Problem 1								
a. Dividend Payout Ratio = (2 * 50)/480 =				20.83%				
b. Free Cash Flows to Equity this year								
	Net Income		$ 480					
	- (Cap Ex - Depr) (1-DR)		$ 210					
	- (Chg in WC) (1-DR)		$ 35					
	FCFE		$ 235					
Dividends as % of FCFE = 100/235 =				42.55%				
c.	Note: I changed the riskfree rate to a long term bond rate of 8.5% in the problem.							
Project	Investment	Beta	IRR	Cost of Equity				
A	$190 mil	0.6	12.00%	11.80%				
B	$200 mil	0.8	12.00%	12.90%				
C	$200 mil	1	14.50%	14.00%				
D	$200 mil	1.2	15.00%	15.10%				
E	$100 mil	1.5	20.00%	16.75%				
Accept projects A, C and E. The total investment is $ 490 million.								
d. Estimation of FCFE next year								
	Net Income		$ 540					
	- (Cap Ex - Depr) (1-DR)		$ 168					
	- (Chg in WC) (1-DR)		$ 35					
	FCFE		$ 337					
e. I may not pay this amount as dividends because of my concerns that I would not be able to maintain these dividends. I								
would also hold back some cash for future projects, if I feel that investment needs could vary substantially over time.								
f. If $ 125 million is paid out as dividends, the cash balance will increase by $ 212 million [$337-$125]								
Problem 2								
a. Estimate the FCFE.								
	Investable Funds		$ 100.00					
	- (Cap Ex) (1-DR)		$ 52.50					
	- Chg in WC (1-DR)		$ -					
	= FCFE		$ 47.50					
I am assuming, since there is no information to the contrary, that these projects have risk characertistics similar to the firm.								
Capital Expenditures								
	Cost of Equity =			15%				
	After-tax Cost of Debt =			6%				
	Debt Ratio = 500/(500+1500) =			25%				
	Cost of Capital = (.18) (.75) + .06 (.25) =			13%				
Accept projects A, B, C and D: They have returns on capital that exceed the cost of capital.								
Total Capital Expenditures =			70					

Since the returns are on capital, the comparison has to be to cost of capital.								
b. The company should return $ 47.5 million to its stockholders.								
Problem 3								
First, estimate the cost of capital,								
	Cost of Equity =		22%					
	After-tax Cost of Debt =		6%					
	Debt Ratio = (100/(100+500))		16.67%					
	Cost of Capital =		19.33%					
Second, calculate the NPV of the three projects,								
In changed the EBIT on the second problem to $ 15 million per year.								
NPV of A = - 10 + (1*0.6+0.5)(PVA,19.33%,5)+2.5/(1.1933^5) =					$ (5.63)			
NPV of B = - 40 + (5*0.6 +1)(PVA,19.33%,10) + 10/(1.1933^10) =					$ 4.60			
NPV of C = -50 + (5*0.6+1)(PVA,19.33%,10)+10/1.1933^10 =					$ (31.13)			
A. Take only project B								
FCFE = Net Income - (Cap Ex - Depr)(1-.Future DR) =				66				
B. The company should pay out $ 66 million in dividends.								
Problem 4								
Project	IRR (to Equity)	Beta	Cost of Equity					
A	21%	2	20.00%					
B	20%	1.5	17.25%					
C	12%	1	14.50%					
Accept projects A and B. The total capital expenditures are $ 1100.								
Estimated FCFE next year								
	Net Income next year =		$1,000					
	- (Cap Ex - Depr) (1-.2) =		480					
	- Chg in WC (1-.2) =		80					
	= FCFE		$440					
The firm should pay out a dividend of $ 440.								
Problem 5								
	Current	1	2	3				
Net Income	$ 100.00	$ 110.00	$ 121.00	$ 133.10				
+ Deprec'n	$ 50.00	$ 54.00	$ 58.32	$ 62.99				
- Cap Ex	$ 60.00	$ 60.00	$ 60.00	$ 60.00				
- Chg in WC	$ 10.00	$ 10.00	$ 10.00	$ 10.00				
= FCFE	$ 80.00	$ 94.00	$ 109.32	$ 126.09				
Dividends Paid		$ 66.00	$ 72.60	$ 79.86				
Cash Balance	$ 50.00	$ 78.00	$ 114.72	$ 160.95				

Problem 6								
I am using a short cut here by assuming that cash flow to equity divided by equity investment is ROE.								
Project	Equity Investm	CF to Equity	Return to Equit	Beta	Cost of Equity			
A	100000	12500	12.50%	1	11.75%			
B	100000	14000	14.00%	1.5	14.50%			
C	50000	8000	16.00%	1.8	16.15%			
D	50000	12000	24.00%	2	17.25%			
Accept projects A and D. The capital expenditures will be $ 150,000.								
Estimate working capital investment								
	Working Capital last year = (1000000-500000) =				500000			
	Revenues last year =				1000000			
	Working Capital as % of Revenues =				50%			
	Expected Revenue increase next year = .10 * $ 1,000,000=				$100,000			
	Working Capital Increase next year = 0.5 * $ 100,000 =				$50,000			
Estimated FCFE next year								
	Revenues	$ 1,100,000						
	Expenses	$ 440,000						
	Depreciation	$ 100,000						
	EBIT	$ 560,000						
	- Interest Exp	$ 100,000						
	Taxable Income	$ 460,000						
	Taxes	$ 184,000						
	Net Income	$ 276,000						
Net Income		$276,000						
- (Cap Ex- Depr)(1-.4) =		30000						
- (WC Increase) (1-.4) =		30000						
FCFE		$216,000						
b. If the company pays out $ 100,000 in dividends, the cash balance will increase by $ 116,000 to $ 266,000.								
Problem 7								
a.No. Its FCFE is negative : FCFE = 10 - (25-5) = -10 million								
b.	Current	1	2	3	4			
Net Income	$ 10.00	$ 14.00	$ 19.60	$ 27.44	$ 38.42	$ 53.78	$ 75.30	105.413504
- (Cap Ex-Depr	$ 20.00	$ 22.00	$ 24.20	$ 26.62	$ 29.28	$ 32.21		
The company will have positive FCFE by year 4. It can start paying dividends after that.								
Problem 8								
Year	Net Income	(Cap Ex - Depr) (	Ch WC (1-DR)	FCFE	Dividends			

1991	$ 240.00	$ 4.20	$ 15.00	$ 220.80	$ 70.00			
1992	$ 282.00	$ 102.60	$ (87.00)	$ 266.40	$ 80.00			
1993	$ 320.00	$ 169.20	$ 195.00	$ (44.20)	$ 95.00			
1994	$ 375.00	$ 127.20	$ (24.00)	$ 271.80	$ 110.00			
1995	$ 441.00	$ 120.60	$ 45.00	$ 275.40	$ 124.00			
			Average	$ 198.04	$ 95.80			
a. Conrail could have paid out $ 198 million in dividends. It paid out only $ 95.8 million a year.								
b.								
	Return on Equity =		13.50%					
	Cost of Equity = 7%+1.25(5.5%) =			13.88%				
Conrail's projects did not do as well as they should have. I would recommend that if Conrail's project								
choice is not expected to improve, they return more cash to their stockholders.								
Problem 9								
Year	Net Income	(Cap Ex - Depr)	Ch WC (1-DR)	FCFE				
1996	$ 485.10	$ 151.96	$ 8.75	$ 324.39				
1997	$ 533.61	$ 164.11	$ 9.19	$ 360.31				
1998	$ 586.97	$ 177.24	$ 9.65	$ 400.08				
1999	$ 645.67	$ 191.42	$ 10.13	$ 444.12				
2000	$ 710.23	$ 206.73	$ 10.64	$ 492.86				
This is the amount that the company can afford to pay in dividends.								
b. The perceived uncertainty in these cash flows will make me more conservative in paying out the entire								
amount in FCFE in the year in which I make it.								
Problem 10								
	Current	1	2	3	4	5		
Net Income	$ 66.00	$ 77.22	$ 90.35	$ 105.71	$ 123.68	$ 144.70		
+ Depreciation	$ 50.00	$ 57.50	$ 66.13	$ 76.04	$ 87.45	$ 100.57		
- Capital Exp	$ 150.00	$ 165.00	$ 181.50	$ 199.65	$ 219.62	$ 241.58		
- Chg in WC	NA	$ 4.30	$ 4.73	$ 5.20	$ 5.72	$ 6.30		
FCFE		$ (34.58)	$ (29.76)	$ (23.10)	$ (14.21)	$ (2.60)		
a. Cracker Barrel cannot afford to pay a dividend.								
b. If the debt ratio is changed to 25%,								
	Current	1	2	3	4	5		
Net Income	$ 66.00	$ 77.22	$ 90.35	$ 105.71	$ 123.68	$ 144.70		
- (Cex-Depr) (1-.25)		80.625	86.53125	92.7046875	99.1235156	105.75648		
- Chg in WC (1-.25)		3.225	3.5475	3.90225	4.292475	4.7217225		
FCFE		$ (6.63)	$ 0.27	$ 9.10	$ 20.26	$ 34.22		
The company can start paying out dividends in year 2.								
Problem 11								

Assuming that we are talking about the second scenario, where the firm does borrow money,								
I would defend my decision by noting that I have a track record of great projects and that I am retaining								
the cash for future projects. My track record will probably make me credible, at least as long as I can								
keep my return on equity above my cost of equity. The high ROE will make this more defensible.								
Problem 12								
Estimated Net Income next year =			$ 140.80					
- (Cap Ex - Depreciation) (1-.10) =			$ 25.74					
- Change in Working Capital (1-.1) =			$ 45.00					
FCFE			$ 70.06					
This is what the company can afford to pay in dividends.								
b. If the company pays of $ 12 million in dividends, the cash balance will increase by $ 58 million.								
Problem 13								
The company will have a negative FCFE, since it will have to generate enough cash flows to make the principal								
payment of $ 100 million. Recalculating the FCFE,								
Estimated Net Income next year =			$ 140.80					
- (Cap Ex - Depreciation)			$ 28.60					
- Change in Working Capital =			$ 50.00					
- Principal Repayment =			$ 100.00					
FCFE			$ (37.80)					
If the company pays a dividend of $ 12 million, the cash balance will decrease by approximately $ 50								
million. The total cash balance which is currently $ 143 million will decline to $ 93 million.								
Problem 14								
Company	Div vs. FCFE	ROE	Cost of Equity	Action				
Alexander	<	8%	11.00%	Pressure to pay more dividends.				
American Pres.	<	14.50%	13.50%	Allow to continue; RoE>COE				
OMI	>	4%	13.25%	Evaluate investments; FCFE < Dividends				
Overseas	<	1.50%	11.50%	Pressure to pay more dividends				
Sea Containers	>	14%	12.25%	Pressure to pay less dividends				
a. Alexander and Brown and Overseas Shipholding.								
b. Sea Containers								
c. If I thought that the returns on projects for this entire sector were going to improve, it would make me								
more cautious about raising dividends in the first place. If, on the other hand, I thought that returns for this								
entire sector were going to drop, I would push for more dividends more aggressively.								
Problem 15.								
Company	Payout Ratio	Dividend Yield	Growth					
Fedders	11%	1.20%	22%					
Maytag	37%	2.80%	23%					

National Presto	67%	4.90%	13.50%					
Toro	15%	1.50%	16.50%					
Whirlpool	30%	2.50%	20.50%					
Average	32%	2.58%	19.10%					
Black & Decker	24%	1.30%	23%					
a. Black and Decker pays less in dividends than the average company in the sector.								
b. Black and Decker also has higher growth than the average company in the sector. One way of								
controlling for differences in growth rate is to regress dividend payout ratios and yields against the								
growth rates.								
Dividend Payout Ratio = 0.88 - 2.90 (Expected Growth)								
Dividend Yield = 0.07 - 0.23 (Expected Growth)								
Black & Decker's predicted payout ratio = 0.88 - 2.90 (.23) =					21.30%			
Black & Decker's predicted dividend yield = 0.07 -0.23*(.23) =					1.71%			
Problem 16								
a. Estimated Dividend Yield for Black and Decker:								
	= 0.0478 - 0.0157 (1.30) + 0.0000008 (5500) + 0.006797 (.35)							
	+ 0.0002 (0.145) - 0.09 (.04)							
	3.06%							
b. This regression factors in all firms in the market, rather than just the sector.								
Problem 17								
No. I would expect, given the higher growth rate, that Handy and Harman will pay less in dividends than								
the average firm in the sector. The higher growth creates a greater reinvestment need.								