Procyclicality and The Intensity of Basel III Measures in Islamic Banking: Some Evidence from Iran

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Abstract. In response to the recent financial crisis, Basel III has introduced major reforms to the regulatory framework for banks in order to decrease procyclicality of the financial sector and its vulnerabilities. This paper studies the procyclical behavior of Iranian banking system which is fully Islamic and comprises of two types of banks, namely Commercial Banks and Specialized Banks. Using macroeconomic and financial data for specialized and commercial Islamic banks in Iran over the 2004-2014 period, the results of panel model estimations indicate that specialized banks inclined towards PLS contracts are less procyclical than commercial Islamic banks inclined towards mark-up contracts. The results imply that bank procyclicality is rooted more in mark-up contracts compared to PLS contracts. Therefore, to decrease the degree of procyclicality in the financial sector, Iranian commercial banks should be subject to tougher prudential measures compared with specialized banks. The results suggest that extending the share of specialized banks in the banking system increases the stability of the financial sector and promotes the ideal version of Islamic finance in practice.

Keywords: Procyclicality, Financial Crisis, Basel III, Islamic finance.

JEL Classification: E44, G01, G28, P50.

KAUJIE Classification: H13, I31, J31, Q91.

1. Introduction

The recent financial crisis, associated with huge losses for major financial institutions in the conventional financial system, highlighted the need for the implementation of macroprudential policies. The theoretical grounds for macroprudential policies stem from the procyclicality of the financial sector (Brunnermeier, Crockett, Goodhart, Persaud, & Shin, 2009, p. 18-29; Borio, 2014, p. 182) which generates systemic risks. Therefore, in order to contain the vulnerabilities of the financial sector and prevent financial crises, the Basel Committee on Banking Supervision (BCBS), introduced major reforms to the regulatory framework for banks' capital adequacy and liquidity standards, known as Basel III. In-line with the international reforms, the Islamic Financial Service Board (IFSB) has revised and approved IFSB-15 standards for Islamic financial institutions.

The Islamic financial system, characterized with a different business plan, has experienced tremendous growth in recent decades while conventional financial institutions have suffered from the undesirable outcomes of the financial crisis. According to the statistics, Islamic finance assets grew at a double-digit rate, from about US$200 billion in 2003 to US$1.8 trillion by the end of 2013 (Kammer et al., 2015, p. 11).

Considering the rationale for Basel III accords and given the specificities of the Islamic financial system, which are quite different from the conventional system, two main questions arise. Firstly, do institutions offering Islamic financial services have the same procyclical behavior as their counterparts in the conventional system? Secondly, what are the guidelines for financial regulators in order to achieve a stable financial sector while maintaining the competitiveness of Islamic financial institutions?

Exploring these questions provides the practitioners of Islamic finance with opportunities to develop appropriate regulations for financial institutions and improve the success of the industry worldwide. This paper uses both descriptive and experimental studies to address these issues. The descriptive part explores the theoretical and empirical work related to the procyclicality of the financial sector. This increases our knowledge and perception of the regulatory aspects of Islamic finance within the context of macroprudential policies. The experimental part studies the financial sector of Iran's economy as the main proponent of Islamic finance and surveys the degree of procyclicality between two types of Islamic banks, namely Commercial Banks and Specialized Banks, using statistical estimations. This, also, enhances the results of the previous part and leads to some guidelines for Islamic financial regulators to promote a more stable version of Islamic finance.

The remainder of this paper is organized as follows. Section 2 provides the literature review regarding the procyclicality of the financial sector in the context of conventional and Islamic financial systems. Section 3 studies the Iranian banking system and explores its financial features including its performance. Section 4 provides the research methodology in order to evaluate the degree of procyclicality in bank lending. The results and implications are discussed in section 5. The final section concludes the paper.

2. Procyclicality of the Financial Sector and Islamic Finance

The literature for banks' procyclicality over a business cycle are discussed in the pioneering works of Minsky (1982), Bernanke and Gertler (1989), Kiyotaki and Moore (1997) and Bernanke, Gertler and Gilchrist (1999).

During a boom period, due to market interactions between agents and competitive pressures of financial intermediaries to make 'easy' short-term profits, externality arises from various strategic complementarities (De Nicoló, Favara, & Ratnovski, 2012, p. 7). In this situation, demand for credit rises and lenders' incentive to assess borrowers' riskiness decreases. As lenders reduce screening standards and borrowers increase their exposure to financial assets, endogenous feedback between the extension of credit and the rise of asset prices contributes to excessive leverage and, hence, increases the vulnerability of the financial system to asset price downturns (Lorenzoni, 2008; Gersbach & Rochet, 2012). Following a sharp decline in asset prices, the externality takes the form of a credit crunch and fire sales where multiple banks respond

to a common adverse shock by cutting new lending to liquidate their assets in order to repay their debt or collect liquidity to service deposit withdrawal (De Nicoló et al., 2012, p. 8). This triggers a further decline in asset prices and exacerbates the financial stance of both lenders and borrowers, which in turn reduces investment and employment (Claessens, 2014, p. 6).

The two externalities discussed above explain the procyclical behavior of the financial sector. Procyclicality amplifies the magnitude of business cycles and leads to the build-up of systemic risks which require macroprudential measures to prevent financial crises in the context of conventional financial systems (European Systemic Risk Board, 2014, pp. 50-41). This system is characterized by interest-based contracts which transfer the entire risk of projects' failure to borrowers (Hadian & Davoodi, 2016). In other words, conventional banks do not internalize the consequences of their operations for the build-up of systemic risks in the financial sector. Therefore, procyclical behavior of financial institutions emerges from the contractual framework of the conventional financial system which is based on interest rates.

Since the central pillar of borrowing contracts is the existence of interest rates, the conventional financial system dominated by interest-based financing will experience devastating crises from time to time, as it has been so far. In contrast, a financial system shunning any interest-based contracts and encouraging risk sharing projects eliminates sources of externalities and the procyclical behavior of financial players. This alternative approach is the fundamental characteristic of the Islamic financial system.

Islamic doctrine considers profit-loss-sharing (PLS) contracts to be the ideal of finance in Sharīʿah. Being based on risk participation, these contracts are not only Sharīʿah-compliant but also preferable to other type of contracts, such as mark-up contracts. PLS contracts have a great role in the stability of the financial system and this has been discussed in many papers (Chapra, 2007, p. 161; Askari, Iqbal, Krichenne, & Mirakhor, 2010; Shafique, Faheem, & Abdullah, 2012). The condemnation of *usury* in Islamic finance limits excessive leverage and the procyclicality of the

financial sector. Therefore, it has been suggested that to avoid financial instability in the conventional financial system PLS contracts should be designed to replace conventional interest rate contracts.

The stability of Islamic finance discussed in theoretical studies, however, is not taken for granted in practice. It would be stable as long as the progress that Islamic finance has made so far is based on fundamental principles. As other studies show, there is a divergence between theory and practice of an ideal Islamic financial system (Iqbal, 2007; Gamaginta, 2012; Belouafi, Bourakba, & Saci, 2015). They argue that Islamic finance is close to conventional finance in practice which favors interest-based contracts (Chong & Liu, 2009, p. 125; Bourkhis & Nabi, 2013, p. 68).

According to the Global Islamic Finance Forum (2012), 93.4 percent of Islamic financial assets are debt-based. Therefore, the current direction of Islamic finance development is not heading toward fulfilling the *maqāṣid* al-Sharīʿah since the rapid growth in Islamic banking is largely driven by the Islamic resurgence worldwide rather than by the advantages of the PLS paradigm (Chong and Liu, 2009). As a result, Islamic banks, depending on the dominance of mark-up contracts in their financial services, may indeed show some degree of procyclicality. In other words, the response of bank lending or credit to business cycles will be greater as the share of mark-up contracts increases in their assets.

Empirical studies examining the procyclical behavior of banks during business cycles have had mixed results. Using an international sample of banks over the 1995-2002 period Micco and Panizza (2006) investigate the effect of GDP growth and bank ownership on bank credit growth. They conclude that credit growth of state banks is less procyclical than for private banks. In contrast, Iannotta, Nocera, and Sironi (2011) do not find a statistically significant difference between state and private bank lending in a smaller sample composed of 210 Western European banks over the 2000-2009 period. Bertay, Demirgüç-Kunt, and Huizinga (2015, p. 330) supports the former study in countries with good governance. These empirical works emphasize the existence of procyclicality regardless of bank ownership.

Ibrahim (2016, p. 127) studies banks' lending behavior over the business cycle in the Malaysian dual banking system, using a sample comprising 21 conventional and 16 Islamic banks covering the period 2001-2013. He finds that the pro-cyclical behavior is verified for aggregate loans by banks while it is not so when the lending and financing are segregated. In other words, the nature of financial contracts influences the procyclical behavior; when the share of interest-based contracts increases the degree of pro-cyclicality increases and, hence, imposes externalities which result in greater systemic risk. In order to decrease this procyclical behavior, Islamic fanatical institutions should be encouraged to increase their share of PLS contracts and decrease the share of mark-up contracts. Meanwhile, they should consider and respect some prudential measures such as the Basel III Accord to achieve greater stability in the financial sector.

Several empirical studies examine the effects of prudential instruments on banking behavior. Harzi (2011) compares the effect of Basel III on Islamic banks with conventional banks. He concludes that Islamic banks should hold more liquid assets for wholesale funding with respect to the new Basel III liquidity requirements. However, Boumediene (2011) states that excess overall liquidity held by these banks is an advantage under Basel III. Ahmed (2015) argues that the Islamic banking sector faces several restrictions that will constrain its ability to adopt Basel III liquidity requirements if new liquidity instruments and infrastructure are not developed. These studies emphasize that Basel III may impose some limitations on Islamic banks. Addressing these constraints should be carefully analyzed by the IFSB so as not to put Islamic banks at an operational disadvantage compared with their conventional counterparts. In the following, we survey Iranian banking data to infer the procyclical degree of its financial system and hence the potential impact of implementing Basel III.

3. Islamic Banking in Iran

Iranian banks make up the world's largest financial system based on Islamic law. According to the IFSB Stability Report (2015, p. 9), Iran's Islamic banking assets were $482 billion, which is more than that of Saudi Arabia, Malaysia, and the United Arab Emirates combined. Such a sizeable banking sector requires robust financial stance to achieve a well-expected business return and the growth of the real sector of the economy. Surveying financial ratios of major individual banks in Iran, however, shows they generally suffer from capital adequacy, asset quality, and liquidity management constraints. Note that Iran is one of only two countries (according to the aforementioned IFSB report) that is 100% Islamic – the other being Sudan.

Iran has two types of banks; "Commercial Banks" which offer a variety of financial services and "Specialized Banks" whose objective is to finance specific projects in the real sector such as agriculture, industry and mining, construction, housing, and trading. Due to oil revenues and the dominance of government activities in the economy, all specialized banks are public and managed through the Ministry of Economic and Finance Affairs. Commercial banks, on the other hand, are owned either by the private or the public sector. The share of specialized banks' assets is approximately 20 percent while that of commercial banks is 80 percent. Therefore, the financial sector of Iran's economy is dominated by Islamic commercial banks and their financial services.

According to Table 1, the ratio of equity to total assets of Iranian banks (the so-called leverage ratio), on average, is above the general level of major European banks (more than 4% is considered respectable; the closest Basel III ratio is Tier 1 Equity to Risk-Weighted Assets). Capital adequacy increases banking stability and mitigate banking sector risks. Moreover, the amount of liquid assets which enables banks to cover their short-term liabilities shows that banks do not hold sufficient liquid assets, therefore increasing their exposure to bank runs. Also, the share of non-performing loans (NPL), is high by international standards. Non-performing loans reduce the amount of funds which could be used to finance economic activity, its ratio has reached destructive levels that may increase instability in the financial sector.

Table (1) Iran Banking Data in 2014 (percent)

Types of bank		Name of Bank	Equity to Asset	Liquidity to short-term Debt	NPL Ratio
Commercial Banks	Private	Parsian	5	64.7	39.6
		Pasargad	15.2	130	3.7
		Eqtesad Novin	5.8	100	15.5
		Saman	4.7	63.7	19.8
		Sarmayeh	4	29.5	57.6
		Kar Afarin	13.3	67	11.6
	Privatized	Mellat	5.5	60	7.5
		Tejarat	6.5	69.4	18.3
		Saderat	8.7	52.2	10.5
	Public	Melli	3	61.2	16.5
		Sepah	13	46.9	17
		Refah	6.7	38.9	5.5
		Weighted Average	6.6	64.5	15.2
Specialized Banks		Maskan (Housing)	4.3	10.1	6.9
		Keshavarzi (Agriculture)	2.9	14.4	12.1
		Sanat Madan (Industry and mining)	12.1	24.7	11
		Toseh Saderat (Trade)	34	111.3	18.3
		Weighted Average	7.1	19	9.3

Source: Iranian Banking Institute.

When we peruse and compare the financial data of commercial and specialized banks, we may infer that the financial stance of specialized banks is relatively better than that of commercial banks. Specialized banks, on average, have fewer NPLs. Why is that? The answer is related to the nature of banks' financial services. Specialized banks, as mentioned above, provide credit for specific activities related to their objectives in the real sector. For example, *Bank of Keshavarzi* finances agriculture activities, *Bank of Maskan* finances housing and constructions, and so on. Therefore, they are more concerned with the outcome of financed projects. In other words, in specialized banks the risk-sharing propensity is more and the nature of their contracts is similar to PLS rather than mark-up. As a result, since they have to be vigilant on the fund usage, they finance feasible projects, and, therefore, have fewer NPLs. Also, since the maturities of PLS contracts are known for specialized banks, they rely on more sustainable funds for financing projects. Therefore, specialized banks need fewer liquid assets to cover short-term liabilities as reported in Table 1.

In contrast to specialized banks, commercial banks, on average, have lower equity-to-asset ratios and higher NPLs. Since they provide a variety of financial services, they do not practically consider the outcome of projects which means their contracts are more similar to mark-up contracts. This form of activity means that they transfer the risk of projects to borrowers, so this is why they have a lower equity-to-asset ratio. As a result, they are not careful about the feasibility of financed projects which leads to a higher NPL ratio. Moreover, they have to hold higher liquid assets to cover short-term liabilities.

The aggregate data of the banking system reveals the adverse effects of procyclicality on macro-economic variables. The correlation coefficient between credit growth and GDP growth over the 2004-2014 period is 74 percent. When the real sector cannot take advantage of the creation of credit, economic growth is low, and in contrast, the inflation rate and asset prices increase. As shown in Table 2, while on average credit increased 27 per-cent annually, GDP has increased only 3 percent and inflation has increased 18 percent. As discussed, mark-up contracts result in the procyclical behavior of banks which aggravates the real sector. There-fore, the greater the size of commercial banks, the more procyclical the financial sector and instabili-ties in the real sector. Since the share of commercial banks is 4 times bigger than that of specialized banks in Iran's banking system, we should expect to see the undesirable effects of banking procyclicality on the real sector of Iran's economy.

Table (2) Annual Growth Rate of Real and Financial Variables

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average
Credit Growth	38%	40%	42%	35%	10%	15%	38%	28%	16%	22%	18%	27%
GDP Growth	6%	7%	7%	5%	1%	3%	6%	3%	-6%	-2%	3%	3%
Inflation Rate	15%	10%	12%	18%	25%	11%	12%	22%	31%	27%	16%	18%

Source: Central Bank of Iran.

It should be noted that most of the deposits in Iran's banking system are in commercial banks. All in all, the data reveals potential vulnerability and instability of the financial sector due to the dominance of commercial banks.

4. Methodology

In this study, we examine the degree of procyclicality in the lending behavior of commercial and specialized banks in Iran. Micco and Panizza (2006, p. 249) and Bertay et al. (2015, p. 330) show that a set of variables including bank-specific and macroeconomic conditions impacts the lending behavior of banks. Therefore, taking leads from their approach, the explanatory variables of loan or credit supplied by each bank, $Crdt_{i.t}$, may be specified by the following regression.

$$Crdt_{i.t} = \alpha + \beta_M M_t + \beta_B B_{i.t} + \varepsilon_{i.t}$$

where the dependent variable, $Crdt_{i.t}$, is the total credits by bank i during period t, α is a constant, M_t is a vector of macroeconomic variables, $B_{i.t}$ is a vector of bank-specific variables and $\varepsilon_{i.t}$ is an error term.

The first group of variables consists of macroeconomic variables. We include real GDP, interest rate, and price level. As the level of activities increases in the economy, the demand for loans and credit increases. Moreover, due to the favorable environment in the economy, banks are more willing to increase the amount of lending. Therefore, the GDP coefficient indicates the degree of procyclicality for each type of bank. Generally, we expect a positive sign for this coefficient due to the nature of procyclicality. We also aim to compare the magnitude of procyclicality between specialized and commercial banks. In addition to GDP, Int_t, is a weighted average of interest rates prevailing in the banking system which captures the cost of supplying loans for banks, and CPI is the consumer price

index as a proxy for inflation. To study the behavior of lending, these two variables are also important since they influence debt servicing and also the real value of outstanding loans (Castro, 2013). Therefore, during business cycles when interest rates and inflation fluctuate changing real rates, the amount of available loans will also change.

The other group, $B_{i.t}$, consists of bank-specific variables including the equity to assets ratio (*EAR*), and a non-performing loan ratio (*NPR*). Besides macroeconomic conditions, which impact the lending behavior of banks, the amount of lending by each bank may vary due to its own characteristics. Higher *EAR* and lower *NPR* indicate a lower solvency and credit risk of a bank. In contrast, those with lower EAR and higher NPLs are financially vulnerable and unstable. This could lead to a shortage of funds to supply new loans and credit (Gambacorta & Mistrulli, 2004, p. 436; Bouvatier & Lepetit, 2008, p. 513)

Next, in order to assess the degree of procyclicality for commercial and specialized banks, we estimate a regression for each type of bank by using a general class of panel model (fixed effects) of the following form:

$$Crdt_{i.t} = \alpha + \beta_1 GDP_t + \beta_2 Int_t + \beta_3 CPI_t + \beta_4 EAR_{it} + \beta_5 NPR_{it} + \varepsilon_{i.t}$$

Using a large number of point data, panel data increases the degrees of freedom and reduces the collinearity between regressors. Therefore, it allows for more powerful statistical tests and normal distribution of test statistics. It can also take heterogeneity of each cross-sectional unit into account, and give more efficiency (Baltagi, 2005, pp. 4-7).

In this paper, regressions are based on bank-level and macro-financial data of the Iran economy in a form of balanced panel data over the period 2004-

2014. Data for total credit, equity-to-asset ratio, and non-performing loan ratio for a sample of 10 commercial banks and 4 specialized banks introduced in table 1 come from the Iran Banking Institute. Moreover, the Central Bank of Iran is the source of data for GDP, interest rates, and inflation variables. We also, use the logarithmic form of credit, GDP and price level data in order to provide a better interpretation of their respective coefficients.

After applying the necessary statistical tests including co-integration test and Hausman test, we reached a panel model with fixed individual effects satisfying the diagnostic tests. The results are reported in Table 3.

Table (3) Panel Estimation Results

Variables	Type of Bank	
Dependent variable: LOG (Crdt)	Commercial	Specialized
Explanatory Variables:		
Constant	53.2 (0.00)[*]	30.4 (0.00)
LOG (GDP)	2.99 (0.04)	1.55 (0.02)
Int	-1.48 (0.06)	-1.24 (0.01)
LOG (CPI)	0.78 (0.00)	0.84 (0.03)
EAR	-1.78 (0.03)	-0.98 (0.04)
NPR	-2.67 (0.00)	-2.05 (0.05)
Adjusted R^2	0.90	0.94

[*]: P-Value
Source: Research findings.

5. Results and Implications

Table 3 indicates that bank-specific and macro-economic variables collectively explain 90% and 94% of the variation in lending of commercial and specialized banks in Iran respectively.

In the light of macroeconomic variables, the coefficient for GDP is significantly positive for commercial and specialized banks and is equal to 2.99 and 1.55 respectively. The positive sign of GDP suggests that financial institutions behave procyclically in their lending during business cycles. In fact, the rate of change in the amount of lending is higher than the rate of change of GDP. Nonetheless, it seems that, in comparison with specialized banks, commercial banks are more procyclical. In order to test the significance of the difference, we use a pairwise comparison of the estimated coefficients in Table 4. The result suggests that for every percent of increase in GDP, lending increases more for commercial banks. Since the procyclical behavior of financial institutions increases the vulnerabilities of the financial sector, the results imply that, in contrast to specialized banks, commercial banks build up more systemic risks and jeopardize the soundness of the financial sector.

Table (4) Comparison of Coefficients

Test	t-statistic	(P-Value)
Null Hypothesis ($\beta_1^{CB} - \beta_1^{SB} = 0$)	1.62	0.05

Source: Research findings.

The interest rate shows a negative and significant relationship to credit. In response to a one-unit percent increase in interest rate, however, commercial banks decrease credit by 1.78 percent while specialized banks decrease credit by 1.24 percent. This could be explained by the fact that commercial banks are more inclined towards mark-up contracts, while specialized banks favor PLS contracts to some extent. Moreover, inflation has a significant positive effect on supplied credit. In response to a one percent increase in the price level, specialized banks increase credit by 0.84 percent while commercial banks increase it by 0.78 percent This could also be explained by the fact that specialized banks are engaged in the financing of projects in the real sector which requires them to increase the credit to facilitate purchasing of goods and services at new prices.

The other two variables explain the effects of bank-specific characteristics on the amount of lending. Equity-to-asset ratio, *EAR*, has a negative and significant effect on lending. It means that an increase in capital strength results from lower lending. Commercial banks generally tend to increase their profitability by increasing their leverage and are less concerned about the outcome of financed projects. Specialized banks, in contrast, consider the feasibility of projects at first and, therefore, have lower leverage. As a result, they are less affected by an increase in *EAR*. Furthermore, the non-performing loan ratio, *NPR,* has a negative and significant effect on bank lending. Again, commercial banks are more influenced by an increase in *NPR*. This could also be related to the nature of lending in the two types of banks. Specialized banks tend to internalize more potential losses of financed projects by promoting risk-taking contracts while commercial banks are more inclined to risk-transferring contracts. Therefore, besides having a lower ratio of non-performing loans, specialized banks are less affected by an increase in *NPRs*.

Considering the procyclical behavior in both specialized and commercial banks, they should be subject to prudential instruments such as capital adequacy and liquidity standards proposed by Basel III or IFSB-15. Nonetheless, since commercial banks are more procyclical than specialized banks, imposing the same amount of prudential measures for specialized and commercial banks is not rational.

This will threaten the growth of specialized banks promoting PLS modes of financing and increase the share of commercial banks inclined towards mark-up contracts and increase the procyclicality of the financial sector.

We suggest that, in order to decrease the procyclicality of the financial sector, while maintaining a sustainable growth of Islamic finance, the regulators carefully analyze the structure of each bank's balance sheet. The more they rely on mark-up contracts, the more capital and liquidity requirements should be imposed. Comparatively, the more the bank relies on PLS modes of finance, the fewer requirements should be imposed. Indeed, in order to promote and realize a more validated version of Islamic finance in practice, Islamic financial authorities should try to increase the equity of institutions favoring PLS modes of finance. Hence, macro-prudential authorities in Iran need to impose higher capital adequacy and liquidity standard in commercial banks to mitigate their procyclicality and simultaneously persuade the government to increase the base capital of specialized banks. This approach will increase the stability of the financial sector and also encourage commercial banks to favor PLS contracts.

6. Conclusion

Recently, under Basel III, regulators agreed to impose new capital adequacy and liquidity standards on financial institutions in order to decrease their procyclicality over business cycles. Since Islamic finance is characterized with specificities different from conventional finance, implementing these measures should be related to their contribution to procyclicality of the financial sector and the generation of systemic risks.

This paper aims to review the source of procyclicality of Islamic commercial and specialized banks operating in Iran. The results show that the procyclical behavior of banks originates from the type of financial contracts – mark-up versus PLS – they use. As discussed earlier, it is well documented that interest-based contracts transfer the risk of failure to borrowers, allowing for excessive borrowing and leverage which contributes to systemic risk and financial crises. Islamic finance strictly forbids interest-based contracts. This condemnation encourages PLS and mark-up based contracts. PLS con-

tracts share the risk of financed projects between creditor and debtor and, therefore, decrease procyclicality and vulnerability of the financial sector (compared to interest-based contracts and Islamic mark-up contracts). As such, Islamic financial services may show some degree of procyclicality depending on the relative share of mark-up contracts in their assets.

We also evaluated the degree of procyclicality in the financial sector of the Iranian economy which is the largest Islamic banking system worldwide. Iran is also unusual in that 100% of the banking sector assets are Islamic. We differentiate between two types of banks, commercial banks offering a variety of financial services and specialized banks financing projects in specific sectors of the economy. Using panel data analysis for a sample of 10 commercial banks and 4 specialized banks over the 2004-2014 period, the results show that specialized banks are less procyclical than commercial banks. Since the nature of financing in commercial banks is inclined towards mark-up contracts while that of specialized banks is inclined towards PLS contracts, this finding indirectly supports the view that interest-based contracts (as well as mark-up contracts which are similar) adversely impact bank procyclicality.

These results have several implications for practitioners and regulators of financial institutions in Islamic countries. Firstly, in order to impose prudential measures, regulators should analyze the structure of bank balance sheets. The more they rely on mark-up contracts, the more capital and liquidity requirements should be imposed. In the Iranian banking system, commercial banks should be required to hold higher capital adequacy and liquidity standards in comparison with specialized banks. Secondly, in order to decrease the vulnerabilities of the financial sector and increase its stability, the share of financial institutions inclined towards PLS contracts should be increased. In Iran, the share of specialized banks in total banking assets is 20 percent which is relatively low. Therefore, the government should support these banks to extend their activities by increasing their base capital. Since they are less procyclical than commercial banks, this will increase the stability of the financial sector while encouraging other financial institutions to favor PLS modes of finance.

There are surely many obstacles to realize PLS-based contracts which demand further studies. However, this collection of actions is one way that will help the sustainable growth of Islamic finance towards its ideal version in practice.

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التقلبات الدورية ومدى تأثير مقررات بازل (٣) على الخدمات المصرفية الإسلامية: دروس من التجربة الإيرانية

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المستخلص: أدخلت لجنة بازل للرقابة المصرفية بعد الأزمة المالية العالمية إصلاحات كبيرة على الإطار التنظيمي للبنوك (بازل ٣) بهدف الحد من التقلبات الدورية في القطاع المالي وتقليل نقاط ضعفه. تتناول هذه الدراسة التقلبات الدورية في النظام المصرفي الإيراني بنوعيه: البنوك التجارية والبنوك المتخصصة الإسلامية. ولتحليل الانحدار، استخدم البحث بيانات الاقتصاد الكلي والبيانات المالية للبنوك التجارية والمتخصصة خلال الفترة ٢٠٠٤-٢٠١٤م. وتوصلت الدراسة إلى أن البنوك المتخصصة التي تميل إلى عقود المشاركة أقل تأثراً بالتقلبات الدورية من البنوك التجارية التي تميل إلى عقود المداينة. ويُستشف من ذلك أنّ التقلبات الدورية لهذه البنوك هي أكثر ارتباطاً بعقود المداينة. مما يفرض إخضاع المصارف التجارية الإيرانية لتدابير احترازية أكثر صرامة مقارنة بالمصارف المتخصصة. وفي ضوء هذا النتائج، تقترح الدراسة إنشاء المزيد من البنوك المتخصصة لتعزيز استقرار القطاع المالي الإيراني.

الكلمات الرئيسية: التقلبات الدورية، الأزمة المالية العالمية، مقررات بازل (٣)، التمويل الإسلامي.