

	Before Recap (All Equity)	Before Recap (W/Tax)
WACC	8.00%	8.00%
Revenue	\$1,500.00	\$1,500.00
Operating Exp	\$1,375.00	\$1,375.00
Interest	\$0.00	\$0.00
Tax	\$0.00	\$25.00
Net Income	\$125.00	\$100.00
Firm Value	\$1,562.50	\$1,250.00
Debt Value	\$0.00	\$0.00
Equity Value	\$1,562.50	\$1,250.00
Shares Outstanding	62.5	62.5
PPS	\$25.00	\$20.00
Dividends	\$125.00	\$100.00
DPS	\$2.00	\$1.60

Return on Levered Equity

0.12

WACC 50/50

8.00%

0.14

WACC 60/40

10.00%

0.173

WACC 70/30

13.33%

0.107

WACC 40/60

6.67%

0.097

WACC 30/70

5.71%

0.24

WACC 80/20

20.00%

After Recap	After Recap (W/ Tax)
6.72%	6.40%
\$1,500.00	\$1,500.00
\$1,375.00	\$1,375.00
\$20.00	\$20.00
\$0.00	\$21.00
\$105.00	\$84.00
\$1,562.50	\$1,562.50
\$500.00	\$500.00
\$1,062.50	\$1,062.50
42.5	39.4
\$25.00	\$26.97
\$105.00	\$84.00
\$2.47	\$2.13

Base Case

Income Statement (in Millions)

Revenue	\$	1,500.00
Operating Expenses	\$	1,375.00
Operating Profit	\$	125.00
Net Income	\$	125.00

Dividends	\$	125.00
Shares Outstanding		62.5
Dividends per share	\$	2.00

PPS	\$	25.00
	\$	32.00

Balance Sheet

Current Assets	\$	450.00
Fixed Assets	\$	550.00
Total Assets	\$	1,000.00

Book Debt		0
Book Equity		1000

Buyback Pr

Inc

Revenue		
Operating Expense		
Operating Profit		
Net Income		

Dividends		
Shares Outstanding		
Dividends per share		

PPS

Current Assets		
Fixed Assets		
Total Assets		

Book Debt		
Book Equity		

Total Capital

1000

Total Capit

Proposal

Income Statement (in Millions)

\$	1,500.00
\$	1,375.00
<hr/>	
\$	125.00
\$	125.00
\$	125.00
	42.5
\$	2.94
\$	69.20

Balance Sheet

\$	450.00
\$	550.00
<hr/>	
\$	1,000.00
	0
	1000
<hr/>	

WACC 100% Equity

0.09884

WACC (under share repurchase plan)

Levered Beta

1000

8%

6.94%

1.10144

WACC 0.098816
 6.94%

0.0640

Base Case

Income Statement (in Millions)

Revenue	\$ 1,500.00
Operating Expenses	<u>\$ 1,375.00</u>
Operating Profit	\$ 125.00
EBT	\$ 125.00
Tax Expense	<u>\$ 25.00</u>
Net Income	\$ 100.00

Dividends	\$ 100.00
Shares Outstanding	62.5
Dividends per share	\$ 2.00

Share Price \$ 32.00

Balance Sheet

Current Assets	\$ 450.00
Fixed Assets	<u>\$ 550.00</u>
Total Assets	\$ 1,000.00

Book Debt	0
Book Equity	<u>1000</u>
Total Capital	1000

Buyback Proposal

Interest Tax Shield

\$ 1.00

Income Statement (in Millions)

Revenue	\$ 1,500.00
Operating Expenses	<u>\$ 1,375.00</u>
EBIT	\$ 125.00
Interest Expense	<u>\$ 5.00</u>
EBT	\$ 120.00
Tax Expense	\$ 24.00
Add Back Interest:	<u>\$ 5.00</u>
Net Income	\$ 101.00

Dividends	\$ 101.00
Shares Outstanding	39.4
Dividends per share	\$ 2.38

Share Price	\$ 60.32
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Balance Sheet

Current Assets	\$ 450.00
Fixed Assets	<u>\$ 550.00</u>
Total Assets	\$ 1,000.00

Book Debt	0
Book Equity	<u>1000</u>
Total Capital	1000

Value of Unlevered Firm	\$ 1,000.00
PV Tax Shield	\$ 25.00
New Value of Firm	\$ 1,025.00

1. How do the financial statements for M&M Pizza vary with the proposed repurchase plan? Do the alternative policies improve the expected dividends per share?

The alternative proposal will increase the dividends per share but will not increase the overall dividend in the no tax scenario.

Amount paid in

2. What impact does the repurchase plan have on M&M's weighted-average cost of capital?

The repurchase plan will lower the cost of capital because debt is cheaper than equity in all instances. In this particular instance, the WACC goes from 8% in the base case to 6.94% in the repurchase plan case.

3. What are the debt and equity claims worth under the alternative scenarios? You may assume that the present value of a perpetual cash flow stream is equal to the expected payment divided by the associated required return.

	Before Recap (All Equity)	Before Recap (W/Tax)	After Recap	After Recap (W/ Tax)
WACC	8.00%	8.00%	6.72%	6.40%
Revenue	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00
Operating Exp	\$1,375.00	\$1,375.00	\$1,375.00	\$1,375.00
Interest	\$0.00	\$0.00	\$20.00	\$20.00
Tax	\$0.00	\$25.00	\$0.00	\$21.00
Net Income	\$125.00	\$100.00	\$105.00	\$84.00
Firm Value	\$1,562.50	\$1,250.00	\$1,562.50	\$1,562.50
Debt Value	\$0.00	\$0.00	\$500.00	\$500.00
Equity Value	\$1,562.50	\$1,250.00	\$1,062.50	\$1,062.50
Shares Outstanding	62.5	62.5	42.5	39.4
PPS	\$25.00	\$20.00	\$25.00	\$26.97
Dividends	\$125.00	\$100.00	\$105.00	\$84.00
DPS	\$2.00	\$1.60	\$2.47	\$2.13

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$$.588 = 500/x$$

PV tax shield

\$100.00

4. Which proposal is best for investors? What do you recommend that Miller do?

In a world with no tax, the investors would be indifferent between the share repurchase proposal and no repurchase; their equity would remain unchanged. In the instance that the tax plan is implemented, the investors would prefer the interest expense would be deducted from the taxes and therefore would give investors a larger amount in a scenario where no buyback occurs.

If we were to make a recommendation to Miller, if taxes were implemented, it would be wise of him to go with the debt proposal because he would create more value for shareholders. If the current tax laws were to stay in place, the way he splits D/E is irrelevant in terms of creating more equity for shareholders. The only thing issuing debt would do is lower the cost of capital, making their cost of capital cheaper, although only by less than 1%, which is not the goal of the firm.

rise because the value of
for the buyback because
equity compared to the

the repurchase plan
raises up his companies
the companies WACC,

5. How would your analysis in questions 2 and 3 and recommendation in question 4 change if the new tax law is implemented? Please note that, with corporate taxes, the expected debt-to-equity ratio under the share repurchase plan is .588 and the number of remaining shares outstanding is 39.4 million.