

Risk Sharing and Shared Prosperity in Islamic Finance

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Abstract

This paper argues that risk sharing is an effective method of expanding participation of agents in economic growth and development and more effective sharing of fruits of prosperity than risk transfer that currently dominates financial systems. Kuala Lumpur Declaration of 2012, by a group of leading Sharī'ah scholars and Muslim economists, considers risk sharing as the essence of Islamic finance, a litmus test of which is its ability to promote financial inclusion and asset-building capacity of the poor and thus better sharing of prosperity. The mobilisation of financial resources toward productive activities through risk sharing enables the Islamic financial system to actualize economic justice and social participation in an efficient manner. The asset-backed equity-financing nature of Islamic finance is conducive to financial system stability because returns, which can only be known ex post, and thus shared on the same basis, are not divorced from risk.

Stability and equitable growth challenges are arguably difficult to undertake through debt-financing, which transfers the burden of losses from financiers to entrepreneurs even at microfinance levels, distorts economic incentives, increases systemic risk, and renders financial regulation more complex. The procyclicality of the conventional financial system leads to credit

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contraction during economic downturns, precisely when the need rather increases for real investment to stimulate economic output and reduce unemployment. Financial intermediaries tend rather to respond to changes in the riskiness of assets by adjusting balance sheets through credit contraction and various mechanisms of credit risk transfer.

This study is an attempt to demonstrate that the risk-sharing modes of financing real investment in the public and private sector reduce the procyclicality of the financial system. The equity-financing of real investment is conducive to more efficient channels of savings towards development finance. The risk-sharing principle underlying Islamic finance reduces the economic incentives for credit risk transfers and speculative activities. By preventing risk from being entangled in complex debt-creating structures that characterize the incompleteness of contracts under conventional finance, this principle also redefines the role of financial markets and institutions in smoothing consumption and capital expenditure. It is the asset-backed nature of Islamic finance that allows for a participative securitization process that provides different segments of the society with fair opportunities to share economic prosperity. The allocation of risk commensurate to the idiosyncratic abilities to bear losses is arguably more conducive to a socially inclusive financial system. Systematic risk cannot be eliminated, but it is collective risk taking and individual risk aversion that promote more efficient mobilisation of resources, and more equitable sharing of economic risk and prosperity.

Keywords: Risk Sharing, Islamic Finance, Financial System

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1. Introduction

“Economic inclusion, by which I mean easing access to quality education, nutrition, healthcare, finance, and markets to all our citizens, is therefore a necessity for sustainable growth. It is also, obviously, a moral imperative.”

- Raghuram Rajan, 2015

There is considerable thinking about the economic concepts of development, which relies on efficient institutions that promote political and economic stability, and the enforcement of property rights, *inter alia*. Human and economic development can be appreciated from improvement in the quality of education,

health, basic infrastructure, and financial inclusion. Iqbal and Mirakhor (2013) argue that there are four dimensions to financial inclusion, including easy access to financial services for all households, competition between service providers, sound and sustainable financial institutions, and effective prudential regulation. Given the precarious conditions of poorer households underserved in terms of opportunities for upward mobility, there is indeed a clear demand for public services, and physical and financial resources. However, the important question remains as to whether the focus should be made not just on access to financial services but also on the financing modes to which access is facilitated.¹ It may be argued indeed that much of the informal borrowing of the poor is made for purposes that should be served by public services such as health and education.² Together with the expansion of government programs in these important areas, there should be recognition that the extension of formal credit to the poor can be merely conducive to excessive indebtedness. Thus, the need for alternative solutions to promote prudential access to finance and risk sharing opportunities. Access to finance is important in its own right, but constructive thinking and innovative strategies are needed to channel financial resources in an efficient and responsible manner toward greater participation into economic activities, and sharing of prosperity.

This paper addresses the question of whether sharing the benefits of economic prosperity is ensured through risk-sharing rather than risk-transfer mechanisms. The principal issue is to demonstrate that the twin-challenge of equitable economic growth and financial stability is rather difficult to undertake through debt-financing. Debt transfers the burden of potential losses from financiers to entrepreneurs even at microfinance levels, distorts economic incentives, increases systemic risk, and renders financial regulation more complex. As the primary role of the financial sector is to promote the development of the real sector of the economy through financial intermediation and efficient payments system, financial instability threatens the prospects of economic growth and the process of prosperity sharing. The fruits of prosperity are optimally shared through the efficient allocation of resources toward productive investment without undermining the efforts toward poverty reduction or worsening income inequality. As the defining principle of Islamic finance, risk sharing has the potential of ensuring economic growth with financial stability, and promoting financial inclusion through the fostering of entrepreneurship opportunities for all segments of society.

¹ Pritchett and Woolcock (2004) examine the critical elements of service delivery, including resources, information, decision-making, delivery mechanisms and accountability. It is argued that the improvement of service delivery depends on how these responsibilities are structured.

² This issue is also raised in the excellent work about elusive stability by Mohan (2011), among others.

In the absence of risk sharing, the inherent fragility of the conventional system built upon debt financing is manifested by the recurrence of financial crises. The apparent macroeconomic stability pursued through aggressive monetary policies should not obscure the fact that, at the micro level, wealth disparities and income inequalities are rather widening. The issue is whether the dependence of small borrowers on banks is part of the wider problems about poverty alleviation since banks have limited capacity to extend credit during economic downturns and in the aftermath of financial crises. The procyclicality of the financial system leads to credit contraction during economic downturns, precisely when the need rather increases for real investment to stimulate economic output and reduce unemployment. Indeed, financial intermediaries tend to respond to changes in the riskiness of assets by adjusting their balance sheets through credit contraction and credit-risk transfer mechanisms.

Thus, this study examines the concept of risk-sharing in finance as the driving force for sharing economic prosperity. The Kuala Lumpur Declaration of 2012, by a group of leading Shari'ah scholars and Muslim economists, considers risk sharing as the essence of Islamic finance, a litmus test of which is its ability to promote financial inclusion and asset-building capacity of the poor and thus better sharing of prosperity. The role of risk-sharing in the optimal allocation of resources in a competitive and dynamic economy is better understood in contrast to risk transfer and in relation with financial stability. The paper is organized as follows. The next section briefly addresses the relation between financial stability and economic prosperity. Section 3 examines the principle of risk-sharing underlying Islamic finance. Section 4 discusses the implications of risk-sharing for prosperity-sharing and income inequality. Section 5 concludes the paper.

2. Financial Stability and Economic Prosperity

2.1. Development and Finance

Financial stability is regarded as a precondition for sustained economic growth and prosperity. This argument is consistent with the stated mission of the Bank for International Settlements, which is aimed at promoting monetary and financial stability. Given financial stability, there remains a major intellectual challenge to development economics, which is to reconcile growth with equity. The conventional wisdom, which no longer enjoys a clear consensus, is that once growth is ensured, equity would be achieved rather systematically. This view assumes, among others, fair access to finance for all, despite conditions of severely

limiting poverty for large segments of society. There are, however, recurrent patterns of fluctuating growth rates, and prolonged periods of negative growth, which have asymmetric effects on consumers with different income-levels. Thus, the dynamics of economic growth and properties of financial systems are arguably more complex to ensure financial stability and reconcile equity with growth.

Insofar that the relation of development with finance is concerned, the fundamental question is whether the workings of the financial sector are conducive to equity. Subbarao (2012) argues with reference to the Indian economy that left to its own device, the financial sector does not have a pro-equity bias. Some regulatory measures may be useful in promoting socially optimal business behavior by financial institutions through priority sector-lending such as agriculture, micro, small or medium industries, low-cost housing and education. The degree of financial services penetration into rural areas can be also used as a criterion for bank branch-licensing in urban areas. While such credit incentives certainly contribute into financial inclusion, broader access to finance remains driven by debt rather than the equity financing of economic activities. Given the asymmetric exposure to risk which underlies debt obligations, it can be further argued that, inherently, financial systems are not even equity-neutral.

The problem of equity is intrinsically related to the mode of financing of real investment. The economics of entrepreneurship imply that investment can be pursued until marginal productivity is equal to zero. The mobilization of resources is governed by the profitability and riskiness of investment projects subject to budget constraints. This is arguably conducive to allocative efficiency, but the issue of equity remains unresolved. Indeed, allocative efficiency need not be pursued with the sacrifice of equity. There are moral and economic dimensions to the relation between finance and development, and the essence of a relation based on equity is not simply about altruism, generosity and benevolence. The competitive economy as envisioned by Adam Smith in *The Wealth of Nations* is founded on a system of morality and justice. Smith (1759, p. 77) argues in *The Theory of Moral Sentiment* that “[s]ociety may subsist, though not in the most comfortable state, without beneficence, but the prevalence of injustice must utterly destroy it.” Thus, both allocative efficiency and equity are important in shaping the relation between finance and development. The pursuit of allocative efficiency in the financial sector promotes economic stability, which reflects the steady state with lower fluctuations of economic output and inflation. However, failure to fulfill the principal function of efficient allocation of resources on the basis of equity and public welfare may undermine financial stability and prospects of economic growth.

Kenneth Boulding (1970, p. 126) notes that “[m]any, if not most, economists regard the Paretian optimum as almost self-evident. Nevertheless, it rests on an extremely shaky foundation of ethical propositions. The more one examines it, for instance, the more clear it becomes that economists must be extraordinarily nice people even to have thought of such a thing, for it implies that there is no malevolence anywhere in the system. It implies, likewise, that there is no benevolence, the niceness of economists not quite extending as far as goodwill. It assumes selfishness, that is, the independence of individual preference function, such that it makes no difference to me whether I perceive you as better off or worse off. Anything less descriptive of the human conditions could hardly be imagined.” Abstraction from morality is usually justified on the grounds that competitive economy is governed by value-neutral exchange relations. As argued by Smith (1759) however, allocative efficiency can be achieved on the basis of a system of morality and justice. Thus, exchange relations are indeed essential to risk sharing, and are not necessarily in conflict with the pursuit of equity and economic justice.³

If the objective of public policy is to promote prosperity, then this objective is also shared with the *maqāṣid* of shari‘ah. The objective of shari‘ah in finance is not to bind individuals into sharing prosperity by giving away wealth through charity and *qard ḥasan* and becoming themselves poor.⁴ It may be argued that it is rather about the sharing, on equitable basis, of economic and financial risks, to which all parts of society are systematically exposed. The asymmetric exposure to systematic risk resulting from the predetermination of claims on future income streams undermines public policies aimed at promoting economic growth and shared prosperity. Asymmetric exposure shifts indeed the burden of losses from one party to another during economic downturns and weakens the long-term relation between finance and development. Thus, it can be argued that it is through risk sharing rather than risk-transfer mechanisms that allocative efficiency and equity can be pursued simultaneously. This risk-sharing argument is central to the relation between development and finance, and it is also crucial to understanding the optimal approach to financial inclusion and poverty alleviation.

2.2. Procyclicality of Financial Systems

In order to understand the relation between risk-sharing and shared prosperity, it is important to consider the salient features of financial systems based on debt

³ Friedman (2005) argues that economic growth has moral consequences as rising living standards are conducive to more open, tolerant and democratic societies.

⁴ This argument is also advanced by Ibrahim (2013), among others.

and non-debt financial arrangements. The conventional financial system is inclusive of financial intermediaries, financial markets as well as the financial infrastructure to facilitate payments. Financial inclusion is usually referred to as the process of widening the access to financial services provided by regulated financial intermediaries such as commercial banks, and insurance companies.⁵ Certainly, access to financial services reduces the reliance of poor households on informal systems of savings and insurance against risks. There is also mounting evidence that access to financial services, to the payments systems in particular, can improve the welfare of the poor in terms of facilitating financial transactions and consumption-smoothing.

However, despite the fact that economies with deeper financial intermediation tend to grow relatively faster, it is not clear whether growth is necessarily accompanied with a reduction in income inequality. The issue remains as to whether access to financial resources is provided in a sustainable and responsible manner. The problems of sustainable and responsible inclusion derive from the fact that financial access may be undermined by the fragility of the financial system itself. The argument can be made that financial inclusion based on microcredit models does not serve the needs of poor households in terms of entrepreneurship and risk management. Debt-financing, even at micro-level, tilts the balance of rights and obligations between creditors and debtors, and the social effects of asymmetric claims on income generated by poor households may be even more severe.

Thus, the usefulness of the financial system for the purposes of sharing prosperity depends on the efficiency of financial institutions, financial markets and payment systems. Financial stability can be understood, in a narrow sense, in terms of the absence of disruptions to the settlements system, but it is the mechanics of financial intermediation that pose systemic problems with the potential of undermining public confidence and the ultimate objective of financial inclusion. As argued by the Financial Services Act in the United Kingdom, the resilience of the financial system is understood not just in terms of its ability to prevent interruptions to financial services, but also credit bubbles. Given the credit cycle, which reflects also fluctuations in economic output and employment, there is an

⁵ It is noted that financial intermediation is also provided by financial institutions other than commercial banks, such as mutual funds, money-market funds, pension funds, investment banks, and hedge-funds, *inter alia*. These financial intermediaries are usually referred to as the shadow-banking system, which is typically less regulated than commercial banks. Naturally, a relatively lower level of financial regulation offers also opportunities for regulatory arbitrage.

intrinsic relation between financial stability and the optimal allocation of resources. The central issue is whether the stability of the financial system can be achieved with debt or equity financing relations. The question is important because the inefficient allocation of resources is conducive to financial instability, which undermines economic growth and prosperity. The type of financial intermediation that is conducive to credit bubbles and financial crises can result also in the failure of the very financial institutions through which financial inclusion is pursued in the first place.

The consumption shocks emanating from fluctuations in the economic cycle can be, to some extent, mitigated by financial intermediaries and financial markets. The ability of households to withstand consumption shocks depends on income levels, but consumption smoothing depends also on the liquidity of assets. As liquidity depends on the convenience and ease with which assets can be converted into consumption units without loss of value, it is important that the financial system allows for efficient asset valuation. As noted by Allen and Gale (2009), it is the perception by individual consumers of uncertainty about the timing of future consumption that explains the preference for liquidity. It can be argued that insurance against liquidity shocks can be provided by financial intermediaries. In the case of banks and depositors for instance, the process of insurance and consumption smoothing is based on interest payments on deposits. Thus, financial inclusion may be instrumental in providing access to financial services that to some extent allow for consumption smoothing. But banking institutions are themselves also bound to seek insurance against their own liquidity shocks. The issue thus remains as to whether financial intermediation can promote financial inclusion, in its broader meaning, which is aimed at increasing participation into the economy through real investment. The effectiveness of financial inclusion schemes rests on the stability of the financial system and on the ability of financial intermediaries to absorb shocks that may affect consumption patterns, and in turn individual time preferences.⁶

Thus, banking institutions are exposed to liquidity shocks, which have the potential of affecting their own ability to extend credit, with asymmetric effects on corporate and households borrowing. This exposure to liquidity shocks is a natural result of the trade-off between the maturity and return of bank assets represented by loan portfolios. The higher premium demanded for holding assets with longer

⁶ From an international perspective, Kindleberger (1978, 2013) argues that the U.S. economic depression and prevailing conditions of economic instability are caused, to a large extent, by the instability of the international financial system.

maturities and, thus less liquidity, implies stronger incentives for banks to extend credit on longer term basis. However, the preference for assets with higher returns, albeit with lower liquidity, implies that the bank's balance sheet tends to be characterized by long-term assets but short-term liabilities in terms of bank deposits. This maturity mismatch affects the behaviour of banking institutions depending on their perceptions of liquidity shocks. The ability and willingness to extend credit differs during economic booms and downturns.

The behaviour of lending institutions is also affected by expansionary or tightening monetary policies. As noted by Tirole (2010), there are three main effects of loose monetary policy. Lower short-term interest rates increase the risk of maturity mismatch by widening the differential between long and short term rates. They may be also indicative of the willingness of central banks to further reduce policy rates in response to the onset of new financial crises. Finally, lower rates are conducive to reduced borrowing costs and increased incentives for higher leverage. Expansionary monetary policies reduce the costs of holding illiquid balance sheets, leading to excessive borrowing and leveraged balance-sheets that increase the probability of bank failures and systemic risk. The commitment by central banks to inflationary policies is reflected by measures such as zero-interest rates, quantitative easing programs, and forward guidance aimed at entrenching expectations about inflation. But, the long-term effects of unconventional monetary policies on financial stability and economic prosperity remain uncertain.

The Bank for International Settlements notes in its annual report (BIS, 2015) that global interest rates, whether measured in nominal or inflation-adjusted terms, have been at extremely low levels for a prolonged period of time. "Such low rates are the most remarkable symptom of a broader malaise in the global economy: the economic expansion is unbalanced, debt burdens and financial risks are still too high, productivity growth too low, and the room for manoeuvre in macroeconomic policy too limited. The unthinkable risks becoming routine and being perceived as the new normal. This malaise has proved exceedingly difficult to understand." This malaise reflects the persistence of unbalanced economic expansion and high financial risks, and, "to a considerable extent the failure to come to grips with financial booms and busts that leave deep and enduring economic scars." Failure to understand the economic repercussions of financial booms and crises reflects perhaps the inability to come to grips with the procyclicality of the financial system. The financial system has the potential of exacerbating business cycle fluctuations by amplifying disturbances to the real economy.

As noted by Rochet (2008), this procyclicality is intrinsic to the financial system since credit crunches during economic downturns and credit booms during economic booms are conducive to the formation of financial cycles. The formation of these cycles is driven in turn by shifts in expectations about future economic and financial conditions. The gradual or abrupt changes in expectations can be triggered by new macroeconomic information that affect the credit function of financial intermediaries, precipitating thereby the phases of credit contraction or credit expansion. Kindleberger (1978) argues that financial panics and crashes can be triggered by single events, such as the freezing of fund redemptions or refusal of credit extension to individual market players leading to wider and sudden demand for liquidity. This is symptomatic of financial fragility, which refers to the state of the financial system where shocks of small magnitude have the potential of straining the entire system.

Naturally, the credit cycle is reflected by structural changes in the balance-sheets of financial intermediaries. Together with the demand for credit, there are also attempts at providing supply-side explanations of credit formation. Shin (2009) argues that the securitization process may be useful in explaining the increasing risk-taking capacity of the shadow-banking system. The distorted incentives for financial intermediaries to fully use slack in balance-sheets capacity lead to credit extension in unconstrained manner. Ultimately however, this credit expansion is conducive to the deterioration of lending standards, and downturn in the credit cycle. Thus, the procyclicality of the financial system is reflective of the debt-financing arrangements in the commercial banking as well as the shadow-banking system.

2.3. Financial Instability

The procyclicality of the financial system affects the long-term prospects of economic growth and shared prosperity. Indeed, the empirical evidence from Harding and Pagan (2002) suggests that under the condition of procyclicality between the quantity of money and business cycles, economic downturns can be exacerbated by the contraction of money-supply and credit tightening. Also, Bordo and Haubrich (2010) based on the relationship between money, credit and output cycles suggest that events that heighten the level of financial distress have the potential of exacerbating business cycle downturns. In fact, the procyclicality of the financial system is related to the structure of balance-sheets of banking institutions, which is examined in the theoretical model by Diamond and Dybvig (1983). This important study provides some explanation about the fragility of banking arrangements based on short-term liabilities and illiquid assets. It is argued

that in addition to concerns about bank's ability to satisfy deposit withdrawals, bank runs can be also explained by fluctuations in the business cycle. The arrival of new information about potential economic downturns can precipitate the depreciation of assets and increase in the likelihood of financial distress. This implies in turn a rising probability that assets with longer maturities and higher returns would be disposed and sacrificed in order to increase liquidity in the face of more deposit withdrawals. Thus bank runs may not be simply reflective of panics or changes in the patterns of withdrawals for individual consumption purposes. As further argued by Allen and Gale (2009), anticipation of bank runs can be conditional on the arrival of new economic information, and it is not necessarily a random event.

The financial-instability hypothesis proposed by Minsky (1982, 1986) implies that the instability of the financial system derives from the procyclicality of changes in credit supply. The argument is intrinsically linked to the notion that liquidity preference is a determinant of interest rates and the price level of capital and financial assets, as proposed by John Maynard Keynes in *The General Theory of Employment, Interest, and Money*. Based on the assumption of a sophisticated financial system, the model of financial instability by Minsky implies that the demand and supply of investment output depend on the financing conditions. It relies also on the definition of banking as a profit-seeking form of financial intermediation. The accumulation of credit during economic booms implies that inflation feeds upon inflation. Three types of borrowing firms can then be considered: (i) hedge firms capable of servicing debt obligations, (ii) speculative units with potential difficulties that warrant refinancing arrangements, and (iii) Ponzi-finance units under constraints to issue new debt, on permanent basis, in order to service outstanding obligations.

The tightening of monetary policies to fight credit-fueled inflationary pressures increases the likelihood that speculative firms also become Ponzi firms. The refinancing difficulties for speculative firms result from the increase in debt-to-income ratios and decrease in net worth following asset sales to meet debt obligations. The argument about asset sales and deterioration of balance-sheets applies also to lending institutions. There are therefore significant implications for the type of financial inclusion that relies merely on credit from lending institutions. Financial instability depends on the nature of financing that underlies the relation between production resources and investment output. Minsky (1992) notes that liabilities created on the firm's balance-sheets represent the commitment of *prior* income cashflows to future debt payments, despite the determination of expected payoffs as contingent on future economic conditions. This raises important

questions about debt-versus-equity financing, and the optimal financing mode for sharing risks and sharing economic prosperity.

The financial instability hypothesis suggests that financing conditions affect the investment function of firms, and thus the linkage between the financial sector and the real economy. Under these conditions, it may not be surprising that real investment represents the most volatile part of the GDP since the behaviour of lending institutions during economic booms and depressions has destabilizing effects on the behaviour of firms. Thus, the dependence of economic growth on capital accumulation and prices of financial assets can affect in turn the balance sheets of households and undermine the benefits from financial inclusion.⁷ Reference can be also made to Tobin's Q , which provides a measure of the linkage between the financial sector and the real economy based on the ratio of firm value and replacement cost of assets. It can be regarded as a proxy for growth opportunities, with rising levels of Tobin's Q providing an incentive for firms to increase capital expenditure financed through the issuance of new equity. In contrast to debt which provides the basis for the financial instability hypothesis, the reliance on equity for the financing of real investment provides stronger foundations for sharing risks associated with growth opportunities, and sharing economic prosperity.

Thus based on Minsky's proposition about financial instability, financing affects the behaviour of firms, and it can in turn constrain lending institutions, leading to the formation of financial crises as a natural result of credit bubbles during economic booms. Financial crises, as argued by Kindleberger (1994), are characterized by precipitated capital flight away from real assets and long-term assets into money and liquid assets, as opposite to capital flight into real assets and long-term financial assets during bubbles. Following a pattern of increases in asset prices, a reversal of expectations triggers a precipitous fall in prices. A reversal may take place over an interceding period of financial distress where anticipations of dipping prices reach gradually a critical threshold that engenders a turning point. Klemkosky (2013) notes also that financial crises reflect a partial breakdown of the financial system due to several factors including excessive debt, formation of asset bubbles, complexity of the banking system, and failure of economic and financial

⁷ With respect to the asymmetric relation between real investment and Tobin's Q , the empirical study by Holmes and Maghrebi (2015) provides evidence that realignment toward long-term equilibrium tends to take place only through adjustments of the level of investment in the real economy. It may be argued that this reflects the procyclicality of the financial system as financial crises are associated with increased uncertainty about future economic growth.

models, *inter alia*. It is further argued that financial crises are conducive to long periods of slow economic growth. Thus financial crises may differ in their origin, but they result in economic strains, regardless.⁸

2.4. Financial Crises and Income Inequality

The partial breakdown of the financial system does not imply that some parts are more robust or less vulnerable than others. Indeed as argued also by the Bank for International Settlements (2008), the U.S. credit crisis raises the natural question as to whether the center of the global financial system may be as vulnerable as the periphery. This crisis is not unique either, as argued by Reinhart and Rogoff (2009), who provide evidence from a history of financial crises dating back to the fourteenth-century England that serial defaults are a universal feature of financial crises. There is also evidence from Greenwood and Scharfstein (2013) of an increase in the total value of financial assets to GDP and in the ratio of financial assets to tangible assets in the period leading to the U.S. financial crisis. The disproportional growth of the financial sector as a dominant part of the economy lends support to the argument that the financial crisis was not inevitable. This line of argument is also shared by the Financial Crisis Inquiry Commission (2011, p. xv), which considers that “[t]he profound events of 2007 and 2008 were neither bumps in the road nor an accentuated dip in the financial and business cycles we have come to expect in a free market economic system. This was a fundamental disruption—a financial upheaval, if you will—that wreaked havoc in communities and neighborhoods across this country.”

Financial crises are reflective of the significant deterioration of the balance sheets of economic agents through debt accumulation. Richard Koo (2008) argues that post-crisis conditions are characterized by “balance-sheet recession” where the long process of deleveraging can be pursued through capital injections, debt-equity swaps or debt-forgiveness. Also, as noted by Stiglitz (2010, p. 1), “the crisis emanated from the center and reached the periphery. Developing countries, and especially the poor in these countries, are among the hardest hit victims of a crisis they had no role in making.” Thus, financial instability has serious implications for the real economy, and the balance sheets of poorer households in particular. Since financial stability depends on financing modes, there are limits to financial

⁸ There is a rich literature on financial crises, which grows further with the onset of new ones. As far the U.S. credit crisis is concerned, reference can be made for instance to the study by Lo (2012), who provides a review of related literature, and views about its main causes and economic implications.

inclusion based on credit extension from lending institutions. The fragility of the financial system implies the financial vulnerability of the poor, which worsens during periods of financial instability. Given the asymmetric effects of financial crises on living standards, it is arguably poorer households that are left with the deepest economic scars.

The rising poverty rates that reflect economic scars in the aftermath of financial crises constitute a significant determinant of suicide rates. There is indeed evidence from the literature in medical and social sciences of strong linkage between economic stress and suicide rates. The question is whether financial inclusion can contribute toward poverty alleviation and lessen economic scars during periods of financial instability. Financial inclusion, defined in terms of facilitated access to financial accounts is important in its own right, but it may not be sufficient to absorb the impact of economic crises on the most vulnerable segments of society. Economic shocks affect consumption patterns, and it is through risk-sharing that optimal consumption smoothing can be achieved. As noted by Stiglitz (2010), funding of development initiatives through capital markets is highly cyclical. Thus, the argument can be made that such funding serves relatively few countries and few sectors, and that there is a need for innovative mechanisms for risk sharing that serve better the relation between finance and development for all segments of society.

3. Risk Sharing in Islamic Finance

3.1. The Essence of Risk Sharing

There are some innovative funding mechanisms for development programs, including for instance, commodity-linked bonds that allow commodity-exporting countries to make payments linked with the price of reference commodities. Counter-cyclical finance includes also measures such as the automatic adjustment of outstanding debt during economic downturns and the extension of credit guarantees with counter-cyclical elements. There are however limits to the effectiveness of counter-cyclical finance based on debt. The main question arises as to the optimal level of debt, and whether there exists a threshold at or beyond which debt-financing ceases to contribute toward economic growth and becomes the principal cause of financial instability and economic downturn. This important issue is examined, *inter alia*, by Reinhart and Rogoff (2010) with respect to sovereign debt and Arcand, Berkes, and Panizza (2012) in relation to private debt. The empirical evidence about the existence of thresholds is not conclusive but the potential for counterproductive effects on economic growth remains.

It can be argued that innovative solutions based on debt fall short from addressing the fundamental flaws of the financial system. As preference for debt-financing derives from differential tax treatment and information asymmetry, the economic rationale behind financing relations based on interest is rather weak and untenable. The natural question arises then as to whether there are viable alternatives to debt financing, which reduce the systemic risk and moral hazards associated with debt. Indeed, the issue is whether a shift in paradigm toward equity financing can contribute toward financial stability, which is essential to effective financial inclusion, sustainable economic development and equitable wealth distribution.

The conventional financial system is based on risk-transfer and risk-shifting relations. There is indeed risk transfer from depositors to banks for consumption-smoothing purposes, and these incomplete contracts are covered by deposit insurance. There is also risk transfer from banks to borrowers through bank lending activities. Mirakhor and Krichene (2009) argue that there is a gradual alteration of Adam Smith's vision of exchange economy based on risk sharing into an economy based on risk-transfer, and into risk-shifting to tax-payers through government bailouts in the event of financial crisis. In contrast, the principle of risk-sharing in Islamic finance dictates that the return on capital should be determined *ex post*. This does not imply that return on capital is necessarily equal to zero in the absence of interest. As expectations of returns and future income determine savings, it is *ex ante* returns that determine real investment. Thus, there is no basis for the argument that an Islamic financial system based on risk-sharing constrains savings and investment. Risk sharing strengthens rather the linkage between the financial sector and the real economy, and its merits become even more apparent when the degree of risk aversion in society increases.

The essence of risk sharing derives from the imperative of taking different states of nature into account, not all of which are necessarily favorable and associated with positive returns. It can be argued that debt financing requires the payment of future cashflows inclusive of principal and interest, irrespective of future states of nature. Askari, Iqbal and Mirakhor (2009) note that Islamic finance prohibits transactions where one party is entitled to a certain amount of rent, measured as a predetermined percentage of the value of a property made available to another party over a predetermined period of time without transfer of ownership. Given the predetermination of rent as a percentage of property value, the return on such transaction is not contingent on the realization of a particular state of nature.

Thus, it is rather difficult to regard interest-bearing fixed-income securities as pure contingent claims, in the sense of Arrow-Debreu securities.

The theoretical studies by Arrow (1953), Arrow and Debreu (1954), and Arrow and Hahn (1971) provide a rigorous conceptualization of Adam Smith's vision of competitive economy. The Arrow-Debreu-Hahn modelling of general equilibrium for optimal allocation of resources under an ideal market economy. Arrow (1974) further argues that institutional structure is essential to the promotion of exchange, which is the basis of resources allocation. Because uncertainty defines the tradeoff between risk and return and thus relative prices, the optimal allocation of resources is governed by forward looking expectations. The Arrow-Debreu economy assumes the existence of a complete set of competitive markets, where the price system allocates risk, and thus resources as well, based on payoffs contingent on the possible states of nature. The existence of Arrow securities, which deliver one-unit-payoffs conditional on the realization of a state of nature, and zero-payoffs for all remaining states, implies that the price system provides, under the assumption of complete markets, the opportunity to hedge against risk under each contingency.

Risk-sharing, which underlies the optimal allocation of resources in the Arrow-Debreu competitive economy, is also the defining principle of Islamic finance. As noted by Cowen (1983), it is difficult however to accommodate pre-determined rates of interest in Arrow-Debreu-Hahn into the system of equations for general equilibrium. The foundations of optimal allocation of resources in a competitive economy are laid indeed on the concept of state-dependent payoffs, and interest-bearing fixed-income securities would be inconsistent with the definition of pure contingent claims. Under Islamic finance, the return on capital is determined on *ex post* basis, which implies that future payoffs on contingent claims are function of variables in the real economy. It is the intrinsic interdependencies between time, cashflows and risks that forces future cash-flows to be defined by economic activities under a world of uncertainty. This provides the basis for stronger linkage between the financial sector and the real economy.

There is thus no case for default on equity. The return on equity is fully governed by the realization of a certain state of nature. Default can be defined with respect to debt only because of the pre-determination of future payoffs and promised payments independent of multiple and mutually exclusive states of nature. In contrast to default risk defined in case of debt, there is no credit risk for equity either given the absence of state-independent claims. Under equity financing, there is thus no economic rationale for hedging against credit risk, and for credit-risk

transfer strategies based on credit-default-swaps. In the absence of credit risk, risk sharing does not entail credit default. Nor does it require risk transfer strategies. Nor should it be construed as unwarranted risk taking without risk diversification strategies.

3.2. Stability of an Islamic Financial System

The fundamental question that arises from the re-emphasis on risk-sharing is about the stability of an Islamic financial system. This issue is important because as noted earlier with reference to the Bank for international settlements, financial stability is a precondition for economic growth. Given the recurrence of financial crises due to serial debt defaults, financial stability seems to be rather elusive. The credit system is based indeed on the ability of banks to issue credit against insufficient deposits. Through credit expansion, banks are empowered not only to create money, but also to fuel credit booms and facilitate leveraged balance sheets. It is possible however, to conceive, theoretically at least, a financial system based on equity participation where bank depositors are shareholders, as demonstrated by Mirakhor (1988). Debt and debt-based contracts can indeed be substituted by equity-financing instruments.

Financial intermediation can be facilitated under Islamic finance, by a wide range of instruments and services. Permissible contracts represent building blocks for custodial services, asset transformation, risk management and payments services that can serve the same functions of the conventional financial system. These building blocks include equity partnership (*mushārah*), deposit (*wadī'ah*), trust (*amānah*), principal-agent representation (*wakālah*), and (*muḍārabah*), among others. It is the nature of financing relations under Islamic banking that promotes the stability of an Islamic financial system. Under participatory arrangements, there is no room for credit creation or engagement in investment that is not backed by real savings. While the asset-side of balance sheets for Islamic banks reflects equity-financing operations rather than interest-based loans, the liabilities-side is represented by deposits, which are by definition, real savings. There is no tendency for the development of leveraged balance sheets, or for the creation of credit with no foundation in the real economy.

There are no risk-free assets given the prohibition of interest. Without the ability of the banking system to create money through credit, it is the central bank that has exclusive power of money creation. The potential for systemic risk is reduced given the absence of speculative booms, and the preclusion of deposit insurance. Based on equity and backed by real assets rather than lending, there is

no economic rationale for bank runs either. The risks for Islamic financial institutions are mitigated insofar that future returns are generated by wealth-creating economic activities. Thus, an Islamic financial system is conducive to allocative efficiency because in principal, partnership dictates prudence. It promotes also financial stability, as well as social and economic justice.

4. Risk Sharing and Shared Economic Prosperity

The discussion in previous sections focused on the relation between financial stability and economic prosperity, the procyclicality of the financial system, and the essence of risk sharing. The notion that financial stability is essential to economic growth, and the fact that the conventional financial system is inherently unstable, raises the question of whether the optimal mobilization of resources and financial stability are better achieved through risk-sharing rather than risk-transfer and risk-shifting. The central argument here is that if economic growth can only be achieved through the optimal allocation of resources, then risk sharing should be essential to the sharing of prosperity. As financial stability is a precondition to economic growth, risk-sharing is also a pre-requisite for financial stability.

4.1. Income Inequality and Wealth Redistribution

There is an extensive literature on the relation between finance and development, and the issue of wealth distribution. Reference is made here to the seminal work about *Capital in the Twenty-First Century* by Piketty (2014) who documents the persistent patterns of wealth and income inequality in capitalist economies over more than two-and-half centuries. It is therein argued that the central contradiction of capitalism and the principal destabilizing force is that the private rate of return on capital r , can remain higher than the rate of growth in income and output g , for prolonged periods of time. The argument raises important issues about the natural relation between the rates of return on capital and rate of economic growth. Piketty (2014, p. 571) notes that “[t]he inequality $r > g$ implies that wealth accumulated in the past grows more rapidly than output and wages. This inequality expresses a fundamental logical contradiction. The entrepreneur inevitably tends to become a rentier, more and more dominant over those who own nothing but their labor. Once constituted, capital reproduces itself faster than output increases. The past devours the future.”⁹

⁹ There is also evidence from Rubin and Segal (2015) that growth and income inequality are positively associated, and that the top-income groups stems from wealth that is more sensitive to growth than labor income.

This important argument between income and wealth, and its implications for income inequality is, understandably, the subject of diverging views and critical analysis. For instance, Mankiw (2014) does not dispute the inequality $r > g$, but notes that it derives as a natural steady state condition in Solow growth model under insufficient levels of savings in the economy. Weil (2015) considers the definition of capital and measurement problems associated with the market value of tradeable assets used as proxy of the quantity of physical capital in Piketty (2014). Further clarification is provided by Piketty (2015) about the role played by $r > g$ in the analysis about wealth inequality. It is noted for instance, (Piketty, 2015, p. 5), that capital ownership different historical forms that take different forms of property relations and social conflict.

Palley (2014) argues that Piketty (2014) presents a mainstream neoclassical explanation of worsening inequality, where the widening gap between the rate of return on capital and rate of growth is due to the concentration of capital ownership. This ownership concentration implies that income increases for the wealthy faster than the rate of economic growth. The theoretical argument is based on the neoclassical marginal productivity of capital, which suggests that return on capital is determined by technological factors. The counter-argument is that this rate of return is function of political and social factors, which affect wealth distribution and thus income inequality. Palley (2014) argues that economic growth is also the outcome of policy decisions and institutional choices, and that the debate should center on the differential in speeds at which the economy grows and capital multiplies. There are legitimate concerns that this important debate may be diverted toward the determination of the rate of return on capital as the marginal product of capital, when “what is needed to make capitalism deliver shared prosperity.” (Palley, 2014, p. 146).

In light of these important arguments, it is possible to examine this inequality with reference to the valuation of capital goods and financial assets using the present-value relation under certainty. The value of capital goods is expressed as the sum of discounted cashflows generated by the asset in the future. Given a discount factor based on interest rate r , the present value of the financial asset generating a stream of constant dividends d can be expressed, in the limit, as $p_t = d/r$. In the case where dividends grow indefinitely at the rate g , this perpetuity can be valued as $p_t = d/(r - g)$. This present-value equation is valid under the crucial condition that $r > g$ to ensure positive asset prices and avoid the

case of indetermination.¹⁰ This condition is reminiscent of, and consistent with, the formulation of the central contradiction of capitalism by Piketty (2014), where r and g represent, instead, the private rate of return on capital and growth rate of income and output, respectively. Thus, the destabilizing force is represented by the tendency for the rates of return to exceed growth rates over prolonged periods of time.

It is clear that the central contradiction of capitalism reflects a breakdown in the relation between the growth rates of capital and economy. The destabilizing factor is the predetermination of the rate of return on *ex ante* basis when information about the growth rate of the economy is only available on *ex post* basis. From the present-value relation, it is clear that return on capital r can be expressed also as the sum of dividend yields and growth rate of dividends $r = d/p_t + g$. With respect to the time variations of expected returns or discount rates, Cochrane (2011) notes that conventional wisdom suggests that the unpredictability of returns is related to variations in expected cashflows, which reflect variations in price-dividend ratios. The evidence indicates however, that price-dividend variations correspond to discount-rate variations. Thus, the formation of discount rates is crucial to the validity of the present value relation, which holds that asset prices should be equal to discounted expected cashflows.

The central contradiction of capitalism may then have also to do with the discount factors and “*the problem of interest*”, which was first introduced by Böhm-Bawerk (1895). The notion that a net income can be derived with respect to any form of capital on inexhaustible and continuous basis poses the difficult questions formulated by Kirzner (1996, p. 141, italics added) as to “*how* it is possible for an individual to invest capital funds in a way that yields a perpetual net income. *Why* does not the market bid up the price of all the “machines” (in which the individual might plan to invest his capital) so that no net annual yield remains?” According to Piketty (2014), capital is not an immutable concept as it reflects the state of development and prevailing social relations of each society. It may be further argued that social relations are also reflective of financial relations, which define the terms of risk allocation in the society based on equity or interest-bearing debt.

¹⁰ Campbell and Shiller (1988) provide an approximation of the present-value identity, which expresses the current dividend-price ratio as a function of the sum of future returns, future changes in dividend, and future as dividend-price ratio using a constant of approximation close to unity.

The concept of interest is crucially related to the central contradiction of capitalism, and to the persistent gap between the rate of return on capital and rate of growth in output. As argued by Askari, Iqbal and Mirakhor (2010), interest is regarded by John Maynard Keynes in *The General Theory of Employment, Interest, and Money* as accruing without genuine sacrifice. The compounding of interest is conducive to wealth accumulation at an accelerated rate that tilts wealth and income distribution toward rentiers. The wedge that interest rates create between investment and savings makes sustainable full-employment equilibrium rather difficult to achieve. This may explain the twin problems: the inability of achieving full employment, and the inequitable distribution of wealth and income. Full employment may be approximated under a comprehensive, and gradual, socialization of capital investment that increases the amount of capital until it solves the problem of scarcity, which is conducive to the “euthanasia of the rentier.”

With respect to the problem of redistribution through inflation, Piketty (2014, p. 134) argues that “once inflation becomes permanent, lenders will demand a higher nominal interest rate, and the higher price will not have the desired effects.” It may be also argued that in the same way that there are limits to inflation-channels of redistribution, a progressive annual tax on capital may not be effective either in suppressing the private return on capital below the growth rate over sustainable periods of time. Again, insofar that the return on capital is determined *ex ante*, lenders would demand a higher nominal interest rate to offset the effects of new tax on capital τ . It can be argued indeed that with r determined *ex ante* and in the absence of upper boundaries on interest rates, the behaviour of lenders would result in the private rate of capital being simply raised to $r + \tau = r^*$ and the central contradiction of capitalism would remain unresolved such that $r^* > g$.¹¹ Using a simple neoclassical growth model, Mankiw (2015) also argues that taxing capital with proceeds accruing to workers lowers the steady state consumption for both capitalists and workers but impoverishes the former at a faster speed. Thus, if the contradiction is due to the predetermination of the rate of capital, then inflation and tax mechanisms may not provide the desirable long-term remedies to such structural inconsistencies.

¹¹ It is noted that this argument is based on simplifying assumptions, which abstract the analysis from, for instance, the effects of monetary policy and the determination of short-term interest rates by central banks. The aim though is to consider briefly the potential limits of solutions to the central contradiction of capitalism based solely on progressive taxes without addressing the determinants of the private rate of return on capital.

The problem derives from the conflicting forces that govern the long-term relation between the rate of growth of income and output and the return on capital. It is important to note that whereas the latter is determined by financial arrangements in the financial sector, the former is driven by the outcome of investment in the real economy. It should be further noted that as the rate of return on capital is determined in financial markets, the distinction should be made between money markets and capital markets, and within the latter between bond markets and equity markets. Askari, Krichene and Mirakhor (2014) argue that in an Islamic financial system, “the rate of return to capital is neither a purely monetary phenomenon determined in the money market by the demand and supply of money, as in a Keynesian model, nor is it purely determined by the real demand for and supply of real savings, as in the Classical model. Instead, the rate of return to capital is determined by the rate of return to ownership position (equity) related to marginal product of capital as well as to the portfolio balance equilibrium.” Thus, the important distinction should be made between the return on capital as determined in the money and bond markets on one hand and in equity markets in the other.

Money and bond markets provide opportunities for investment under certainty with return on capital based on interest rates and bond yields. In contrast, equity markets provide returns on capital for investment under uncertainty. It can be argued that the principal contradiction of capitalism results from the predetermination of *ex ante* rates of return on capital from investment in money and bond markets when growth rates in income and output are not certain. It is the return on equity that is more congruent with the uncertain nature of real investment and economic growth. This return on equity is determined *ex post*, and depends on the observed growth rate g such that $r = f(g)$. Since the payoffs are contingent on the realization of a particular state of nature, the realized return on real investment is known only on *ex post* basis. The growth rate can be positive or negative depending on the realization of favorable or unfavorable states of nature. This implies that capital is not allowed to increase irrespective of growth rates, and that it is bound to decrease with negative growth. The systematic risks entailed by economic activities are thus shared by investors in capital markets insofar that equity markets, rather than bond markets, are concerned. This distinction is fundamental to understanding the role of equity markets in promoting risk-sharing and its implications for shared prosperity. In light of the effects of the central contradiction of capitalism on income and wealth inequality, equity-financing is also crucial for more efficient and more equitable mechanisms for financial inclusion.

4.2. Risk-Sharing Mechanisms for Financial Inclusion and Shared Prosperity

The discussion until this point has dealt almost entirely with financial instability, and the essence of risk-sharing, and its importance for prosperity-sharing. The notion that risk-sharing promotes financial stability and economic growth raises the question about the mechanisms through which risk-sharing can be achieved. Financial inclusion and financial stability have little significance for poor households however, in the absence of risk-sharing mechanisms with tangible and observable effects that provide the basis for shared prosperity. The risk-transfer relations that underlie the conventional financial system imply asymmetric exposures to economic risk, and do not therefore promote economic justice. Indeed as argued by Askari, Iqbal, Krichene and Mirakhor (2010), “the social and human costs of financial instability and financial crises, though impossible to quantify, might even dwarf the economic costs.” The reliance of households on debt, rather than equity, has implications for their leveraged balance-sheets. For poorer households in particular, the limited value of assets implies the absence of collateral and in turn the denial of access to bank credit. The lending experience from microfinance schemes based on the concept of joint liability suggests that these interest-based contracts do not constitute a viable form of financial inclusion. Indeed, the risks associated with economic downturns are not shared with financiers, and the social and human costs can be considerable.

Thus, the foundations of financial inclusion and prosperity sharing lie in risk sharing. The most likely to be financially excluded are the poor and residents of rural areas with limited bank penetration. It is imperative that financial inclusion promotes access to banking services as well as risk-sharing and risk-hedging financial instruments on a fair basis. Under equity-financing, the issue of creditworthiness does not apply with the same force as in the case of lending and debt-obligations. The government plays a central role in the conception and implementation of new strategies for financial inclusion based on equity. To provide the basis for prosperity sharing, it is imperative that governments promote a number of participatory initiatives and incentives toward investment based on risk sharing agreements, which include the following.

- a. The most important initiative is the investment in public education and awareness programs about the merits of equity participation schemes.
- b. The alignment of positive incentives for micro-savings schemes, and for reduced dependence on consumption loans and charity that tend to perpetuate hand-to-mouth consumption patterns.

- c. The issuance of GDP-indexed “bonds” in which income is not fixed *ex ante* but determined on the basis of future economic growth. This is an important issue that is intrinsically related to the central contradiction of capitalism. The issuance of growth-linked securities ensures indeed that the rate of return on capital does not persist above the growth rate of income and output.
- d. The implementation of measures against imperfect market conditions such as transactions costs, and asset indivisibility. This argument is against the preferential tax treatment of debt and about ensuring a level-playing field for equity-financing. It is also crucial that the economics of asset divisibility are taken into consideration. Theoretically, the ability to construct optimal investment portfolios under imperfect divisibility depends on the investor’s level of wealth. Financial inclusion should provide poorer households associated with higher degrees of risk aversion with investment opportunities into mutual funds, which allow for asset pooling and portfolio risk diversification. Albeit limited, the assets of poorer households can be optimally mobilized toward participatory investment opportunities based on risk-sharing rather than exploited under micro-finance models based on joint liability and risk transfer arrangements.
- e. The design of information-sharing systems for wider-access to macroeconomic and financial information on low-cost basis, ensuring affordability or free access to poorer households. Financial inclusion is not confined to access to financial services, it should include also access to timely and accurate information, which is essential to promote participation into equity markets on informed basis.
- f. The integration of inalienable endowments *waqf*-based microfinance into development schemes. In light of the mounting evidence about the adverse effects of micro-credit, it is imperative that new modes of equity-financing substitute for interest-based debt in development programs. Çizakça (2004), and Ahmed (2003 and 2007), *inter alia*, suggest that cash *waqf*, funds from other types of *awqāf* as well as charity *sadaqāt* can be used to finance productive micro-level enterprises in addition and in lieu of government finance.
- g. The promotion of Islamic insurance schemes for various income categories based on the concept of *takaful*. These forms of risk-hedging based on mutuality are essential to the optimal allocation of risk in the society based on the individual degrees of risk tolerance.
- h. The institution of development schemes based on equity partnership where potential profits from economic activities are shared with public-private

participants. It is the government that channels finance and other necessary resources into projects, such as land development, and poorer households in particular are given the opportunity to own, develop and cultivate land and share into future net income streams. This form of financial inclusion based on equity is conducive to poverty alleviation, and shared prosperity. A balanced approach to capital-labour resources promotes allocative efficiency without compromising upon the imperative of equity.

Thus, it is crucial that the institutional, regulatory and administrative structures promote the type of financial intermediation that allows for allocative efficiency and equity. These risk-sharing conditions are conducive to financial stability and economic growth, and therefore shared prosperity. The optimal allocation of risk in the society provides safety in numbers for risk-averse individuals. It may not be possible to assume higher risk-tolerance degrees for individuals with higher income, which describe conditions of diminishing absolute risk aversion. But, the optimal allocation of risk depends on the individual levels of risk tolerance. Thus there are different mechanisms for risk-sharing, including the *mudārabah* and *mushārah* financial instruments for equity partnership initiatives explained above. There are also, under Islamic finance, other redistributive institutions for risk-sharing such as obligatory levies of *zakāh*, and non-compulsory benevolent loans *qarḍ ḥasan* and charity *ṣadaqah*, and institutional endowment *waqf*. Finally, the inheritance levies constitute also a form of intergenerational redistribution of wealth and risks among the inheritors.

As noted above, this risk-sharing approach to financial inclusion can be more effective in reducing hand-to-mouth consumption, where poor households tend to consume all disposable income. These patterns result in high levels of correlation between income and consumption, leaving virtually no room for savings to be channeled toward investment. Financial inclusion should not be simply defined in terms of facilitating access to financial services, but it should be conducive to a larger pool of savers rather than borrowers. Robert Shiller (2011) argues that there is a need for the humanizing and democratizing of finance. Whereas democratizing finance means the extension of the principles of risk management to benefit all segments of the society, humanizing finance involves the use of various branches of cognitive science to improve “human-factors financial engineering.” Thus, financial innovation should benefit people at all income levels, providing insurance against systematic risks and idiosyncratic risks associated with the vicissitudes of earning a living, as argued also by Shiller (2003). The natural question remains as to whether the democratizing and humanizing process can be optimally achieved

under a financial system driven by debt and risk transfer or equity and risk-sharing. It is clear that a financial system that allows for greater financial inclusion based on risk-sharing and mutuality is conducive to financial stability, and shared economic prosperity.

5. Conclusion

There is, arguably, a “market failure” of the financial sector to meet the demand from different social groups, including poorer households, for financial instruments based on risk-sharing rather than risk-transfer. This market failure provides the economic rationale for government intervention. There is a significant role for the government to play in providing an enabling environment for financial inclusion. It is not just the lack of access to financial services that traps many segments of the society into poverty. The participation into economic growth and sharing of prosperity require equity-financing modes based on risk-sharing rather than consumer loans and microcredit schemes that perpetuate the cycle of hand-to-mouth consumption and indebtedness.

To ensure growth with equity, it is necessary that the definition of financial inclusion is broadened to include the financing of development programs based on equity partnership. There is undisputable evidence that debt and leveraged balance-sheets are conducive to financial instability. It is argued that the destabilizing force leading to the central contradiction of capitalism is the persistence of the private rate of return on capital above the growth rate of income and output. It is the predetermination of *ex ante* rates of interest irrespective of the realization of particular states of nature that is conducive to fixed rewards under asymmetric exposures to risk. These conditions contribute to income inequalities, which are inconsistent with the optimal allocation of resources and risk-return tradeoff. As no stream can rise above its source, rates of return on capital cannot be sustained above growth rates indefinitely.

Adam Smith’s vision of competitive economy, which is embodied in Arrow-Debreu-Hahn model of general equilibrium, is based rather on risk sharing. Since the mobilization of resources is driven by forward-looking expectations, it is risk-sharing finance that is more congruent with the riskiness of economic activities under uncertainty. Financial systems laid on the foundations of credit and risk transfer have the procyclical propensity to generate financial crises with the deepest economic scars for poorer households. Mechanisms for risk transfer cannot provide viable solutions for sharing prosperity. It may be thus argued that risk-sharing, as the defining principle of Islamic finance, is not just the catalyst of

economic growth, it is the essential mechanism for sharing prosperity, and sustainable economic development.

Further research may shed light on the risks of financial exclusion. The lessons from the microcredit models need to be learned and persistence-in-errors as well as path-dependencies should be avoided. As rightly argued by Aksari, Iqbal, Krichene and Mirkahor (2010), it is time to revamp the financial system to rely on equity. The economic rationale behind equity-financing is that in order to share prosperity, economic risks should be shared as well. The allocation of risk commensurate to the idiosyncratic abilities to bear losses is arguably more conducive to a socially inclusive financial system. Systematic risk cannot be eliminated, but it is collective risk taking and individual risk aversion that promote a more efficient mobilization of resources, and more equitable sharing of economic risks. Economic prosperity should be pursued through risk-sharing rather than at the expense of others.

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