


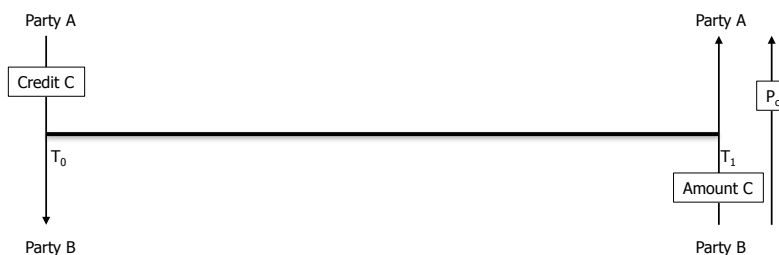
	<h1>Innovation & Financial Engineering in Islamic Finance (II)</h1>	
<p>Professor Humayon Dar CEO & Chairman Edbiz Consulting</p>		
<p><i>Presented at the</i> <i>Durham Islamic Finance Autumn School 2011 in Istanbul</i> <i>jointly organised by</i> <i>Durham Centre for Islamic Economics and Finance and ISAR-Istanbul Foundation for</i> <i>Research and Education;</i> <i>Istanbul Commerce University, Istanbul</i></p>		
 <p>19th-22nd September 2011</p>		

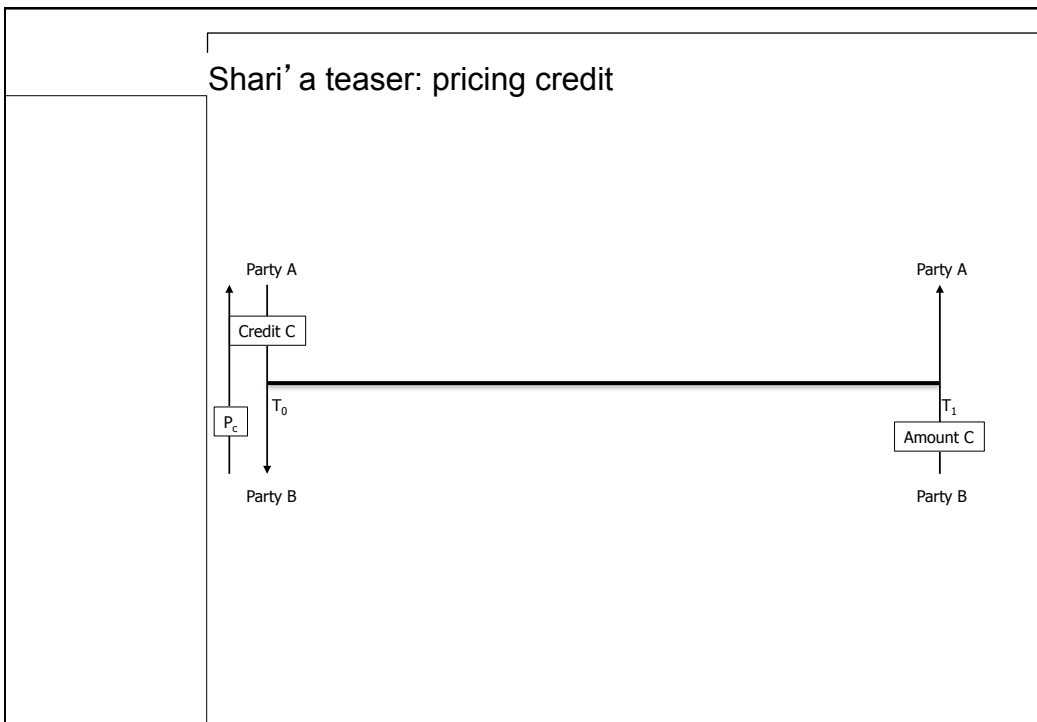
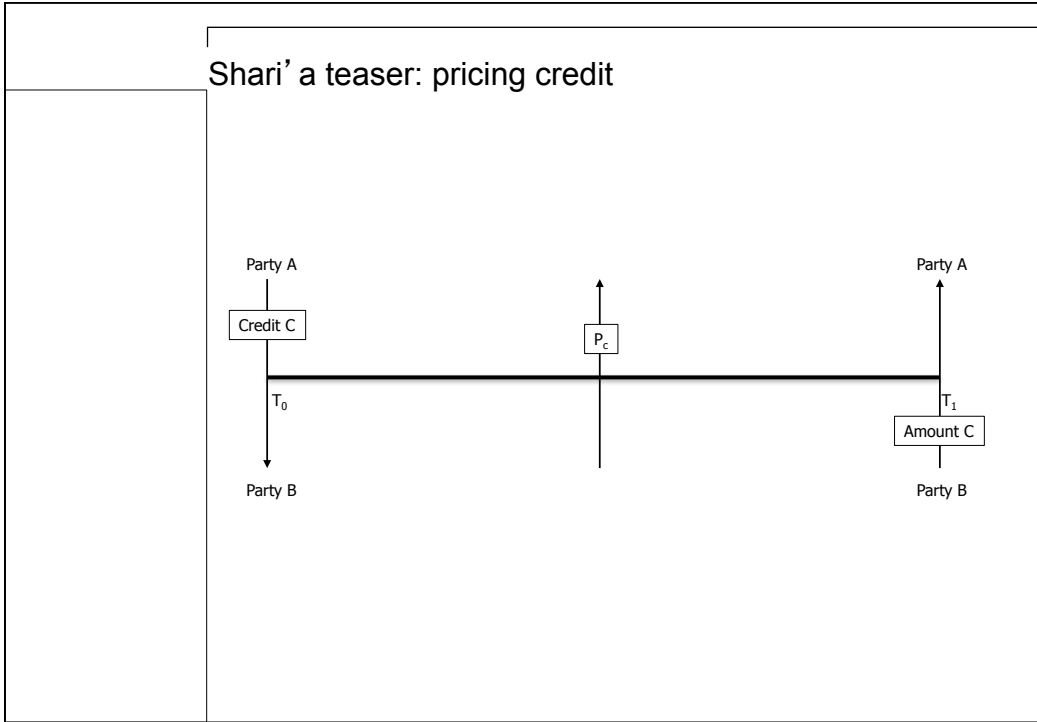
	<h2>Introduction</h2>
	<ul style="list-style-type: none">■ ScottishPower introduced a rebate scheme last year to their customers overpaying through Direct Debit: “ScottishPower will give consumers an extra £1 for every £33 they are in credit on their bills” Read more on: http://www.thescottishsun.co.uk/scotsol/homepage/news/article2348632.ece#ixzz0tA1pzRvX■ Is it shari’a compliant?■ Can this be made shari’ a compliant?■ Should we make it shari’ a compliant after all?

Shari' a teaser

- What is the prohibited riba?
- If a party A offers credit C to another party B at time T_0 and charges a price P_c for extending the credit (whether upfront, during or at the end of the period T_1), the price of the credit, P_c , ought to be the prohibited riba

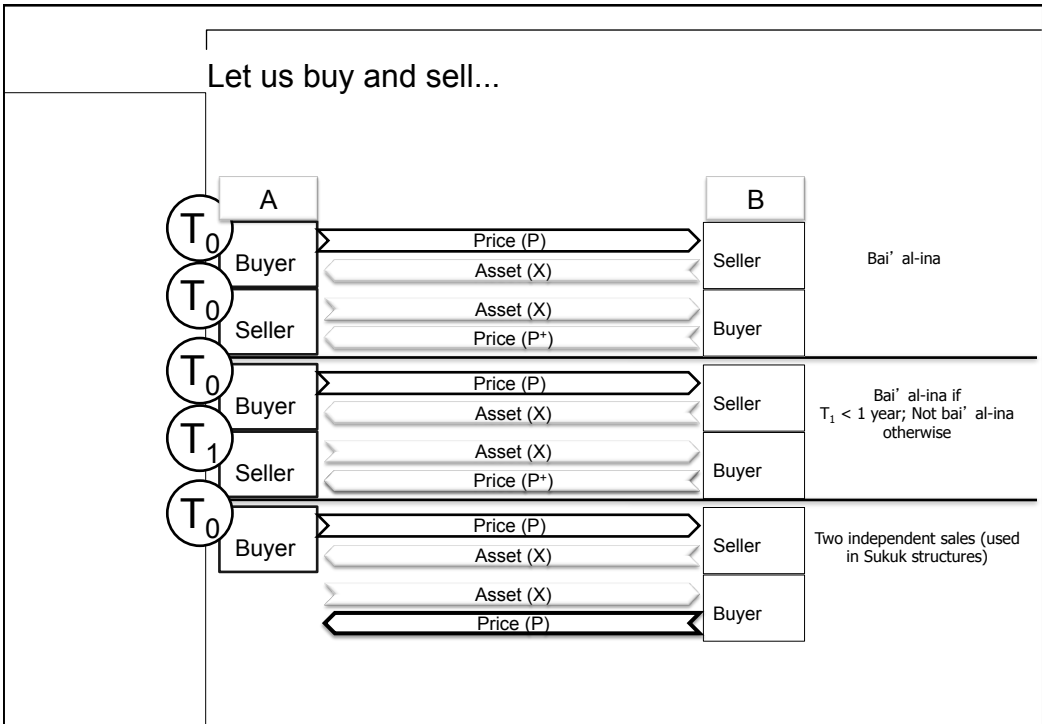
Shari' a teaser: pricing credit





Shari' a teaser continues

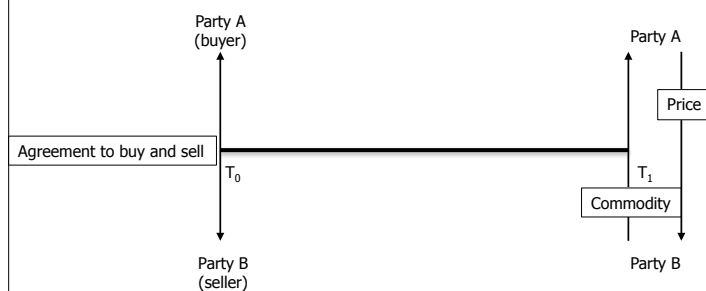
- Can this be made shari' a compliant?
- Should we make it shari' a compliant after all?
 - Make P_c as a voluntary payment on part of Party B (at the end)
 - Make P_c as an "arrangement fee" (to be paid upfront)
 - A must sell something to B other than credit for a price



Let us look at some more exotic structures...

- What do you think of a forward sale contract?
- Do you think futures contracts should be allowed in Islam?
- How about options?

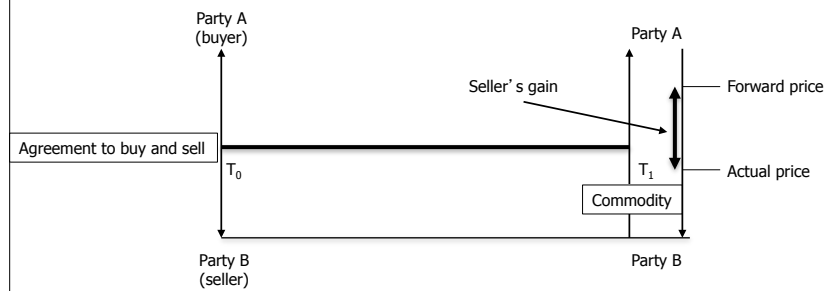
Shari' a issues in forward contracts

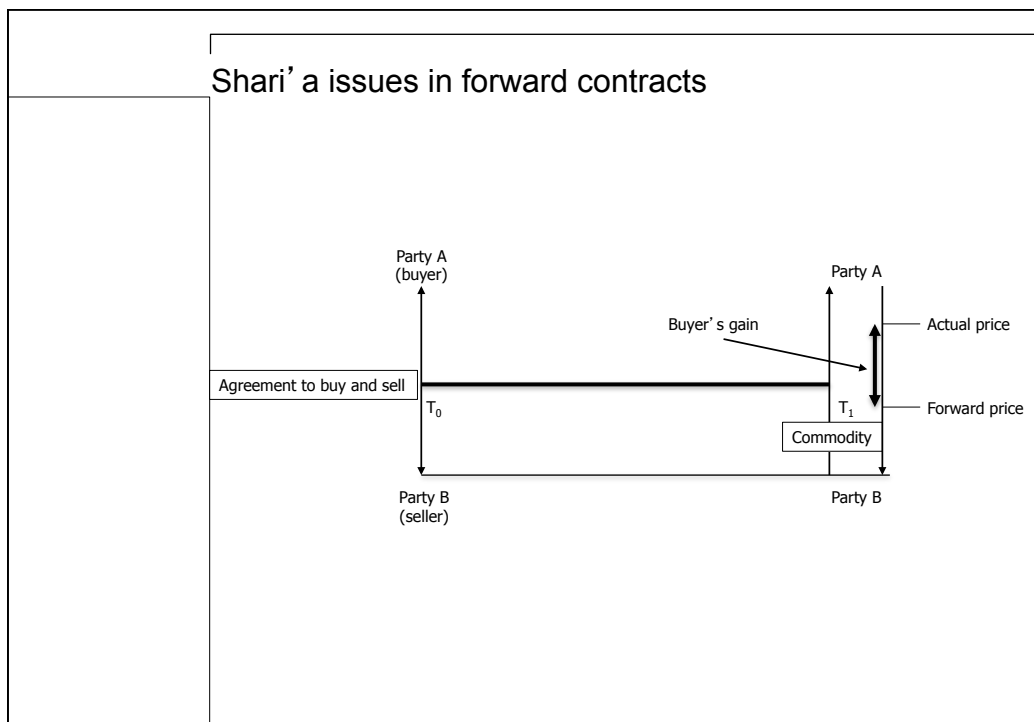


Shari'a issues in forward contracts

- What's wrong with it?
 - Is there any incidence of riba?
 - Is there any gharar involved?
 - Or is it pure gambling?

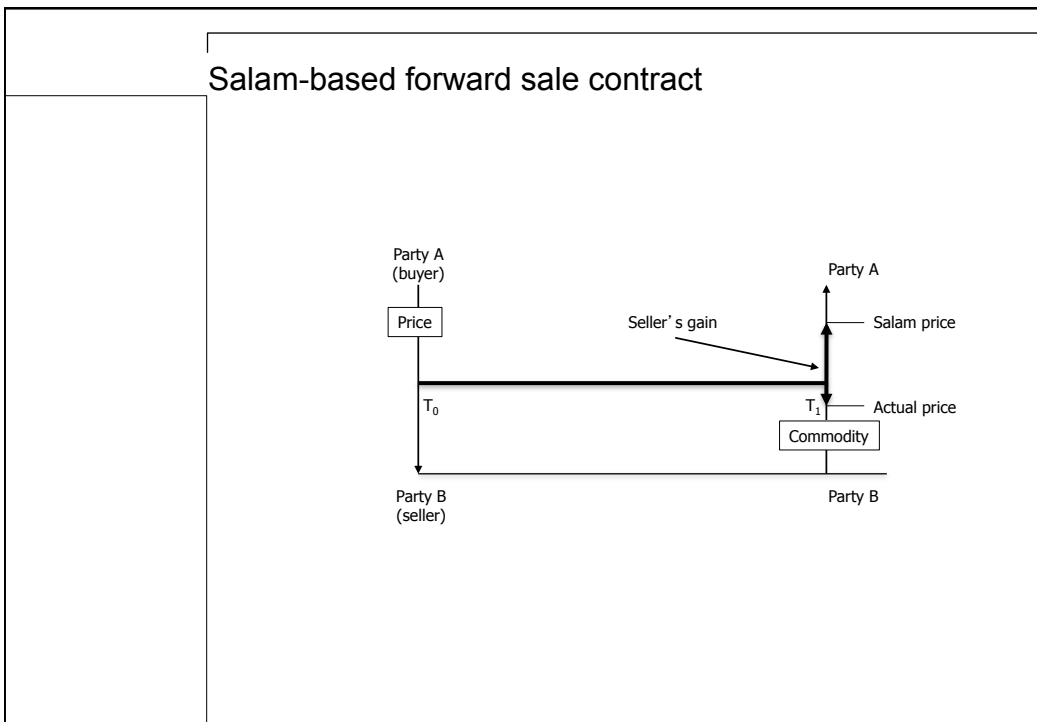
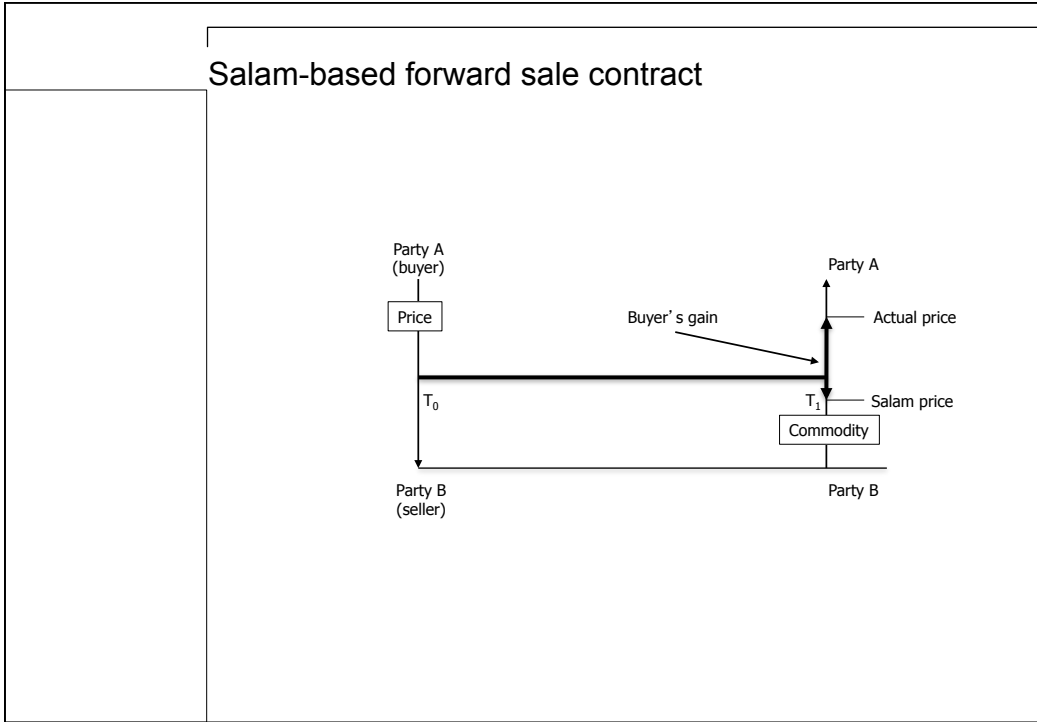
Shari'a issues in forward contracts





Shari'a issues in forward contracts

- Is it unlawful (shari'a repugnant) gain?
- Why?
- Let us look at Salam



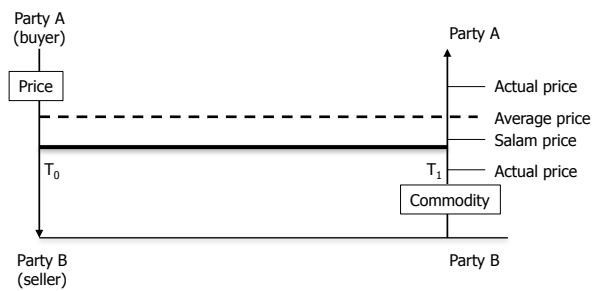
Shari'a issues in forward contracts

- How is the salam price determined in practice?

$$P_s = E(P_1) - d$$
$$P_s = \text{Average}(P_0, P_1) - d$$

- Is it exploitative?

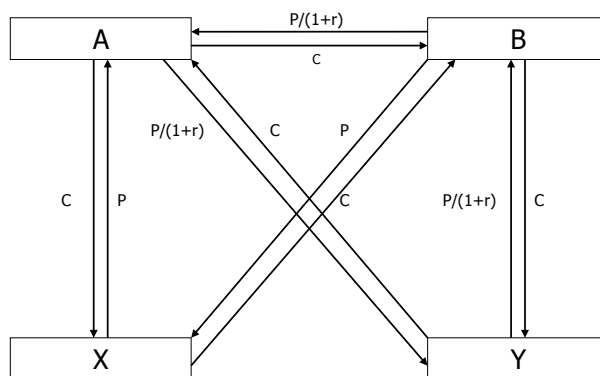
Salam-based forward sale contract



Salam-based forward contract

- How about the liquidity benefit?

Salam-based forward contract



Red donates immediate; Black implies deferred

Futures contracts

- Marked to market forward contracts
- Less gharar as compared to conventional forward contracts

Options

- Call option isn't a problem – arbun contract
- Put options?

Innovation in investment products: derivative structures

- Innovative use of “promises” allows the institutions offering Islamic products to offer Sharia-compliant products with risk-return profile equivalent to the conventional products.

Promises

- Promises are quasi-contracts – binding on just one party: the promisor
- Sharia issues around promises
 - Distinction between a ‘promise’ and a ‘contract’
 - A ‘promise,’ in general is not binding and, hence, unenforceable in a court of law; a contract is binding and enforceable
 - A ‘promise,’ being unenforceable, does not have an economic value
 - It has an economic value only if it is binding
 - Can we write binding ‘promises’ ?
 - Yes... conditional upon the OIC Fiqh Academy’ s resolution

Promises

- The OIC Fiqh Academy allows writing binding promises
 - The promise must be unilateral
 - It must have caused the promisee to incur some costs/liabilities
 - If the promise is to purchase something, the actual sale must take place at the appointed time by the exchange of offer and acceptance. Mere promise itself should not be taken as the concluded sale
 - If the promisor reneges on their promise, the court may force them either to purchase the commodity or pay actual damages to the seller. The actual damages will include the actual monetary loss suffered by the promisee, and must not include the opportunity cost

Promises (1)

- The issue of “unilateralism” in promises
- Case 1:
 - A unilaterally promises to buy a stock x from B at a future date t for a price p
 - Simultaneously, B unilaterally promises to sell a stock x to A at a future date t for a price p
 - The two promises together are in fact a bilateral promise, which in the eyes of Sharia is binding on both parties, and hence is a full contract

Promises (2)

■ Case 2:

- A unilaterally promises to buy a stock x from B at a future date t_1 for a price p
- Simultaneously, B unilaterally promises to sell a stock x to A at a future date t_2 for a price p
- The two promises together do not amount to a bilateral promise because they refer to different execution dates

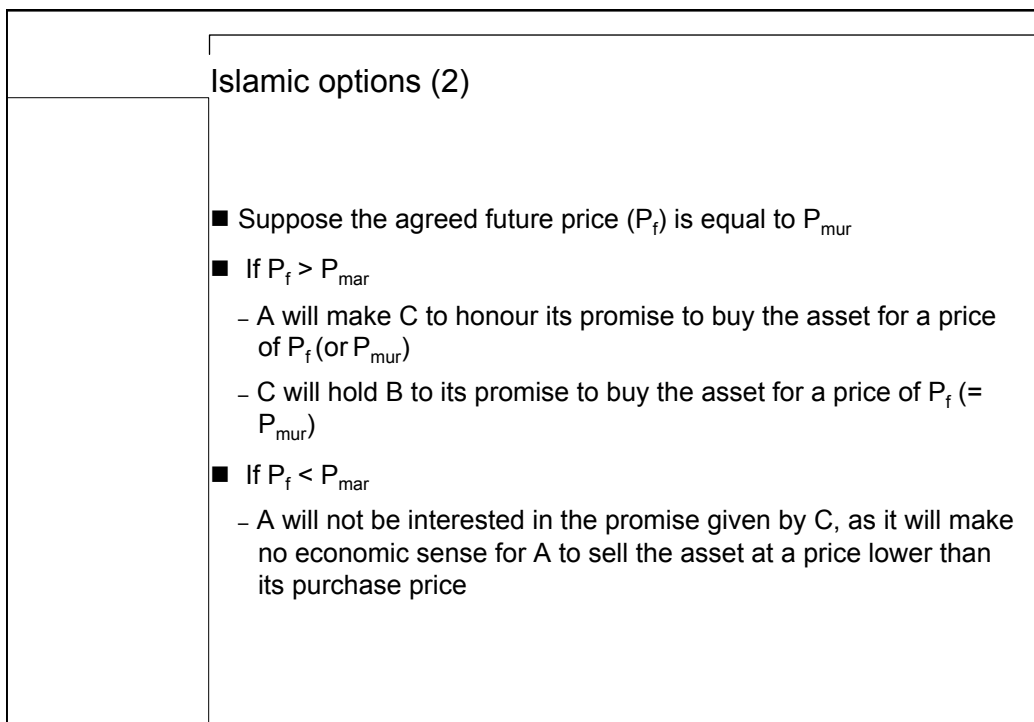
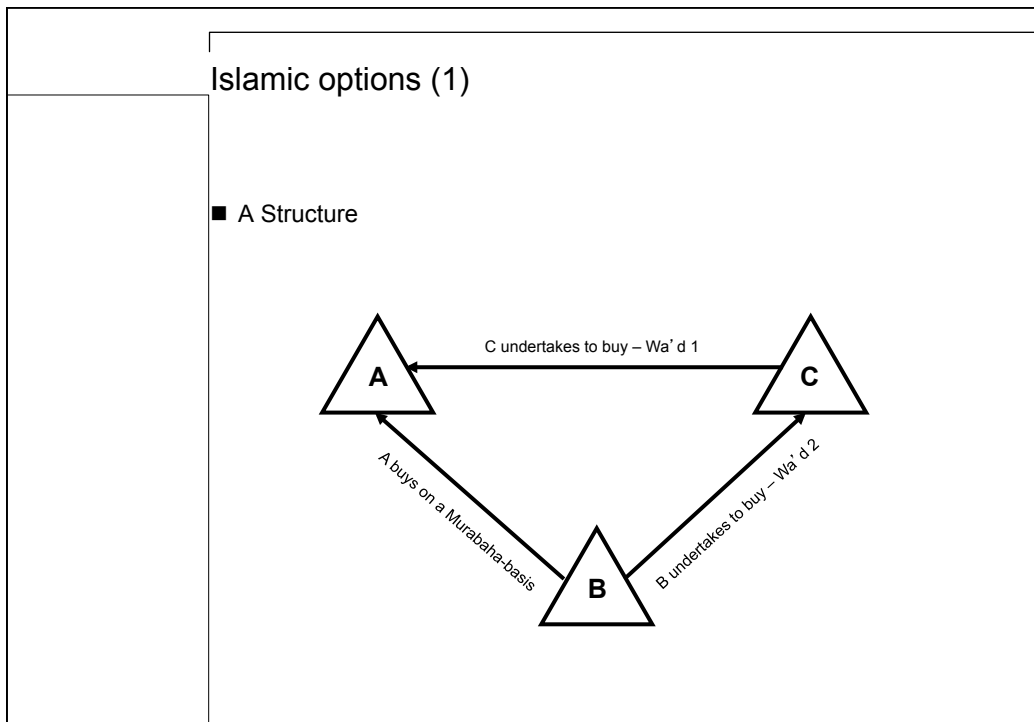
Promises (3)

■ Case 3:

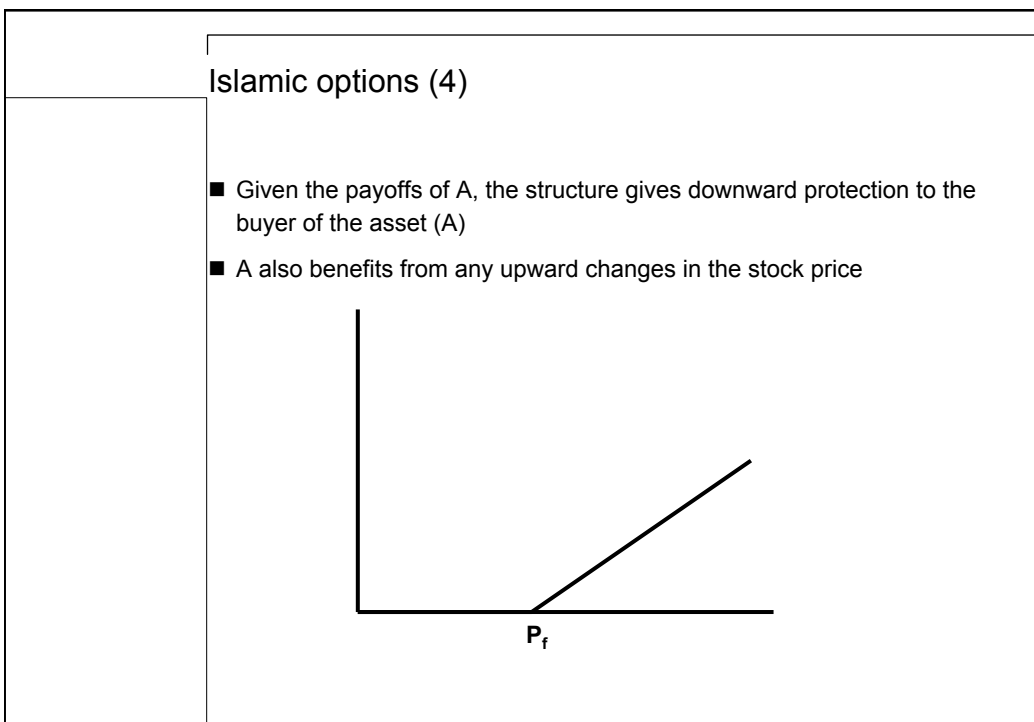
- A unilaterally promises to buy a stock x from B at a future date t for a price p_1
- Simultaneously, B unilaterally promises to sell a stock x to A at a future date t for a price p_2
- The two promises together do not amount to a bilateral promise because they refer to two different settlement prices

Promises (4)	
	<p>■ Case 4:</p> <ul style="list-style-type: none"> - A unilaterally promises to buy a stock x from B at a future date t for a price p - Simultaneously, B unilaterally promises to sell a stock y to A at a future date t for a price p - The two promises together do not amount to a bilateral promise because they refer to two different objects of sale

Promises (5)																																																							
	<table border="1"> <thead> <tr> <th>Promisor</th> <th>Promisee</th> <th>Object</th> <th>Execution date</th> <th>Price</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>B</td> <td>X</td> <td>T</td> <td>P</td> <td></td> </tr> <tr> <td>B</td> <td>A</td> <td>X</td> <td>T</td> <td>P</td> <td>Bilateral promise</td> </tr> <tr> <td>A</td> <td>B</td> <td>X</td> <td>T</td> <td>P₁</td> <td></td> </tr> <tr> <td>B</td> <td>A</td> <td>X</td> <td>T</td> <td>P₂</td> <td>Two unilateral promises</td> </tr> <tr> <td>A</td> <td>B</td> <td>X</td> <td>T₁</td> <td>P</td> <td></td> </tr> <tr> <td>B</td> <td>A</td> <td>X</td> <td>T₂</td> <td>P</td> <td>Two unilateral promises</td> </tr> <tr> <td>A</td> <td>B</td> <td>X</td> <td>T</td> <td>P</td> <td></td> </tr> <tr> <td>B</td> <td>A</td> <td>Y</td> <td>T</td> <td>P</td> <td>Two unilateral promises</td> </tr> </tbody> </table>	Promisor	Promisee	Object	Execution date	Price	Comments	A	B	X	T	P		B	A	X	T	P	Bilateral promise	A	B	X	T	P ₁		B	A	X	T	P ₂	Two unilateral promises	A	B	X	T ₁	P		B	A	X	T ₂	P	Two unilateral promises	A	B	X	T	P		B	A	Y	T	P	Two unilateral promises
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Islamic options (3)	
<ul style="list-style-type: none"> ■ Payoffs 	
When $P_f > P_{mar}$	When $P_f < P_{mar}$
A: $P_{mur} - P_{mur} = 0$	A: $P_{mar} - P_{mur} > 0$
B: $P_{mur} - P_{mur} = 0$	B: $P_{mur} > 0$
C: 0	C: 0



Islamic derivative contracts / products

- Islamic derivative products can be structured if
 - We can sell (stock) A for the price of (stock) B
 - For example, if we can sell a basket of stocks drawn from Dow Jones Islamic universe for the price of another basket of stocks
- Can we do that?
 - Is it permissible to sell oranges for the price of apples?
 - Certainly yes, but can we enter into binding arrangements for selling oranges for the price of apples at a future date without *precisely* knowing the price of apples at a future date?
 - No – owing to Gharar (uncertainty) in the future price
- However, promises can be used to structure some mechanisms, which allow us to do so

Islamic derivative contracts / products

- Suppose
 - A basket of stocks drawn from the Dow Jones Islamic universe is valued at 100 at time 0 = B_0
 - The price of another basket A at time 0 = A_0
 - The price of basket A at time 1 = A_1
 - The price of the Dow Jones basket at time 1 = P
- If
$$P = B_0 \left[1 + \left(\frac{A_1}{A_0} - 1 \right) \right]$$
- This allows us to price the Dow Jones Islamic basket in terms of the other basket A

Islamic derivative contracts / products

■ If

- $B_0 = 100$
- $A_0 = 100$
- $A_1 = 110$

- Then $P = B_0 \left[1 + \left(\frac{A_1}{A_0} - 1 \right) \right] = 100 \left[1 + \left(\frac{110}{100} - 1 \right) \right] = 110$

■ If

- $B_0 = 100$
- $A_0 = 100$
- $A_1 = 90$
- Then $P = 90$

Islamic derivative contracts / products

■ If

- A person x promises to buy the Dow Jones basket at date 1 for a price P if $P > B_1$ (the price of the DJ basket at future date 1)
- A person y promises to sell the Dow Jones basket at date 1 for a price P if $P < B_1$

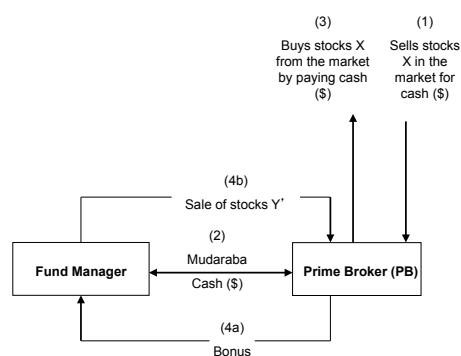
■ Then, the two parties will be selling / buying the DJ basket for a price of the basket A in future

■ This allows us to construct a number of Islamic derivative products allowing Islamic investors to have exposure to a number of asset classes that may not otherwise be available to Islamic investors

Islamic shorts (1)

- Salam can be used to construct Islamic shorts
- A fund manager asks a prime broker to sell some over-valued stocks in the market for the market price P_m
- The fund manager sells (on Salam basis) the stocks to the prime broker for the price P_m
 - The fund manager gets P_m now to deliver the stocks in future
 - In future the fund manager buys the stocks from the market for the then prevailing price (P_f) and delivers them to the prime broker
 - If $P_f < P_m$, the fund manager earns the difference
 - Otherwise, the fund manager loses $P_m - P_f$

Islamic shorts (2)



Sharia Conversion Technology – good or bad?

- Sukuk is an example of SCT
- The concern that it may lead to leakages of funds from the Islamic markets into conventional is not entirely genuine
- Actually, structured products based on SCT may help in diversification of benchmarking