# SHARED RISK & REWARD

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**Reading List**

Insurers can end sukuk compliance woes, experts say (Reuters)

"Principal-Agent Issues in Takaful" (Chapter 7) in *Takaful & Mutual Insurance* (Scribd)

**Blog Posts This Week**

Are bank mudaraba financing contracts more or less aggresively structured than sukuk?

Islamic finance development and the competition with conventional banking

Qatar to build a large solar plant, and Islamic finance should be involved in the financing

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## Takaful for sukuk? I hope not.

Several years ago, the idea of takaful for sukuk was considered, but as far as I know the discussion never moved forwards towards implementation and I think this is a good thing. The development of takaful coverage for sukuk (insurance against sukuk default) introduces a tail risk to Islamic finance that doesn't exist today, and would be increased by the incentive structure of takaful operators.

A principal-agent problem is created where the takaful operator is paid a fee based on the volume of premiums paid, but where the takaful participants bear the risk of loss in the investments made with the premium income, as well as facing loss if the premiums are insufficient to meet all claims (see Chapter 7 of this book).

There are well established actuarial formulas for providing family takaful (life insurance), auto and health takaful, but it would be much more difficult for a takaful provider to accurately price a sukuk takaful, and they would be incentivized to underprice it to attract more business. In addition to this potential problem, there is the challenge in accurately assessing the probability of tail events that would lead losses on the insured sukuk to become highly correlated with one another, and inversely correlated with the value of the invested assets in the takaful pool.

To explain further, consider a takaful pool that is formed to insure 10 sukuk, issued by a variety of GCC corporates from different countries and different industries. The takaful operator will price the premiums based on expected default rates for the different sukuk. This will be difficult on its own because there have been few defaults in sukuk. But, assume that the takaful operator can find a large enough pool of both bonds and sukuk to assign a probability of default for each, as well as the recovery value if each one defaults within a defined time frame.

The premiums will be collected based on this calculation (which, again, may be underpriced since there will be an incentive for the takaful operator to underprice the default risks or overstate the likely recovery in the the case of default in order to attract more issuers). The takaful provider will invest the premiums in sukuk, equities, real estate, and structured products, in a way to meet its expected needs for any defaults.

What happens in a traditional takaful provider if a tail event, like a global financial crisis happens? The value of the assets in the takaful pool will probably decline in value and there might be a shortfall in the assets of the takaful pool to meet claims. Typically, takaful operators would respond in this case by providing a qard loan from the operator's capital to the takaful pool to cover the shortfall, and when things recover, any future surpluses go to repaying the qard from the takaful operator.

The decline in the value of the assets of the takaful pool led to a temporary shortfall. There will not be an effect on the number of claims from takaful providers since

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mortality rates are not highly—if at all—correlated with financial market performance. Therefore, so long as the takaful operator is adequately capitalized, it can withstand the impact and move on.

In a sukuk takaful arrangement, this will not be true. The takaful operator, in normal times, will be able to identify enough Shari'ah-compliant assets that are uncorrelated with the likelihood of the issuers defaulting to make management of the takaful pool work, where the investments are made to provide high enough returns to withstand the expected rate of defaults. There may be temporary shortfall if the takaful coverage was drawn on, which can be met with a qard loan from the takaful operator.

But, what happens if there is another global financial crisis? Unlike family takaful where claims are based on factors independent of the value of the assets in the takaful pool (so decline in value of the assets can be met with qard loans from the operator), the claims on a sukuk takaful pool would be inversely correlated with the value of the assets in the takaful pool.

As the effects of the financial market crisis spread, the assets decline in value at the same time as the probability of default by the sukuk issuers rises because, for example, the financial crisis has led to a recession and an inability of the issuers to refinance their sukuk when they come due, or an inability to receive working capital financing as banks avoid taking any additional risks.

Furthermore, a new risk emerges which will have an endogenous effect on the likelihood of it occuring: sukuk investors become concerned that the takaful pool will have sufficient assets to meet the claims, and become concerned about the takaful operator's ability to provide a qard loan to meet claims. A rational response by sukuk holders to this risk would be to sell the sukuk, driving down their price and driving up their yield, which will make the issuers more likely to have difficulty refinancing their sukuk (and thus increasing the probability of default).

And this type of tail risk has occurred in the conventional market. Remember AIG, the global insurer that nearly collapsed because its liabilities swelled as the historical correlation between the assets it insured (bonds insured through CDS) broke down? There is not necessarily anything unique within takaful or sukuk that would prevent a reoccurrence of a tail event leading to significant declines in the value of the takaful pool's assets at the same time as the correlation between the insured sukuk rises and default rates jump exceed historical averages.

As a result, I think it is better if the idea of takaful for sukuk (would that be called sukuk insurance, or Islamic CDS?) remained an idea considered and rejected as impractical and overly risky.

Until next week,
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