

ISLAMIC BANKING: NECESSITY IS THE MOTHER OF INVENTION

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In this essay, Sam Logan takes a novel view of banking practices by examining the world of Islamic banking. He analyses how and why this alternative form of banking evolved, and the benefits it may have to improve societal welfare. He concludes by stating that the Western banking industry could learn important lessons in risk management by paying attention to this alternative system.

Introduction

“... let us begin and create in idea a State; and yet a true creator is necessity, which is the mother of our invention.”

Plato, The Republic, Book II

This quote from Plato is often cited as the origin of the idea that necessity is the mother of invention. This necessity often comes courtesy of artificial constraints that force one to significantly alter one's approach to the problem being addressed. Canned food was created as a means of feeding seafarers on long ocean voyages. Examples from space exploration range from foil heat blankets to the technology of freeze drying food for supporting human life without gravity or oxygen. Like these and similar inventions, Islamic banking was created to overcome a specific constraint but is relevant far beyond the restriction that inspired it.

Islamic banking is a system of financial intermediation that complies with Shari'a law and forms an alternative to the traditional, Western system of banking. The necessity for such an alternative was born out of the prohibition in Islam of several practices that are integral to Western banking. The most important of these practices for this discussion are *riba*, charging an interest rate on loans, and *gharar*, speculative or excessive risk. While the centrality of interest rates to European-style banking makes an alternative system seem close to impossible, Islamic banking attempts to provide such an alternative. Indeed, the presence of these and other moral prohibitions has forced Islamic bankers to devise alternative ways of providing the credit necessary for the healthy functioning of an economy.

It is important to acknowledge that Western banking makes use of many of the ideas also prevalent in Islamic banking. The argument I put forth in this essay is not that these ideas are exclusive to Islamic banking, but that their benefits are more obvious when viewed through this lens. Islamic banking approaches creating credit from a perspective fundamentally different to the approach of Western banking. The incentive effects of concepts which are shared by both Islamic and Western banking are made clearer through the Islamic system's explicit preference for profit and loss sharing models.

In this discussion I challenge the degree of difference between Islamic and Western banking systems, separating what is genuinely divergent in Islamic banking from what is, in practice, identical to the Western system. I investigate the implications that the application of Islamic banking principles could have for issues of informational asymmetry and show that risk-sharing models of finance bring the incentives of banks and borrowers closer together. I present the beneficial effects the principles of Islamic banking could have on avoiding the inefficiencies arising from the present-biased preferences of investors. Lastly, I put forward an argument for the application of Islamic financial principles to capital structures. These equity-based capital structures would minimise costs from default and give the economy greater resilience to shocks. Overall, the aim of this essay is to show the wide ranging effects a radically different approach to banking can have on an economy.

How Different Are Islamic Banks?

Shari'a law is an interpretation of Islamic holy writ that gives guidance to Muslims about how to act in accordance with their faith in everyday situations. Islamic banks operate with the same objective of making a profit as Western banks; however they have the additional aim of upholding Shari'a law and providing Shari'a-compliant services for their customers. Although there are different interpretations of Shari'a law, there is a broad consensus in Islamic jurisprudence that engaging in transactions based on an interest rate, excessive unilateral risk and gambling on uncertain events are all unacceptable. Instead of European-style banking where debt is issued and repaid with interest, Islamic jurisprudence prefers an arrangement where profit and loss are shared by the source of funds and the receiver. This system usually operates through either a copartnership arrangement or by the investor taking an equity stake in a project.

However, the way these profit and loss sharing arrangements actually operate may not always make Shari'a-compliant alternatives materially different from their Western counterparts, as observed by Willem Buiters (2009):

"I am not talking here about the sham shari'a-compliant instruments that flooded the market in the decade before the crisis; these were window-dressing pseudo-Islamic financial instruments that were mathematically equivalent to conventional debt and mortgage contracts, but met the letter if not the spirit of shari'a law"

This quote most likely refers to sukuk, the Islamic alternative to securities and bonds, but we can also observe connections between some of the foundational products of Islamic banking and Western banking. Mahmoud El Gamal describes the Murabaha, one of the alternative loan contracts integral to Islamic banking, as a purchase and resale agreement where the bank charges the customer a “transaction fee” (El Gamal, 2006). As Tarek Coury notes, this “transaction fee” tracks the market interest rate (Coury, 2013). The Musharaka, or diminishing partnership, is a common alternative to a mortgage where the customer's monthly payments are comprised of elements of principle and rent. Again, the rental portion of the payments tracks the market interest rate. In this way many Islamic banking products can be technically Shari'a-compliant without differing substantially from products that explicitly charge an interest rate. However, while the alternative nature of Islamic banking may be undermined by its current underlying use of market interest rates as a reference, the conceptual value of Shari'a-inspired arrangements for the sharing of profit, loss and risk and avoiding an interest rate is unaltered. This provides a based for a truly distinct alternative that has wide ranging and profound implications.

Shari'a Principles for Incentive Alignment

The finance sector, which provides the credit vital for the continued functioning of the economy, is plagued by issues of moral hazard, adverse selection and myriad other problems of informational asymmetry and misaligned incentives. These problems all lead to inefficiencies which cumulatively erode the highest potential level of societal welfare. Is it possible to change or improve this inefficiency by changing the mechanism by which credit enters the economy? While Islamic banking is not perfect in this respect, I believe it provides support for the idea that the answer to this question is positive.

Moral hazard refers to any situation that involves a decision where the choice of the level of risk to take and the cost of this risk do not fall to the same agent. In these situations the risk taker is incentivised to take more risk than they would, were they to face the cost themselves. In banking this concept finds its most frequent application in the context of a bank providing a loan for a private investment project. In the Western paradigm, credit is provided as a loan that must be repaid regardless of the result of the project. The entrepreneur shoulders all of the risk of failure but retains the entire reward in the event of success. This leads to a situation where potentially profitable investment projects are not pursued because the entrepreneur is unwilling to take sole responsibility for all the risk involved. In the profit and loss sharing model, on which Islamic banking is based, credit is provided as an equity stake in the project. In this case the bank and the entrepreneur share both the potential reward of success and the cost of failure and the disincentive to pursuing potentially beneficial investment opportunities is reduced.

From this simple theoretical example it becomes clear that using a profit and loss sharing arrangement to provide credit brings the incentives of the entrepreneur, the

bank and society in general into closer alignment. This paradigm has the effect, lauded by proponents of Islamic banking, of ensuring that credit is rationed according to multiple factors, rather than a one dimensional conception of “creditworthiness”. This has the effect of enforcing greater due diligence on the part of the lender (Coury, 2013).

Despite the observable reductions in moral hazard, the Shari'a-compliant structures do not completely eliminate inefficiencies arising from all instances of informational asymmetries (Dar, 2007). For example, in a type of loan alternative called a Murabaha contract, the usual Western deterrent to default in the form of accumulating interest is not present. While this can be remedied by the application of a penalty clause, it essentially advantages the borrower to the detriment of the lender. Due to this disadvantage Murabaha and similar contracts have high prices that make cheaper Western products preferable to potential customers of Islamic banking. As Humayon Dar observes, these types of incentive incompatibilities between lenders and borrowers are widespread among the Islamic banking products currently in use (Dar, 2007).

Pro-social Effects of Partnerships

Some of the most profound effects of profit and loss sharing arrangements arise when a partnership functions as a way of enforcing a commitment to a decision that will bring about the best possible outcome. The point has been raised that the prohibition of the *riba* in Islam is not exclusively due to the exploitative aspect of an interest rate but is also motivated by the pro-social effects of the alternatives (El Gamal, 2001).

Hyperbolic discounting is the term used to describe the way that people consistently display preferences that are present-biased. That is, present consumption is preferred to equivalent consumption in the future (Prelec, 2004). Hyperbolic discounting is unquestionably relevant to financial intermediation given how people make decisions without considering their “future selves”. It is particularly apparent in the area of savings and investment (Phelps and Pollack, 1968). El Gamal (2001) presents a plausible situation where an entrepreneur with present-biased preferences revises their initial investment decision in favour of present consumption. This situation, whereby the final investment is less than the ex-ante optimum (Laibson, 1997), may arise in the context of an investment financed by debt. In the Sharia-influenced alternative, a profit and loss sharing arrangement allows investment decisions to be vetoed by a risk sharing partner. This alleviates the detrimental effects of hyperbolic discounting and results in an outcome that has greater potential for Pareto optimality.

The crux of El Gamal's argument is that the wisdom of Islam anticipated some of the insights of behavioural economics. From the Islamic philosophical perspective, humans are seen as flawed and vulnerable to making mistakes and so mechanisms for checking individual decisions against a benchmark external to the individual would lead to a better collective outcome (El Gamal, 2001). However, there is a conflict between this

philosophical background and how Islamic banking is actually applied. The influence of an Islamic bank on the decisions of an entrepreneur in a partnership-style contract may be overestimated in the theoretical model due to real world costs of monitoring those decisions. Nonetheless, the idea that partnerships in profit and loss sharing models of finance can have a beneficial effect on outcomes is significant. It would be worthwhile to investigate these effects further and develop financial products that replicate their theoretical benefits in a practical setting.

Capital Structures and Islamic Banking Principles

The Modigliani-Miller “irrelevance” theorem is a mainstay of orthodox economic theory that has come to set the agenda in discussions of the capital structures of firms. The crucial result of this theorem is that the composition of a firm's capital structure has no bearing on the firm's market value. When the extensive assumptions of this theorem hold, the choice of either debt or equity financing (or indeed any mixture of the two options) does not affect how the agents concerned act or the economic results. The justification of this counter-intuitive result is that the fundamental factors underlying a firm are what determine the firm's market value. As Villamil explains, the failure of the theorem to explain different behaviours in contexts of varying debt-to-equity ratios is as a result of it assuming that the meaningful frictions of the real world do not apply (Villamil, 2009). However, relaxing these assumptions does not give a single definitive result for an ideal capital structure (Coury, 2013). Instead, the results are context dependent and so provide richer ground for analysis of the application of Islamic banking principles to capital structures.

The behaviour of banks in the era preceding the recent financial crisis is particularly germane to a discussion of Islamic financial ethics and their effects. The change in the model of banking in the United States, and much of the world of Western banking, during this period was from one of making loans and profiting from their repayment to one where loans were made, assembled, tranching and resold (Brunnermeier, 2008). The novel practice of financing mortgages through money market funds accessed via the sale of collateralised debt obligations emerged. This capital structure left banks exceedingly vulnerable to a fall in asset prices, a vulnerability to which many ultimately succumbed. Banks applying this system of financing were violating the Islamic prohibition of *riba*, by reselling interest-based debt, and *gharar*, by speculating on the sustained rise of property prices.

Instituting a risk-sharing system where mortgage debt would be converted to equity could reduce the costs of debt default and improve the incentive compatibility of banks and mortgage holders. In 2009, Willem Buiter advocated for the application of Islamic financial principles as a partial solution to the legacy of excessive debt from the financial crisis. His argument is as follows: mortgages in default should be converted

into a Musharaka rent-to-ownership contract, after which the bank could sell the contract, transferring ownership and the right to collect rents from the occupier, and thus the social and financial costs of repossession could be minimised. He puts forward parallel arguments for converting corporate and government debt into equity.

In sum, the sort of risk sharing advocated by Islamic financial ethics could improve the stability of the economy by disciplining lenders through exposure to greater risk and increasing the capacity of the economy to resist shocks.

Conclusion

Given the advantages of seniority and incumbency, any comparison of traditional European-style banking with Islamic banking is bound to favour the former. Islamic banking has existed in its current form for a little over forty years, and was not born into a vacuum. Compliance with a supra-legal moral imperative is Islamic banking's *raison d'être*. However, it has struggled to fulfil this ideal, faced as it is with competition from the well-established, innovative and lucrative Western system. In short, the Islamic approach has, as of yet, failed to revolutionise banking. Islamic banks have dealt pragmatically with this competition; instead of enjoying the freedom to create "ideal" Sharia products they have created a range of "least bad" alternatives that can compete through mirroring Western alternatives.

As I have shown, the ideological motivation to innovate around the proscriptions of Islam has made a highly valuable contribution with wide-ranging implications. The behavioural implications from profit, loss and risk-sharing models of credit could have enormous benefits for the efficiency of the economy. Similarly, converting debts into equity holdings, in line with Islamic principles, could reduce social costs from defaults and even has significant implications for the effectiveness of government economic policy. Islamic banking was created because of the need to avoid certain practices prohibited by religious doctrine. In this case necessity was the mother of invention, and the fruits of this invention are too important and interesting to ignore.

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