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PROFIT AND LOSS SHARING RATIOS
A HOLISTIC APPROACH TO CORPORATE FINANCE

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This paper considers the possibility of a holistic approach to designing the capital structure for new companies through the use of profit and loss sharing ratios alone. The scheme is presented in bare essentials stripping any details of agency theory and economic arguments that may be cited in support. The objective is to invite criticism from fiqhi as well as other perspectives so that the potential for abandoning or further refinement of the proposal can be considered.

Introduction

Based on justice / welfare implications, Islam approves certain forms of financial contracting and prohibits others. Amongst the prevailing forms, profit and loss sharing arrangements on the pattern of equity contracts come closest to the Islamic ethos whilst pre determined fixed interest debt is considered as unjust and a taboo. Apart from profit and loss sharing arrangements, there is also a spectrum of other instruments that resonate with the spirit of *shari'a* and could cater for a variety of investor risk preferences and entrepreneur financing requirements. However, a need is always felt to synthesise more instruments to broaden and deepen financial intermediation and investment prospects. Below, a broad concept is floated to examine if the capital structure of a new corporate entity can be designed purely on the basis of profit and loss sharing ratios. Borrowing from the modern theory of corporate finance, the scheme makes use of residual rights, bankruptcy threat, signalling, and dilution prospects to expect that economic efficiency will obtain. *Shari'a* compatibility is expected to be achieved through making the bargaining process, as far as possible, linked with differential rights in residual assets. However, details of building supporting arguments are deferred until such time that a broad feedback as to the *shari'a* compatibility of the basic proposal is obtained.

System Constraints

The macroeconomic management that exists today is a far cry from the environment of some 1500 years ago when Islam was vouchsafed through the Prophet Muhammad (peace be upon him). To the Prophet, fluctuations in commodity prices were the result of natural processes and it was inappropriate for government to intervene (to fix prices) as it inevitably involved injustice. In parallel, any deliberate steps that were undertaken by market participants to obviate the free flow of demand and supply signals (such as hoarding) were condemned from an ethical perspective. Central monetary and fiscal arrangements were non-existent in the sense that we know of today. Thus, the present environment wherein fiscal, monetary, and legal infrastructure bears extensively on market processes hardly provides a semblance to the early days of Islam.

Consider the role of money and credit in the modern economy. Unravelling its impact on prices and output has attracted some of the finest brains for the past some two and a half centuries but the debate is still on. The conclusion at this stage is that monetary processes have a good deal of impact on prices in the long run but perhaps imprecise impact on output except in extreme cases. Whilst one wonders if a prophet was amongst us what he had to say on this aspect of government intervention in the economy that affects prices, the fact remains that decisions have to be made and for Muslims as far as possible, in accordance with the precepts of Islam.

One corollary that may be drawn from the above discussion is that based on Islamic justice, holders of idle money balances (savers) are not entitled to any compensation for inflation that results from natural processes (interactions of technology, productivity, population growth, and environmental factors such as weather etc). However, a question may be raised if justice is compromised by not compensating them to the extent the level of rise in general prices is induced by money expansion? Leaving this question for experts in economics and *shari'a* to resolve, professionals in finance can speculate at least one implication. Within the prevailing economic management mechanisms, investors, in particular those with conservative risk preferences, will expect to be compensated for that portion of depreciation in their purchasing power that owes to money expansion. Given lags in monetary phenomenon and their impact on general price level, as well as complexity involved in separating inflation due to monetary processes from that due to natural processes, some kind of proxy expectation has to be figured out.

Some may like to call the above mentioned proxy or minimal required rate as risk-free rate; others a back door way of introducing fixed rate obligations within Islamic finance. The latter argument is contested on two grounds. First, what is being discussed here is 'expectation' not 'entitlement'. Expectations are a natural result of the broader system parameters that influence human behaviour. Given that the prevailing monetary, fiscal, legal, tax, and supervisory regimes take interest based structure for granted, rather encourage and support such arrangements through various incentives (for example, interest is expensed), if one were to work within the system, focus on a benchmark expectation is natural. Second, focus on 'expectation' is not a 'justification' for entitlement. From the perspective of Islamic justice, many interim steps would need to be argued to tread on that path. In particular if money induced price changes affect on the one hand, all goods and asset prices and on the other hand all sections of the society proportionately in the same way, why should idle money balance holders alone out of all other classes of asset holders be entitled to a 'risk-free' rate without participating in the risks of the productive processes that generate return. After all, investors in all other asset classes bear the risk that the return on their investments could fall below an assumed risk free rate or even below zero. This boils down back to the argument that 'entitlement' to return as distinct from 'expectation' has to be earned through sharing in the risks of a project, insofar as Islam is concerned, even within fiduciary money economy[1] .

Coming back to the importance of expectations about a benchmark rate in the present system, it is proposed that the net impact of natural processes of diffusion of technology, productivity enhancement, and population growth is expected to spread over comparatively longer time cycles than of monetary policy. The rationale employed here is that some of the long-term factors mentioned before work against each other (automatic stabilisers). An argument can be made that monetary policy is in reality focused on these natural factors.

However, practitioners in finance observe extended periods of 'irrational exuberance[2] ' of asset price bubbles followed by recessions. In particular, there is usually a significant wedge between goods price inflation and asset price inflation due to some credit being diverted for pure speculation in securities markets. Thus, the claim that natural processes that may affect intrinsic demand for money work over longer cycles than monetary policy cycles stands. The implications are that insofar as investors, focus shifts from natural trends that are inseparable from our living and being toward artificial trends created by monetary policy.

From the above intuitions derived from general observation, one implication for security design could be that in an economy where prices reflect only the interaction of natural processes that are spread over longer term time horizon, investor 'expectations' are formed differently than in an economy wherein the prime focus of investors is on implications for asset prices of day to day actions of monetary authorities. In particular, it may be argued that in the case of the former, benchmark yield curve may be expected to be pretty flat over different maturity buckets up to medium term horizons whilst in the case of the latter a rising yield curve under ordinary circumstances will be a norm reflecting increasing uncertainty over time on money induced changes in prices. This argument receives sympathy from the fact that repeated surveys of professional economic forecasters indicate failure to forecast interest rates and prices with accuracy beyond one year time horizons.

A stricter interpretation of the Islamic prohibition of usury in light of the pre-Islamic Christian practice would entail prohibition of linking return with time. As argued previously, this would be possible only if money induced changes in prices could somehow be immunised and changes in prices reflect natural processes alone. In this case, strong link between return and maturity spectrum could presumably weaken. Within the ambit of the present system, a disregard for demand of different return over different time horizons is inherently incompatible with the way return expectations are formed. In case of financing through profit and loss sharing mechanisms, 'offering' different rates for different time horizons in a manner fixed income securities obtain it, is incompatible with the Islamic ethos. To summarise, the proposal presented below is based on the following premises: -

- The prevalent economic system focuses investor's return expectations in relation to fixed interest benchmark rates for different maturity government debt or inter-bank lending and borrowing rates.
- Profit and Loss sharing vehicles offer limited potential for segregation into different risk-return parcelsgiven the same asset pool / going concern underlying all parcels. Also resolution of agency issues is costly that makes debt optimal vis a vis equity under some circumstances

Problem Formulation & Proposal

Can a method be designed to segregate equity into parcels / tranches of different risk-return profiles in an Islamically acceptable way given the constraints mentioned in the previous section?

A simple way could be to issue different tranches of equity parcels A,B,C that provide different levels of residual control (tied to certain stipulated events) on company assets. Thus, tranche A provides control on plant and equipment, whilst tranche B on land, buildings and stock, and tranche C is like ordinary shares providing a residual control in general on company assets. Given such arrangement changes the risk of different tranches it provides a way to attach different sharing ratios and controlling rights on each parcel suiting different investors.

1. If the idea is *shari'a* compatible, then let tranche A promise 25% share in company earnings, tranche B 35%, and tranche C 40%. Say the estimated rate of return for the whole company is 30% pa. This means holders of A are expecting 7.5% pa and C 10% pa return.

2. Let us now introduce slight complexity. Let us suppose one year murabaha / JIBOR (whatever) yields 6%, 2 year 6.5%, and 3 year 7%. If we are targeting investors with 2-year investment horizon, we may adopt tranche A to their needs.

3. A sharing ratio of 25% pa defines ceiling on return on tranche A. Expected return on this tranche is 7.5%. A concept of targeted (expected not guaranteed) rate of return may be introduced here (say 7%) which is the indicative rate of return that the company management is targeting to deliver on parcel A. Again, parcel A gives holders right to share in profit and loss at a ratio of 25% for two years with residual rights of ownership on specific assets in case its holders do not agree with the valuation (as a going concern of the company) on the basis of which their stake (in principal / face value) of shares is redeemed at stipulated maturity and providing further that such disagreement can be triggered only if the then valuation entitles them below par. Note that the target rate is the rate announced and advertised as an objective to be pursued but not a commitment.

In the above arrangement, residual right of different classes of shareholders on different assets of the company can be combined with different control rights by agreeing upon assuming, diluting, or relinquishing full rights as that of ordinary shareholders depending on states of nature linked to redemption at the end of the stipulated period. Thus, if a targeted two-year share A facility cannot be redeemed at par at stipulated maturity, this gives rights to its holders to assume fully-fledged control rights like ordinary shareholders. This threatens ordinary share holders a dilution in control, an incentive to redeem A at par. An associated possibility is giving shareholders A the right to seek bankruptcy on 'disagreement' and avail title on pre-specified assets in case there shares are not redeemed at par. Thus, one choice triggers dilution, other bankruptcy, putting pressure on holders of C to remain 'honest' and make economically efficient decisions. If holders of C value combined economic benefit of control plus residual net worth more than the alternative possibilities (dilution or bankruptcy) they will be willing to redeem / refinance A. In a religious sense, C are purchasing residual right on specific assets from A at a given price. One expects a mutually beneficial bargain between A and C and face value redemption under ordinary circumstances although below par redemption is not ruled out contingent upon company performance and prospects.

Legally acceptable bankruptcy triggers described above need to be refined further and tied to different contingent events to facilitate balanced and efficient resolution of conflict between Class A and Class C shareholders through bargaining.

Redemption, of course, is not the only possibility. For a well managed company, refinancing is always an alternative. In this context, an option can be granted to class A share holders to elect at the end of two years, for redemption or re-financing on same or different terms. Call option for company management to redeem class A or class B at a given price after a certain stated period (anticipating better cashflows or re-financing possibilities etc.) may also be included.

1. In the above arrangements, from a religious perspective, returns are expressed in terms of sharing ratios and realised returns are tied to the actual; at redemption a genuine buying and selling of valid property rights is occurring at mutually acceptable prices.

2. All income will flow first into a trust and distributed from there. As an option, trustees (may or may not) have the right to accumulate the (voluntarily agreed (*hiba*)) cut between the targeted and the ceiling rates on various tranches to smooth out flows. There is re-investment risk but company may / may not have the priority right to re-invest within, depending on its product portfolio life cycle.

3. In an economic sense, return offered has a direct connection and link with that realised through ceiling determined by the PLS ratio. The incentive structure is so designed that if company as a going concern offers actual rates way below targeted on shorter term class A shares, it will face higher re-financing rates in future (an issue of credibility). Investors get security because of residual right on certain assets that will be triggered if the company goes bankrupt (or company as a going concern is unable to pay face value on pre-stated maturity).

4. Variations of the above scheme are possible. A United States CMO (Collateralised Mortgage Obligation) like offshoot is possible for securitising housing loans issued in an Islamic manner. Given cashflows and rates are more or less certain, even though contractual obligations are different, US mortgage models can be adapted extensively. This can be done by securing a voluntary agreement from A that if return over projected horizon of 2 year crosses say 6.5% pa, the balance will be applied to redeem the face value of shares A on issue. An agreement can also be secured from tranche B holders (say expected horizon 5 years) and tranche C holders (say ultimate stake holders) that if the annual rate matches certain pre-defined targeted rate within that year, they will voluntary pass the surplus (trustee to smooth out flows) to redeem class A shares. For housing loan securitisation, all pre- and repayments of principal can be applied first to redeem tranche A, then B, then C. Once Class A are redeemed, Class B can be redeemed similarly. Such securitisation will help broaden and deepen investment and financing possibilities.

5. Given appropriate design, short-term (6 months to a year) company CDs may be possible based on PLS right (for a particular period) and linked to assets marked for this purpose (control contingent on non-payment of face at redemption).

6. If assessed as *shari'a* compatible, there is a potential to integrate the concept into a 'holistic approach to capital structure' in a *shari'a* compatible manner. Of course, a way has to be find out to bridge prevailing financing patterns with the proposed. But that is to explore potential rather than the '*shari'a* compatibility. At the concept stage, it is the latter that is more important.

Notes:

[1] There is an alternative possibility (no judgements implied here) that repetitive execution of monetary transmission mechanism through existing institutions and security instruments affects different sections of the society differently. In particular, there is need to examine if the prevailing infrastructure increases the gap between 'haves' and 'have nots' given differential capacities of two groups (if not willingness) to 'leverage' and 'de-leverage' at different stages of the monetary cycle. Also, the two groups hold different asset classes and the prevailing monetary methods may be benefiting some vis a vis other. These issues need to be taken into account to provide a comprehensive Islamic perspective on the issue.

[2] A famous phrase floated by Dr Alan Greenspan, Chairman of the US Federal Reserve Board, some years back.