



Risks and Rewards Application: Mall Exercise

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TWO SHAREHOLDERS

Part (a)

Assumptions

On 01/01/2009

- ABC Company is formed and issues common stock to two shareholders in exchange for cash: \$200 worth of stock to shareholder A and \$800 to shareholder B.
- ABC creates a balance sheet immediately after issuing these shares.

On 01/02/2009

- ABC acquires land that is next to a proposed shopping mall for \$1,000.
- ABC creates another balance sheet immediately thereafter.

On 12/28/2009

- ABC learns whether the mall has been approved.

On 12/30/2009

- ABC sells the land either for \$2,000 if the mall is approved or for \$500 if the mall is not approved.
- ABC creates a final balance sheet immediately after selling the land that recognizes the profit or loss it received from selling the land. ABC is located in a country where there are no taxes.

On 12/31/2009

- ABC distributes all of its cash to its shareholders.

Required

1. Complete the two right-most balance sheets at the top of the next page for ABC: 1/1/2009 (after financing) and 1/2/2009 (after purchasing the land).
2. Complete all rows of the table below the balance sheets on the next page: investments, payoffs, gains or losses, and % returns on investment under the two mall-approval scenarios. Ignore the “Expected” columns at this time.
3. Complete the two left-most balance sheets on the next page: 12/30/2009, (pre payoffs for the two scenarios, if mall approved or if mall not approved).
4. Assuming there is a 50% probability the mall will be approved, complete the “Expected” columns for table below the balance sheets on the next page: expected payoffs, gains or losses, and % returns for the two shareholders.

ABC Company Consolidated Balance Sheets

	12/30/2009, Pre Payoffs		1/2/2009	1/1/2009
	If Mall approved	If Mall not approved	After land purchased	After financing
Assets				
Cash and equivalents	_____	_____	_____	_____
PP&E	_____	_____	_____	_____
Total assets	=====	=====	=====	=====
Liabilities and stockholders' equity				
Debt	_____	_____	_____	_____
Stockholders' equity:				
Common stock	_____	_____	_____	_____
Retained earnings	_____	_____	_____	_____
Total stockholders' equity	=====	=====	=====	=====
Total liabilities and stockholders' equity	=====	=====	=====	=====

Investments, Payoffs, Gains/Losses, and Returns

	SHAREHOLDERS					
	A			B		
	Mall Approv	Mall Not Approv	Expected	Mall Approv	Mall Not Approv	Expected
Part (a)						
Investment			—			—
Probability	50%	50%	—	50%	50%	—
Payoff						
Gain/Loss						
% Return on investment						

ONE SHAREHOLDER & ONE BANK

Part (b)

Assumptions

The assumptions are the same as part (a) except:

- On 01/01/2009 ABC Company issues \$200 of common stock to shareholder A and \$800 of debt to First Bank (there is no shareholder B in this part). The bank expects to be repaid \$800 of principal and one year's interest at 10% per year on 12/31/2009.
- On 12/30/2009, ABC creates a final balance sheet immediately after selling the land that recognizes: (i) profit or loss ABC received from selling the land, (ii) interest, if any, that ABC plans to pay First Bank the next day (if it has enough cash to first pay off debt principal and then pay owed interest) and (iii) gain, if any, associated with decreasing the value of debt that ABC expects to repay (in the event that it does not expect to have enough cash the next day to repay debt principal.)

Required

1. Complete the two right-most balance sheets at the top of the next page for ABC: 1/1/2009 (after financing) and 1/2/2009 (after purchasing the land).
2. Complete all rows of the table below the balance sheets on the next page: investments, payoffs, gains or losses, and % returns on investment under the two mall-approval scenarios. Ignore the "Expected" columns at this time.
3. Complete the two left-most balance sheets on the next page: 12/30/2009, pre payoffs, for the two scenarios.
4. What has not changed in part (b) versus part (a)? What has changed? Why?
5. Assuming there is a 50% probability the mall will be approved, complete the "Expected" columns for table below the balance sheets on the next page: expected payoffs, gains or losses, and % returns for the two shareholders. Evaluate the bank credit analyst who approved the loan.
6. Determine the probability of approval needed for First Bank to expect to earn an 8% return on its investment.

ABC Company Consolidated Balance Sheets

	12/30/2009, Pre Payoffs		1/2/2009	1/1/2009
	If Mall approved	If Mall not approved	After land purchased	After financing
Assets				
Cash and equivalents	_____	_____	_____	_____
PP&E	_____	_____	_____	_____
Total assets	=====	=====	=====	=====
Liabilities and stockholders' equity				
Debt	_____	_____	_____	_____
Stockholders' equity:				
Common stock	_____	_____	_____	_____
Retained earnings	_____	_____	_____	_____
Total stockholders' equity	=====	=====	=====	=====
Total liabilities and stockholders' equity	=====	=====	=====	=====

Investments, Payoffs, Gains/Losses, and Returns

	Bank			SHAREHOLDERS		
	First			A		
	Mall Approv	Mall Not Approv	Expected	Mall Approv	Mall Not Approv	Expected
Part (b)						
Investment			—			—
Probability	50%	50%	—	50%	50%	—
Payoff						
Gain/Loss						
% Return on investment						

ONE SHAREHOLDER & TWO BANKS

Part (c)

Assumptions

The assumptions are the same as part (a) except:

- On 01/01/2009 ABC Company issues \$200 of common stock to shareholder A, \$800 of debt to First Bank, and \$1,000 of debt to Second Bank. First Bank expects to be repaid \$800 of principal and one year's interest at 10% per year on 12/31/2009. Second Bank's debt is subordinate to First Bank's debt, meaning that First Bank is paid first in the event there is not enough cash to pay both banks. Second Bank expects to be repaid \$1,000 of principal and one year's interest at 15% per year on 12/31/2009.
- ABC acquires two land parcels (rather than one) next to the proposed mall that are identical to the one purchased in part (a) in all respects.
- On 12/30/2009, ABC creates a final balance sheet immediately after selling both land parcels that recognizes profit or loss (following the guidelines discussed in part (b)).

Required

1. Complete the two right-most balance sheets at the top of the next page for ABC: 1/1/2009 (after financing) and 1/2/2009 (after purchasing the land).
2. Complete all rows of the table below the balance sheets on the next page: investments, payoffs, and gains or losses.
3. Complete the two left-most balance sheets on the next page: 12/30/2009, pre payoffs, for the two scenarios.
4. What has not changed in part (c)? What has changed? Why?

ABC Company Consolidated Balance Sheets

	12/30/2009, Pre Payoffs		1/2/2009	1/1/2009
	If Mall approved	If Mall not approved	After land purchased	After financing
Assets				
Cash and equivalents	_____	_____	_____	_____
PP&E	_____	_____	_____	_____
Total assets	=====	=====	=====	=====
Liabilities and stockholders' equity				
Debt	_____	_____	_____	_____
Stockholders' equity:				
Common stock	_____	_____	_____	_____
Retained earnings	_____	_____	_____	_____
Total stockholders' equity	_____	_____	_____	_____
Total liabilities and stockholders' equity	=====	=====	=====	=====

Investments, Payoffs and Gains/Losses

	BANKS				SHAREHOLDERS	
	First		Second		A	
	Mall Approv	Mall Not Approv	Mall Approv	Mall Not Approv	Mall Approv	Mall Not Approv
Part (c)						
Investment						
Payoff						
Gain/Loss						