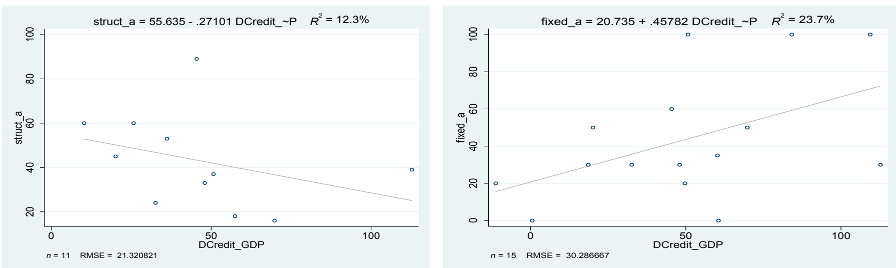
where – the value of "population alpha", median "structural alpha" or actual alpha for country *i*; –the explanatory variable for country i, – the regression model error component (we wish it to be independent and identically distributed, i.i.d.).

We choose the regression specification as follows due to the limitation in the number of observations. We do not introduce multiple macroeconomic variables to stay with the largest possible degrees of freedom. As the alphas are not dynamically changing throughout the years, we neither have sufficient observations to maximize goodness-of-forecast for the model [5]. We use the independent factor coefficient statistical significance as a success criterion for the optimal model choice. We consider the p-value as the significance indicator. It measures the probability of the null hypothesis that the respective coefficient equals to zero. The closer the p-value is to zero, the more significant the coefficient is. Conventionally, we wish to obtain a model where the coefficient is significant at less than 10%, i.e., the p-value is below 10%.

DISCUSSION AND FINDINGS

At the beginning we wish to present two selected scatterplots to visually demonstrate the revealed problem. Further on we would provide quantitative evidence for it. **Figure 3** has the credit-to-GDP on the horizontal axis as one of the possible core drivers for the alpha in the Islamic banking capital regulation framework. The alpha itself is on the vertical axis. The part (a) has the theoretical structural alpha from Baldwin, Alhalboni, and Helmi (2019). The part (b) has the actual alphas that we have collected. The number of dots on the scatterplot in parts (a) and (b) varies because we do not have complete overlap in the countries' coverage. For more details, please, refer to the discussion of **Table 1** in the previous section.

Figure 3. Actual Alpha Are Positively Related to the Credit-to-GDP Whereas the Theoretical Structural Alpha Yields Opposite Results



(a) OY - Structural alpha (b) OY – Actual alpha

The major observation from **Figure 3** is that the regression slope at part (a) is negative, whereas it is positive at part (b). We already noticed earlier that the theoretical alphas from (Baldwin, Alhalboni, & Helmi, 2019) are mostly not associated with the actual values of alphas set by the local regulators. Here the problem exacerbates. The implication from **Figure 3** is the opposite regulatory settings for the alpha given the same inputs assuming the credit-to-GDP is the right determinant for the alpha. This means that the regulators would set up low values of alpha where the high value is needed and vice versa following the theoretical model of Baldwin, Alhalboni, and Helmi (2019). This is exactly the realization of the key challenge raised by Archer, Karim, and Sundararajan (2010). Let us verify whether the visual representation has a formal grounding.

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Table 3 has the regression estimates. There are three last columns for the various alphas. The first column "year" indicates the time at which the independent value was registered. Thus, the upper part of the table relates to the earlier values of 2007. The bottom part of the table corresponds to the latest year of 2016. Using two such snapshots is a way to establish a robustness check for our results.

Table 3. Regression Model Estimates

			Alpha, pp.	
Year	**Variables**	**Population**	**Structural**	**Actual**
2007	DCredit_GDP	-0.0912	-0.271	0.581**
	Intercept	42.68***	55.63***	9.883
	Observations	11	11	15
	R-squared	1.6%	12.3%	30.3%
	l_GDPpc	0.517	-10.68**	4.432
	Intercept	33.27	135.8***	-0.0313
	Observations	10	10	15
	R-squared	0.1%	55.7%	3.9%
	l_Money_mult	-10.7	11.57	5.74
	Intercept	51.85***	28.61*	35.17*
	Observations	11	11	14
	R-squared	12.2%	12.3%	1.4%
	CA_GDP	-0.28	-0.59	-0.204
	Intercept	38.63***	43.56***	39.05***
	Observations	10	10	12
	R-squared	4.3%	16.5%	1.0%

	DCredit_GDP	-0.141	-0.188	0.635***
	Intercept	48.38**	55.04**	-6.581
	Observations	8	8	14
	R-squared	5.7%	9.5%	60.5%
	l_GDPpc	0.564	-10.78**	4.929
	Intercept	32.87	136.3***	-4.857
	Observations	10	10	15
	R-squared	0.2%	53.6%	3.9%
2016	Money_mult	0.167	0.108	0.187
	Intercept	34.32**	38.69**	37.38***
	Observations	8	8	14
	R-squared	7.7%	3.0%	2.1%
	CA_GDP	-1.143	0.877	0.183
	Intercept	27.43**	50.06***	40.10***
	Observations	10	10	14
	R-squared	17.3%	9.0%	0.2%

Notes: Significance indicators; *** p<0.01, ** p<0.05, * p<0.1. Population alpha is a theoretical value originating from Archer, Karim, and Sundararajan (2010) and retrieved from Baldwin, Alhalboni, and Helmi (2019); structural alpha is the value from the theoretical model of Baldwin, Alhalboni, and Helmi (2019); actual alphas are value set up by the regulators manually collected by us and available in **Table 1.** Yellow fill indicates the significant coefficients for the macroeconomic determinants.

We fail to find any statistically significant driver for the population alpha from Archer, Karim, and Sundararajan (2010) model in **Table 3**. However, we do find such ones for the structural values from Baldwin, Alhalboni, and Helmi (2019) and for the actual values collected by us. Here are the two striking findings.

First, the key determinants for the theoretical alphas differ from those for the actual alphas. Theoretical alphas are strongly associated with the GDP per capita values, whereas the actual alphas co-depend with the credit-to-GDP. Above we discussed that the correlation of GDP per capita and the credit-to-GDP rose from 2007 to 2016 (**Figure 2**). We should remember that it is positive, i.e., the larger the GDP per capita is, the higher credit-to-GDP is all else being equal. If the association coefficient for the independent macroeconomic indicators is positive for the both alphas (theoretical and actual), then the finding of the different determinants is not that critical for the policy-making. However, here comes a challenge.

Second, the sign of the dependence for the theoretical alphas and the actual ones are the opposite. The theoretical alpha is negatively

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associated with the GDP per capita. The larger the GDP per capita is, the lower value of alpha is recommended from the theoretical model of Baldwin, Alhalboni, and Helmi (2019). For instance, if the GDP per capita shifts from USD 5k to USD 10k, its logarithm changes from 9.2 to 8.5, the difference is -0.7. The coefficient equals to around 11. This means the alpha should be lower by 7.6 pp. However, the actual alpha has a positive sign for the GDP per capita value, though insignificant at 10% level. The coefficient is around five. For the same illustrative values of GDP per capita, alpha should be larger by 3.5 pp. This means that de facto the alpha should be lower if the GDP per capita is larger. It is right the opposite to the theoretical model implications.

Same finding holds for the actual alpha determinant. It is positively and significantly related to the credit-to-GDP. This means the larger the credit boom is in the economy; the closer alpha is to one. More precisely, extra ten percentage points in the credit-to-GDP add around six pp to the alpha value. However, if we followed the theoretical model of Baldwin, Alhalboni, and Helmi (2019), we had to rely on the negative relationship, though being insignificant. For example, the mentioned extra ten points in credit-to-GDP would imply lower alpha by two pp. As we see from **Table 3**, the findings hold disregarding the year we consider (whether it is 2007 or 2016). The coefficient estimates are pretty close for the different time snapshots.

Thus, we have found the key novelty. Relying on the earlier research of Baldwin, Alhalboni, and Helmi (2019) misleads the central bankers when designing the Islamic banking regulation in two aspects. If we followed this model, we expected that the alpha should be lower if the GDP per capita is larger. However, the actual central banking practice implies another driver and inverse relationship. More specifically, the alpha should be lower if the credit-to-GDP is lower. Alternatively, it may be lower for the lower GDP per capita value. However, the credit-to-GDP should be preferred as a driver.

CONCLUSION

We come to a key finding that the actual alpha determinant is different in essence and in sign from the one corresponding to the theoretical alpha values. Relying on the theoretical model, one could thus deteriorate the stability of the Islamic Banking system. We claim that each ten percentage points in the credit-to-GDP add to six percentage points in alpha. Such a finding corresponds to the essence of the Islamic Banking capital regulation. The higher the credit boom is in the economy, the larger credit-to-GDP is. Our finding suggests that alpha should be closer to one in such a case. This means that the depositor is taking less commercial risk. Most of the risk is then allocated to a bank. Remembering the capital adequacy ratio from, the amount of the risk-weighted assets (RWA) grows for an Islamic bank. Given the same amount of capital, the Islamic bank becomes more constrained in its activities to meet the same minimum capital adequacy requirements. This means that a regulator incentivizes an Islamic Bank to contract the amount of risks taken when there is a credit boom. This is actually the idea of the countercyclical capital buffer that BCBS introduced for the non-Islamic banks after the world financial crisis of 2007-09 (BCBS, 2010).

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