Financial Mathematics

MATH 5870/6870[1]
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[1] Based on Robert L. McDonald's *Derivatives Markets*, 3rd Ed, Pearson, 2013.

Chapter 5. Financial Forwards and Futures

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§ 5.1 Alternative ways to buy a stock

§ 5.2 Prepaid forward contracts on stock

§ 5.3 Forward contracts on stock

§ 5.4 Futures contracts

§ 5.5 Problems

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Chapter 5. Financial Forwards and Futures

Four different payment and receipt timing combinations

1. Outright purchase: ordinary transaction
2. Fully leveraged purchase: investor borrows the full amount
3. Prepaid forward contract: pay today, receive the share later
4. Forward contract: agree on price now, pay/receive later

	Day 0	Day T	Payment
Outright purchase	pay+receive	—	S_0
Fully leveraged purchase	receive	pay	$S_0 e^{rT}$
Prepaid forward contract	pay	receive	?
Forward contract	—	pay+receive	$? \times e^{rT}$

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