The impact of Basel III on Islamic banks:

A theoretical study and comparison with conventional banks

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Adel HARZI

Head of Capital Management Dexia Credit Local - Dexia SA

Mail: adelharzi@yahoo.fr

Abstract

Since the last financial crisis, the Basel Committee on Banking Supervision, (BCBS), an international

organization which main objective is to enhance understanding of key supervisory issues and improve

the quality of banking supervision worldwide, has issued some reforms more know as Basel III new

framework.

The major parts of the propositions are included in the document Basel III: A global regulatory

framework for more resilient banks and banking systems published in version June 2011.

This document contains all the needed reforms in order to prevent the financial system from future

crisis. This framework is only propositions, but it really became a global standard as both the

European Union (CRD4¹) and USA² have decided to pass the BCBS regulation proposal into their

legal frameworks.

Basel III will have a major impact on the business plans and the strategy of conventional financial

institutions. It will introduce a lot of modifications: new own funds and risk computations, new ratios,

modification of the Tier 1 and Tier 2 category, new solvency ratios, introduction of new concepts

(Asset Value correlations, Credit Valuation adjustment, PD downturn, Stressed VaR), new buffers

See http://ec.europa.eu/internal market/bank/regcapital/index en.htm#crd4

² See "Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies", Federal Register, Vol. 77, No. 3/Thursday, January 5, 2012/Proposed Rules available at

http://www.gpo.gov/fdsys/pkg/FR-2012-01-05/pdf/2011-33364.pdf

(Capital Conservation and countercyclical Buffers), and new limits in terms of leverage and liquidity

ratios.

If we consider that Basel III framework was thought only for conventional banks, and as Basel III will

be an international standard with regard to the precedent Basel Committee proposals (Basel 1 and

Basel II), we can ask whether this new regulation is compliant with the Islamic banks as the financial

structure of conventional and Islamic banks are quite different.

Moreover, we will see if, from a theoretical point of view, if the Basel III impact is more or less

important in Islamic banks than in conventional one by analyzing each new reform and its potential

impact in the structure of the two types of banks.

First, we will review the impact of the new Basel III capital requirements and ratios. In the second

section, we will analyze the impact on the risk computation. Section 3 will present the impact of the

new buffers. The section 4 will deal with the leverage ratios when the fifth part will be focused on the

new liquidity framework.

The last section will be presented as a global conclusion on the capacity of the Islamic banks to face

to new Basel III regulation as regard as the conventional financial institutions.

Keywords: Basel II, Basel III, islamic banks, risk management, displaced commercial risk, profit

equalization reserve, investment risk reserve, liquidity risk, leverage ratio, capital adequacy ratio, profit

sharing, regulation

Category of paper: Technical

1. Section 1: Impact of the new capital requirements and ratios on Islamic banks

1.1. New definition of own funds and new regulatory ratios

The Basel Committee has decided to increase all the capital ratios with a progressive period from 2013 to 2018. For example, the minimum level of Common equity ratio will pass from 2% to 4.5% when the minimum level of Capital Adequacy ratio will pass from 9 to 12% excluded

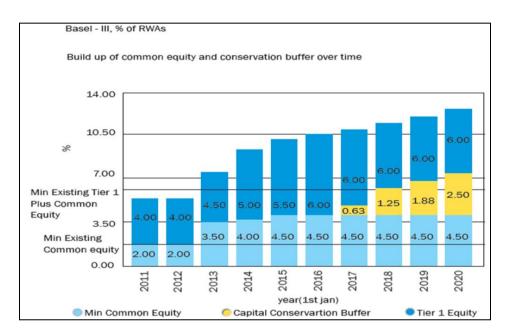


Figure 1: Basel III new ratios Source: http://www.basel-ii-risk.com/new-basel-iii-common-equity-by-year/

The capital structure defined by the BCBS in Basel II is segregated into three categories: Tier 1, Tier 2 and Tier 3. As we can see in the table 2 below, Basel III has deeply impacted the new definition of the capital under Basel III.

BII (current version)		Proposed new standard	
Tier 1	Common Stock and other forms of Tier 1 (including perpetuals)	Tier 1	Common Equity (common stock plus retained earnings and OCI)
	Disclosed reserves (including from minority interests)		Additional going concern capital
	15% innovative instruments (Annex 1 to BII)		n.a.
	Deduct goodwill and equity from securitizations		Deduct goodwill and many other items 1:1 from common equity
	Deduct 50% of investments in other financial institutions		Transformed into 1:1 adjustment
Tier 2 max 100% of Tier 1	Undisclosed reserves and asset revaluation	Tier 2	Only one form of Tier 2 capital remains
	General loan-loss reserves		Unrealized gains will be reviewed by BCBS until y/e 2010
	Hybrid capital instruments		n.a.
	Subordinated debt (max 50% of Tier 1)		n.a.
Tier 3	For market risk coverage (limitations apply)	Tier 3	n.a.

Table 2 Classification of Capital according to Basel II and III Source: Deloitte

With Basel III, the regulator has decided to increase the importance of what we name the Tier 1 Capital, which is in fact the common equity and some hybrid capital (strict eligibility criteria). The definition of the Tier 2 Capital is reduced consequently (for example, issuances without loss absorbency at the point of non viability are progressively excluded from Tier 2 Capital). The Tier 3 is abrogated.

For Islamic banks, Capital structure is not the same: Islamic banks operate in line with the principles of Shariah. Shariah prohibits, among other things, payment and receipt of riba (interest). This means that Islamic banks cannot pay or earn interests on their financial instruments. The consequence is that the banks mobilize and utilize funds using Shariah-compliant instruments or contracts that are not used by their conventional counterparts.

According to Habib Ahmed and Tariqullah khan in their handbook of islamic banking, the financial structure of an Islamic bank is essentially compounded of Tier 1 Capital (bank's own capital). Having some Tier 2 in the capital of Islamic banks is very rare as in general it is capital or hybrid capital linked to the payment of interest and when it is the case, tier 2 capital is restricted to 50% of the total of tier1+tier 2 capital

So, when the redefinition of the capital has a quite important impact on the conventional banks, it is not the case for the Islamic banks because their capital is essentially compounded of common equity (and rarely of Tier 2 products). On this point, Basel III clearly has a positive impact in terms of competitivity for the Islamic banks, as the conventional banks will see their capital (all things being equal) decreased by a larger share than the Islamic banks, hence the former will then experience higher costs of compliance than the latter.

the same phenomenon is likely to happen for Tier 2 ratios of the conventional banks: a strong decrease because of the new regulation. Meanwhile, the Islamic banks will still have a total capital ratio (Tier 1 + Tier 2) approximately equal to their Tier 1 ratio.

2. Basel III impact on the risk computation of islamic banks

2.1. Impact of the Profit sharing investment accounts (PSIA) on the risk weighted assets and capital adequacy computation.

Basel committee has done its framework for conventional banks and does not take into account specific features of Islamic banks, such as the Profit Sharing Investment Accounts.

Although these assets do not imply financial risks for the bank (because the risk was taken by the investment account shareholders) for the bank, they are not considered as equity capital.

According to the BCBS and under Basel III rules, the capital adequacy ratio should be over 8% today according to the following formula:

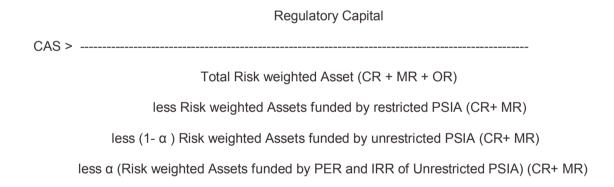


Credit Risk (CR), Market Risk (MR) and Operational Risk (OR)

IFSB (Islamic Financial Standard Board), an international institution created by Islamic banks and regulators, has issued some regulatory standard that constitute the equivalent of Basel II for Islamic finance. In 2005, IFSB has issued a guideline which help Islamic banks to compute a ratio equivalent to the Basel II capital adequacy ratio by in taking into account the PSIAs specificities of Islamic banks.

In effect, the capital amount of PSIA is not guaranteed by the Islamic bank. Any losses arising from investments or assets funded by PSIA are for the owners of theses PSIAs and so do not require any regulatory capital requirement. This implies that assets funded by restricted or unrestricted accounts of PSIAs should be excluded from the calculation of the denominator of the capital ratio.

The capital adequacy formula defined by IFSB is the following:



CR= Credit Risk; MR= Market Risk and OR = Operational Risk

In contrast to the BCBS capital adequacy formula, the effect of this integration of the PSIA concept is to leave a proportion α (alpha) of RWA(CR+MR) for unrestricted PSIA as part of the denominator, with an adjustment for RWA financed by Profit Equalizations Reserves & Investment Risk Reserves within equity of Investment account holders which absorb risk. The IFSB permit to each national supervisor to determine its α depending on the banking stability and the financial system development of each country

2.2. Basel III impact on the risk computation

Islamic banks have the same role in the economy as conventional banks: they allow their customers and others investors to earn a potential return on their accounts. They are hence exposed to the same risks as conventional banks. Basel III framework sets out a better risk coverage and develops new supervisory and risk management guidelines according to the Basel III guidelines published by the BCBS with some new tools for the risk computation (Asset Value Correlation, Counterparty credit Risk in the trading book, CVA for risk Charge ...). These new rules would encourage Islamic banks to reinforce themselves in their Risk, Audit, Compliance and Capital Management functions.

Moreover, as a consequence of the last financial crisis, the Basel committee has decided to increase the amount of Risk weighted assets and specifically for the credit risk and the market risk...

One of the peculiar features of Islamic banks is that they have a credit risk higher than conventional banks. It is due to the importance of *Mudarabah* and *Musharakah*, *valued at their accounting value and which are* instruments held by the banks in their accounts for investment reasons and in general kept until their maturities. The predominance of credit based products imply for Islamic banks to be more exposed to the credit risk than conventional banks. Basel III will introduce some measures in order to limit the credit risk due to counterparty credit exposures. It is in that perspective that they should stress their portfolio and compute an additional RWA compared to Basel II. They will also add a capital charge for credit valuation adjustment risk associated with deterioration of the credit quality of counterparty.

Moreover, Basel III will improve the coverage of the risks related to capital market activities, especially counterparty credit risk on over the counter derivatives and in the trading book.

Historically, trading book businesses are less important in Islamic banks than in conventional banks because a non negligible part of the derivatives instruments used are not Shariah

compliant and short selling is forbidden. So, as logic consequence, Islamic banks will not see their trading book very impacted by the changes in the new regulation.

In the other hand, the products in the quasi trading books (as *Salam* and *istisna* contracts) may be more impacted mainly due to the fact that it is commodity structured products with a price which depends of the volatility of the markets. In the same way, the volatility will have a major impact on the stress test scenarios and will increase the capital requirements due to the price fluctuations of the assets and commodities theses recent years by the way of the Value at Risk.

The impact of these additional requirements (Asset Value Correlation, Counterparty credit Risk in the trading book, CVA for risk Charge, additional requirements for the securitization) in terms or RWA will increase deeply the amount of RWA in the conventional banks. In fact, the larger the trading book of a bank, and proportionally the higher will be the increase of additional RWA specific to Basel III.

Morgan Stanley estimates that the increase of Risk Weighted Assets due to Basel III in conventional European banks will be between 10 and 30% of the RWA under Basel II. This is principally due to the fact that European banks have generally a consequent trading book which is higher than in the major parts of the Islamic banks. It is mainly due to the fact that Islamic institutions cannot invest in all the financial instruments as CDO, CDS, Repo, bonds and all the others derivatives. And in fact, the major part of the additional RWA is linked to such instruments that Islamic banks do not hold in their portfolios, such as CDO, CDS, repos or interest rates swaps...

As regard to this point, we can argue that Islamic banks will experience a far lesser risk weighted assets increase than the conventional financial system. It is nevertheless impossible today to quantify this impact and it depends clearly of the trading portfolio structure of each bank.

2.3. Capital conservation buffer and countercyclical buffer in islamic banks

Basel Committee has required to setup two buffers: a countercyclical buffer and a capital conservation buffer in order to prevent against a financial collapse.

The volume of the capital conservation buffer should be equal to 2.5% of the RWA. This buffer should be composed of common equity (Tier 1) assets. If the banks has not enough capital for this buffer, Basel 3 restricts the distribution of dividends, share buybacks or bonus payments) until the ratio of 7% is respected (4.5% + 2.5%)

The objective of the Capital conservation buffer is to absorb losses during periods of financial and economic stress: if a bank's buffer falls below 2.5%, the bank will find itself subject to constraints on the payment of dividends and discretionary bonuses, until the buffer is replenished.

A countercyclical buffer within a range of 0% - 2.5% of common equity or other fully loss absorbing capital will be implemented according to national circumstances. The purpose of the countercyclical buffer is to achieve the broader macro prudential goal of protecting the banking sector from periods of excess aggregate credit growth.

In the case of Islamic banks, these buffers should be implemented for the banks that wish to respect Basel III. The objectives of theses 2 buffers are quite different from the investment risk reserve and the profit equalization reserve. But, as usually, the computation of theses buffers should take into account the specificities of the Islamic banks and especially the presence of profit sharing investment accounts.

In fact, as investment account holders take a part of the risk, we should deduct from the total risk weighted assets the parts which depend from the PSIAs and compute, after deduction the required amount for the 2 buffers.

In the same way, if some gains should be retained in order to attains the required ratio for the new buffers, we should not retains neither the earning of the investment account holders or from the two specific islamic reserves (PER and IRR). The reason is that these two reserves are not compounded from profit of the bank shareholders but from the profit of the investment account holders. So, if retained earning should be done, bank's shareholders should transfer their own profit in theses reserves.

Except this point, the impact for either islamic or conventional banks are the same and the presence of PSIAs in islamic banks is not something so relevant which can increase much the competitivity of islamic banks with regard to the conventional ones.

3. impact of the leverage ratio on the islamic banks

In December 2010, the Basel III agreement formalized a simple, transparent, non-risk based leverage ratio. The leverage ratio is intended to constrain the build-up of leverage in the banking sector

The leverage ratio requires a definition of capital (the capital measure) and a definition of total exposure (the total exposure or assets measure)

Capital measure will be either realized by the regulatory Common Equity ratio, the Tier 1 Capital ratio or the Total Capital ratio.

Total exposure measure is based on reported accounts but physical or financial collateral, guarantees or credit risk mitigation purchased is not allowed to reduce on balance-sheet exposures and High quality liquid assets are included in total exposure measure. Another important point is that Basel II regulatory netting for on balance sheet derivatives and repostyle transactions is allowed, which is clearly a positive point for Conventional banks comparatively to Islamic banks which are not allowed to take that kind of short positions.

Today, the leverage ratio is a very hard requirement for investment banks. French banks have not this problem because they all adhere to the *universal* banking model (retail + investment banking). Those banks that will be much impacted by this new rules are the investments banks which work and deal on the financial markets with a high leverage. Clearly; the Investment Bank model will be more impacted by Basel III than wholesale or universal banks. Islamic banks should not experience more constraints under the leverage ratio because there are generally limited before by the risk management of their liquidity (Islamic assets and products are generally less liquid than conventional products). But as the business model developed by the Islamic banks is more a universal banking model, and as deposits/loans ratios are higher than in conventional banks according to Morgan Stanley research paper on Qatari banks published in November 2011, we can reasonably anticipate that the leverage ratio will not be a real constraining point for Islamic banks. According to the same Morgan Stanley research paper, leverage ratio for Qatari Banks and Emerging banks is generally between 5 and 10% of the own funds when conventional banks are generally between 2 and 4% (Morgan Stanley Research paper on European banks - April 2011)

Clearly, the leverage ratio is a measure that will increase the competitivity of the islamic banks as regard to the conventional banks. For example, it was not abnormal in the past to see some banks with a leverage ratio of 1.5 or 2%. With a limit of 3%, these banks should not have a total exposure above 33 times their capital.

4. Basel III new liquidity ratios on the islamic banks

In order to provide a response to the recommendations of the G20 that called for " ... tools, metrics and benchmarks that supervisors can use to assess the resilience of bank's liquidity cushions and constrain any weakening in liquidity maturing profiles, diversity of funding sources, and stress testing practices", the Basel committee has decided to setup minimal Regulatory standards for liquidity risk and now asks the bank to create new monitoring tools to be used by supervisors in the monitoring of liquidity risks.

The regulatory standards must be supplemented by application of the sound liquidity principles. An individual bank can be required to adopt more stringent standards or parameters to reflect its liquidity risk profile.

Liquidity risk is the risk that the Bank will be unable to meet its payment obligations associated with its financial liabilities when they fall due and to replace funds when they are withdrawn. The consequence may be the failure to meet obligations to repay depositors and financing parties and fulfill financing commitments. Liquidity risk can be caused by market disruptions or by credit downgrades, which may cause certain sources of funding to become unavailable immediately. Diverse funding sources available to the Bank help mitigate this risk. Assets are managed with liquidity in mind, maintaining a conservative balance of cash and cash equivalents.

The core of the framework consists of two ratios, the liquidity coverage Ratio and the Net Stable funding ratio. These two ratios have been developed to achieve two separate but complementary objectives.

The liquidity coverage ratio (LCR) aims at strengthening banks' short-term liquidity profile. It defines the level of Liquidity buffer to be held to cover short-term funding gaps under severe Liquidity stress, under a time horizon of 30 days. The first step consists in calculating the difference between the cumulated outflows on liabilities and the cumulated inflows on the assets. For example, in the conventional system, deposits in the banks are considered as fully unstable in times of stress as the customers have a full access to their deposits, so, Basel Committee considers that the outflow rate of the deposits is 100%. This can be reduced by a potential 100% inflow rate on loans to banks for example, but within a maturity of 30 days. If cumulated outflows are bigger than cumulated inflows, then the difference is a net cash outflow, to be counterbalanced by a liquidity buffer (for example a portfolio of high quality and liquid assets)/ These assets must be selected in a narrow list prescribed by the regulation (sovereign debt, corporate debt), excluding any financial asset like banks bonds or banks certificates of deposits.

The Net Stable Funding Ratio (NSFR) is more a long term liquidity constraint. Its objective is to strengthen banks' medium- to long-term liquidity profile. It defines the minimum acceptable amount of stable funding in a stress scenario with an horizon of one year. The NSFR is problematic because it is not in accordance with the primary activity of banks, which the transformation of the liquidity collected...

The LCR and NSFR are not definitely defined and the Basel Committee pursues its calibration in order to be "absorbable" by the banks and not too much penalizing for the economies financing. The LCR will become binding on January 1st, 2015, and will be observed by national regulators from January 1st, 2013, to December 31, 2014. The NSFR, which will become binding on January 1st, 2018, will also be observed since January 1st, 2013. With this observation period, some substantial modifications can be decided by the Basel Committee.

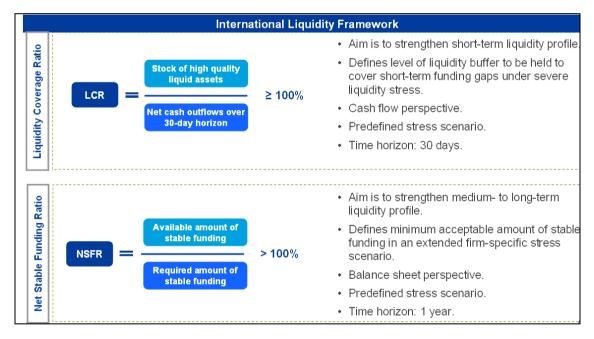


Table 5: International liquidity framework according to Basel III Source: Deloitte

In Islamic banks, liquidity management is one of the main important obstacles to development of Islamic finance as the debt paper could only be resold under very restrictive condition and at its nominal value.

Basel III liquidity risk requirements will affect Islamic banks for two reasons. The first one is that the lack of a developed Islamic money market and the second one the lack liquid Islamic investment instruments with short term maturities.

Clearly, LCR and NSFR are not calibrated for Islamic Finance and do not take into account the specificity of this industry. For the LCR, it misses to Islamic banks the abundance of Shariah Compliant short term instruments... For the NSFR, there is no profusion of longer term liabilities that can be withdrawn at short term...

Despite this, Basel III, finally, will not penalize more than today Islamic banks for the following reasons:

- Today, if we compare the net impact on both Islamic and conventional banks, we will see the presence of a major competitive distortion due to the lack of short term liquidity instruments in Islamic Finance, but also because conventional banks did not have liquidity constraints and that this new framework will be very penalized for them.
 Basel III will oblige conventional banks to limit the liquidity appetite.
 - In the first hand, if we refer to the research Paper writed by Laurent Quignon "Basel III: no Achilles' spear", only 46% of the 166 National Banks which had responded to the BCBS Qantitative impact study respect the LCR Ratio and only 43% of them respect the NSFR ratio... So, Basel III new liquidity constraints will impact almost the half of the major banks in the world
 - In the other hand, as Islamic Banks are limited, since their origin, in terms of liquidity, Basel III impact will be much less important for Islamic banks. For example, the Governor of the National Bank of Malaysia as said in an interview given to the "Global Islamic Finance Magazine "issued in November 2011 that "The majority of Islamic banks in Malaysia already maintain capital levels well above the current regulatory minimum, ..., and the Liquidity Coverage Ratio (LCR) under Basel III is conceptually similar to the liquidity framework adopted by Malaysian Islamic banks".

However, the NSFR will attract more focus for Islamic banks as it aims to limit over-reliance on short-term but with a limited impact: In general, Islamic banks

are largely deposit funded (over 50% in general) with mainly maturities less than one year. As Basel III allows banks to include the portion of the Short term deposits with a 10% haircut, we can expect the NSFR will not be so constraining for Islamic Institutions.

Moreover, we can underline an initiative that will increase the liquidity possibilities in terms of liquidity management for islamic banks. IFSB, which is an international regulatory institution and which is established by central banks and supranational institutions, aware that the liquidity is a real problem for the industry, attempt to found some solutions in order to improve liquidity for international Islamic institutions. That why last year was established on 25 October 2010 the IILM (International Islamic Liquidity Management Corporation). The International Islamic Liquidity Management Corporation is an international institution established by central banks, monetary authorities and multilateral organizations to create and issue short-term Shari'ah-compliant financial instruments to facilitate effective cross-border Islamic liquidity management. By creating more liquid Islamic financial markets for institutions offering Islamic financial services, IILM aims to enhance cross-border investment flows, international linkages and financial stability.

The corporation was set up by the Islamic Financial Services Board, IFSB, after the signing of the Memorandum of Participation by member countries. A statement issued by the IFSB said: "The primary objective of the IILM is to issue Shariah-compliant financial instruments in order to facilitate more efficient and effective liquidity management solutions for Islamic financial institutions, as well as to facilitate greater investment flows of Sharia-compliant instruments across borders. This initiative is in line with the IFSB mandates (as stated in its Article of Agreement) to enhance and coordinate initiatives to develop instruments and procedures for the efficient operations and risk management, and to encourage cooperation among members-countries in developing the Islamic financial services industry...

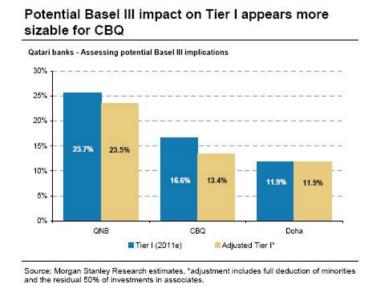
Conclusion:

Despite the fact that Islamic finance holds global appeal in its provision of Shariah-compliant financial services for both Muslims and non-Muslims, the Basel III has so far often failed to make a distinction between conventional and Islamic finance. Currently, emphasis seems to been placed on a greater collaboration between the Basel committee and Islamic standard and regulatory bodies such as the Islamic Financial Services Board (IFSB).

The majority of Islamic banks already maintain capital levels well above the current regulatory minimum.

As example, according to the Al Khaliji "Investor guide", issued in October 2011, the average Tier 1 Ratio of the 18 Islamic banks in Qatar is about 22.8%

And if we use this information with an a Morgan Stanley Research Department impact study about Basel III in 3 qataris Banks (.Commercial Bank of Qatar, Doha Bank and Qatar National Bank), we can easily see that Basel III will have a limited impact on the risk, own funds and regulatory ratios.



In the other hand, own funds of conventional banks will be more impacted by Basel III, and especially in Europe and US, until change their business model. The reason is that, generally, a lot of conventional banks will have a lot of difficulties to respect new Basel III requirements.

In effect, these banks have taken higher risks regarding their own funds and in a spirit of maximization their return on equity, have a regulatory ratio, in general, a little bit above the limit (between 8 and 12%). And with the recent crisis, major parts of these banks have initiated a rethink of their business model in order to limit Basel III impact with, sometimes, big consequences as in France, where the local authorities lending market was deserted by the historical commercial banks as the maturities are too high...

Concerning the liquidity, the new ratios, LCR and NSFR, will require Islamic banks to hold more liquid assets for wholesale funding than they are required to under the existing liquidity framework but as for the own funds, we can anticipate that the impact will be inferior than in the conventional system as the islamic banks are historically constrained in terms of liquidity and as there are historically well capitalized as regard to their exposures.

Clearly, there has been a push for Islamic banks to further support the Basel III standards in order to improve their transparency and capital adequacy.

Comparatively with conventional banks, Islamic banking industry seems to be less impacted by Basel III as the business model is more conservative and derivatives and short selling is forbidden. It is a possibility for them to increase their international competitively as regard as the big impact that Basel III has in the business model of conventional banks.

As Islamic banks cannot adopt Basel III without modification according to their specificities, IFSB should adapt theses new regulations in order to permit to Islamic banks to adopt the new international standards.

Another conclusion could be done, as from a theoretical point of view; Islamic banks are less impacted than conventional banks... Does conventional regulation converge into something more ethics, more linked to rhe real economy and with less speculation? As Chapra pointed out: "Since the existing architecture of the conventional financial system has existed for a long time, it may perhaps be too much to expect the international community to undertake a radical structural reform of the kind that the Islamic financial system envisages. However, the adoption of some of the elements of the Islamic system, which are also a part of the western heritage, is indispensable for ensuring the health and stability of the global Financial system."

Basel III is just one step forward. (Chapra U. [2008], The Global Financial Crisis: Some Suggestions for Reform of the Global Financial Architecture in the Light of Islamic Finance, Kyoto University, 2008)

The next step of this research now is to stand the last and definitive version of the European transposition of Basel III, that will be voted in June or July 2011, in order to see if finally, Basel III has made islamic banks more resilient, as the conventional one and what is the impact of this new regulations in both 2 systems in terms of own funds, risks, but also liquidity, leverage and business model because an impact on each precedent criteria has also an impact on the return of the banks, and finally, the strategy...

Before this, a comparative and rigorous analysis should be done in order to see Basel III impacts in islamic and conventional banks by using a representative panel of conventional (investment and wholesale) and islamic banks. It will be the topic of the next research paper incha Allah.

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