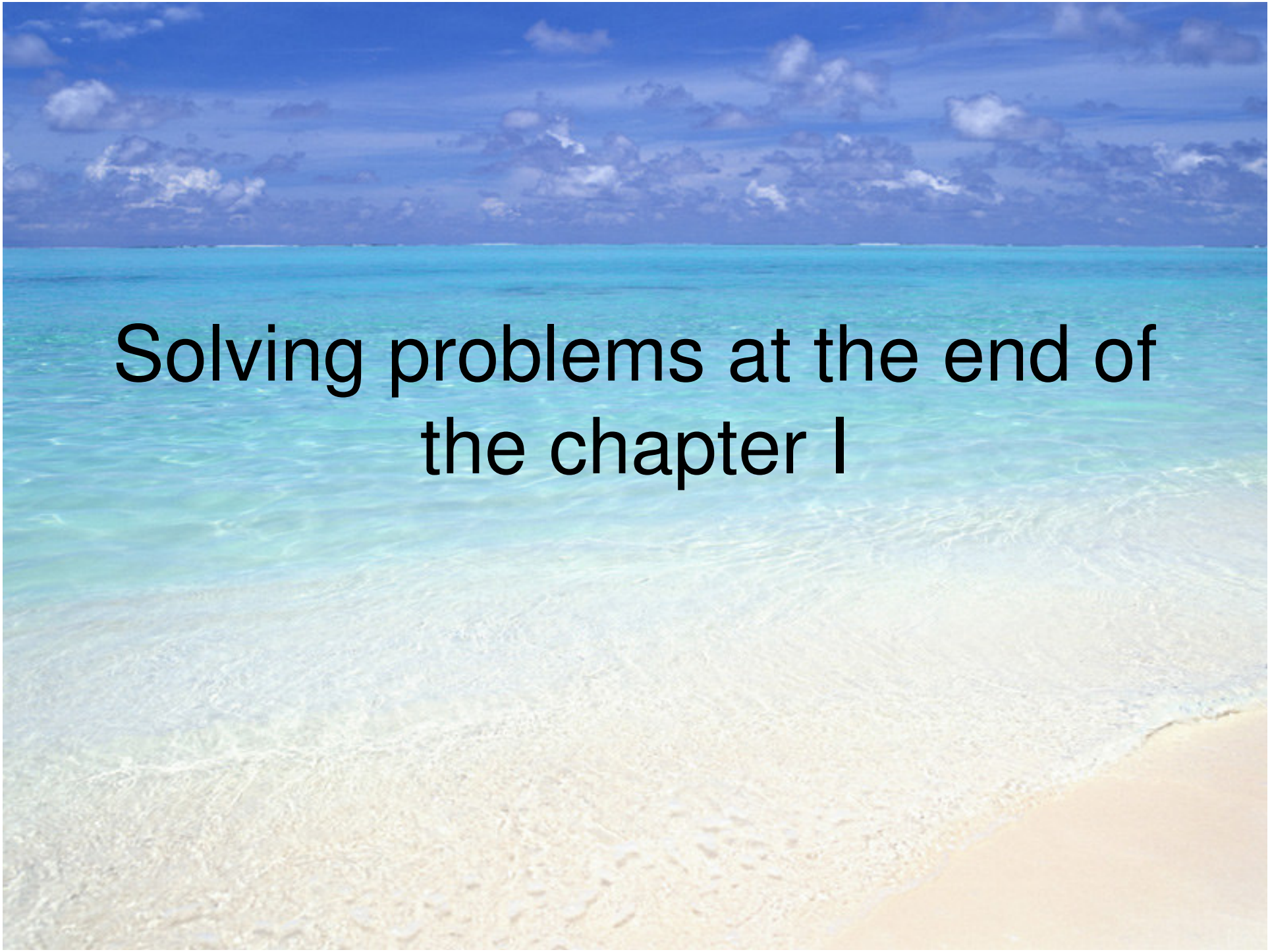

Managerial Finance
Hussain A. Al Awami, B.Sc. Pharm., M.Sc., MBA

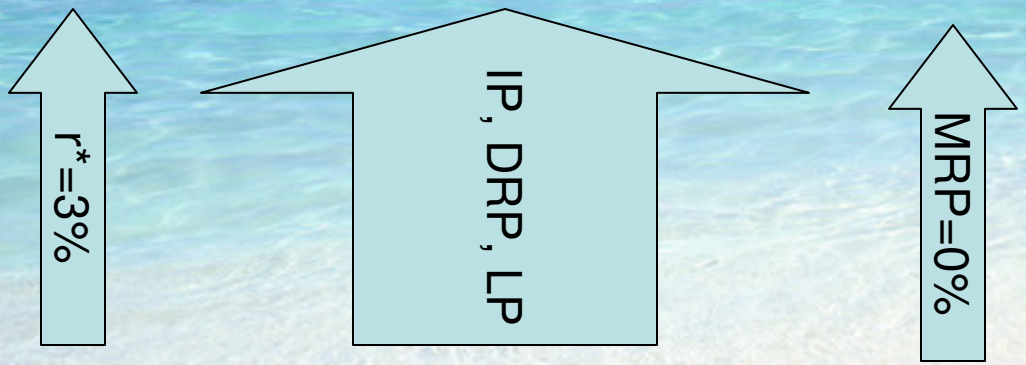

Solving problems at the end of the chapter I

Problem 1-1

- The real risk-free rate of interest is 3%. Inflation is expected to be 2% this year and 4% during the next 2 years. Assume the maturity risk premium is zero. What is the yield on 2-years treasury securities? What is the yield on 3-years treasury securities?

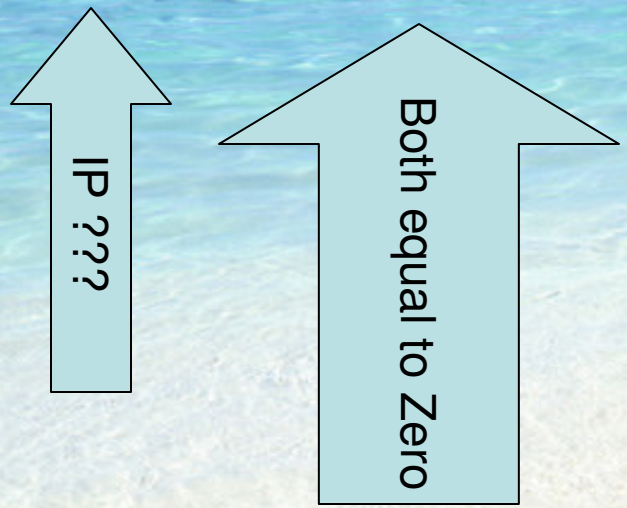
Solution 1-1

- $r = r^* + IP + DRP + LP + MRP$



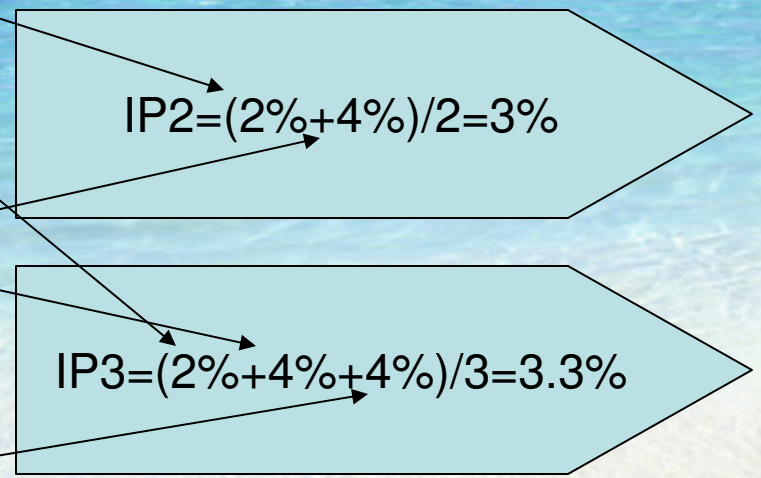
Solution 1-1, continue

- $r = r^* + IP + DRP + LP + MRP$



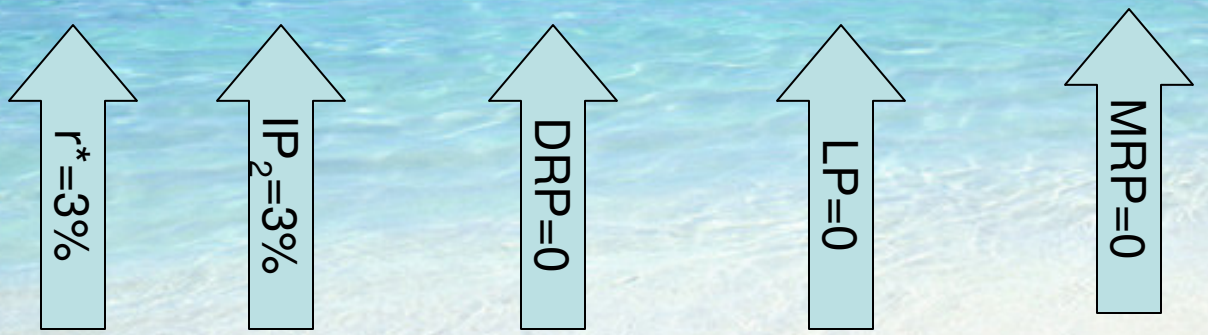
Solution 1-1, continue

- IP_1=2%
- IP_2=4%
- IP_3=4%



Solution 1-1, continue

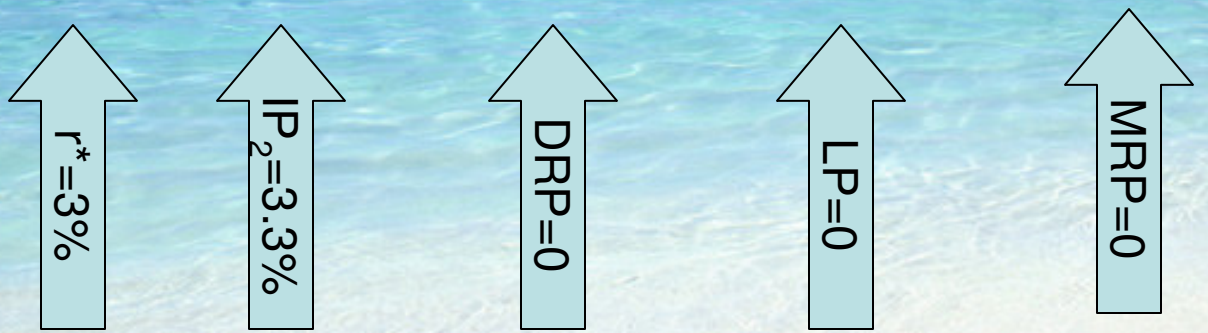
- $r_2 = r^* + IP + DRP + LP + MRP$



$r_2 = 3\% + 3\% + 0 + 0 + 0 = 6\%$

Solution 1-1, continue

- $r_3 = r^* + IP + DRP + LP + MRP$



$r_3 = 3\% + 3.3\% + 0 + 0 + 0 = 6.3\%$

Problem 1-2

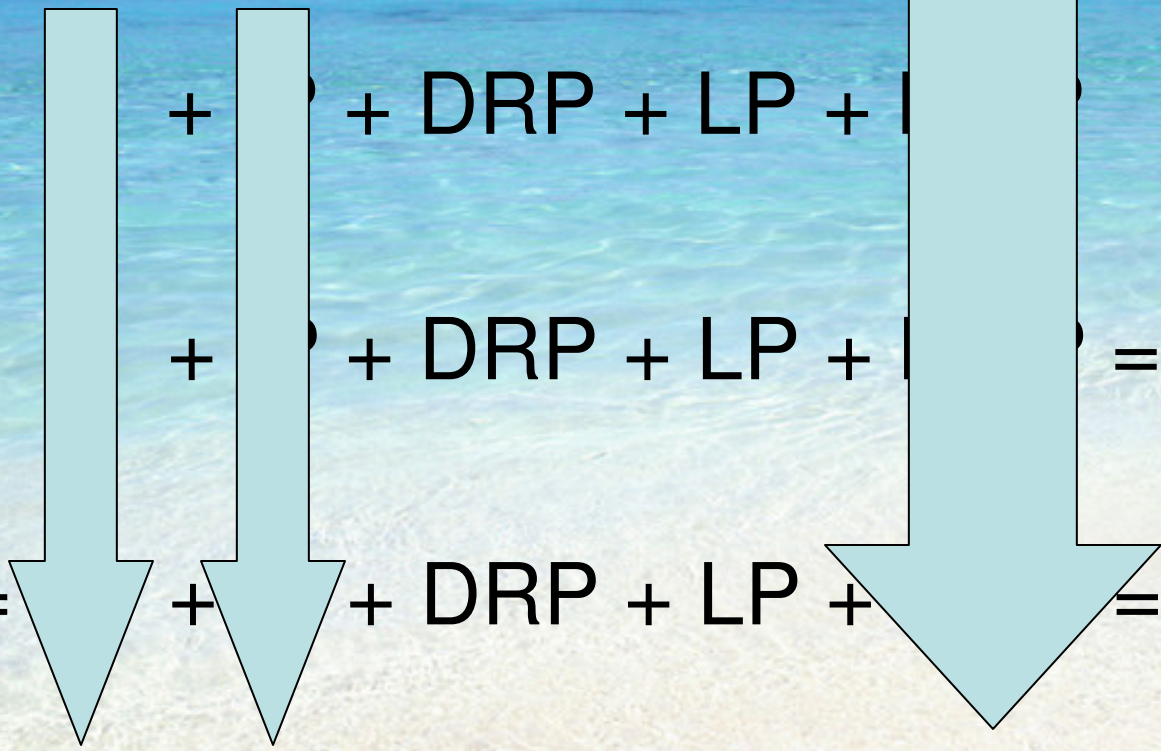
- A treasury bond that matures in 10 years has a yield of 6%. A 10 years corporate bond has a yield of 8%. Assume that the liquidity premium on the corporate bond is 0.5%. What is the default risk premium on the corporate bond?

Solution 1-2

- $r = r^* + IP + DRP + LP + MRP$
- $r_{t\text{-}10} = r^* + IP + DRP + LP + MRP = 6\%$
- $r_{C\text{-}10} = r^* + IP + DRP + LP + MRP = 8\%$

Solution 1-2, continue

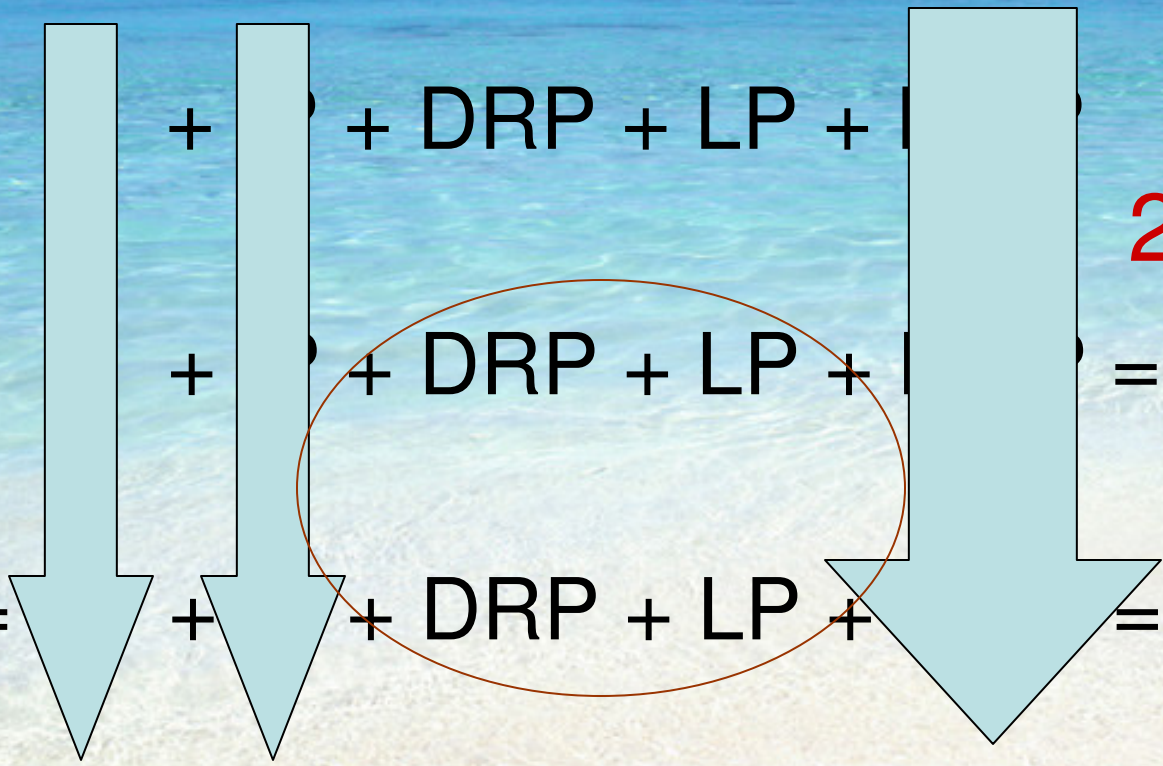
- r = + + DRP + LP +
- r_{t-10}= + + DRP + LP + = 6%
- r_{C-10}= + + DRP + LP + = 8%



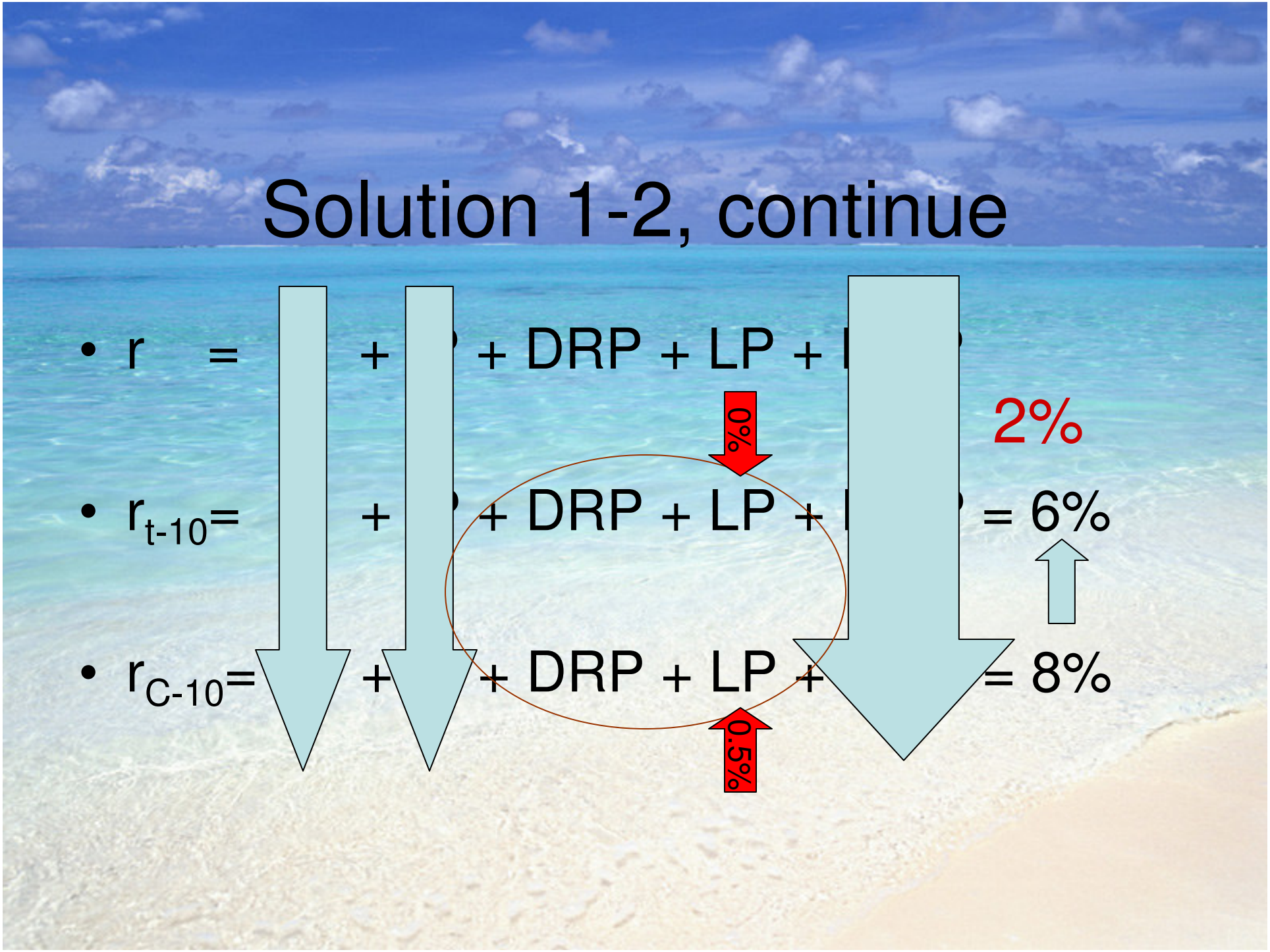
Solution 1-2, continue

- r = + + DRP + LP +
- r_{t-10} = + + DRP + LP + = 6%
- r_{C-10} = + + DRP + LP + = 8%

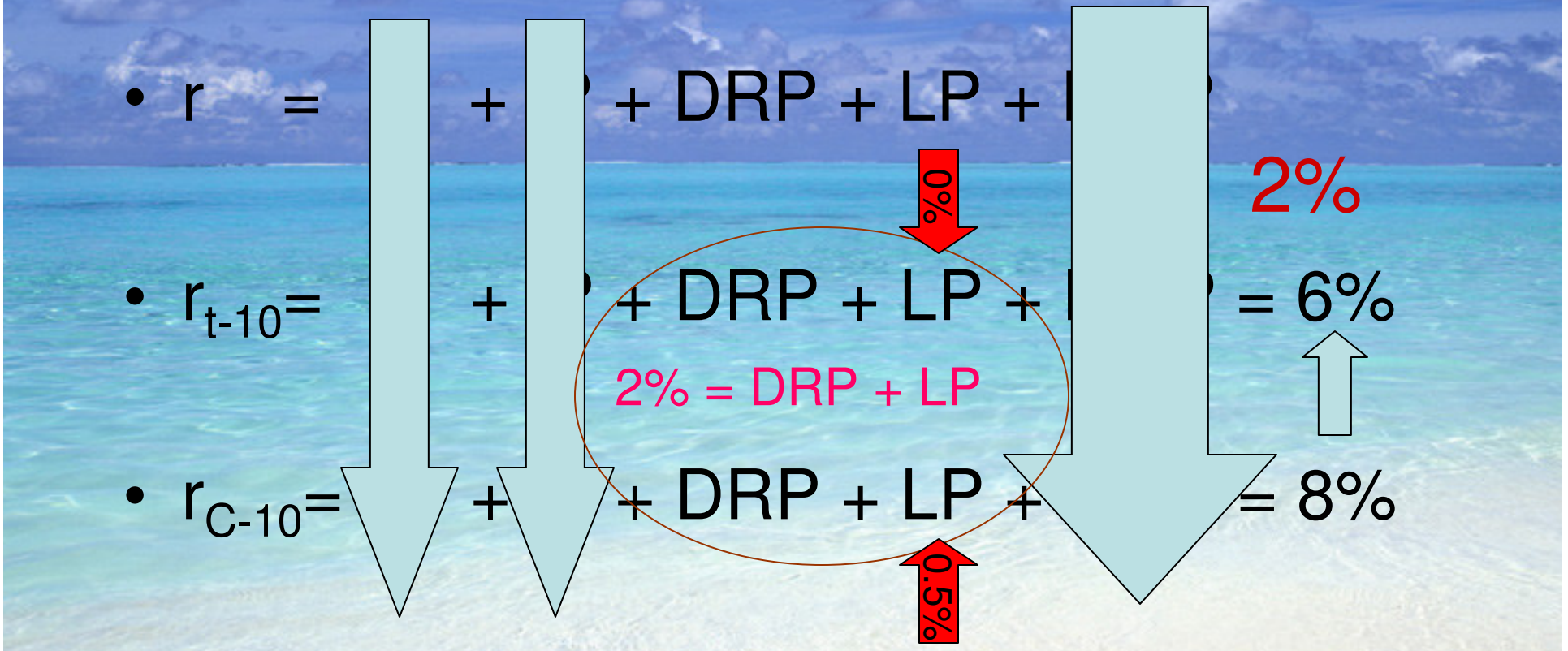
2%



Solution 1-2, continue



Solution 1-2, continue



2% = DRP + 0.5%

DRP = 2% - 0.5%

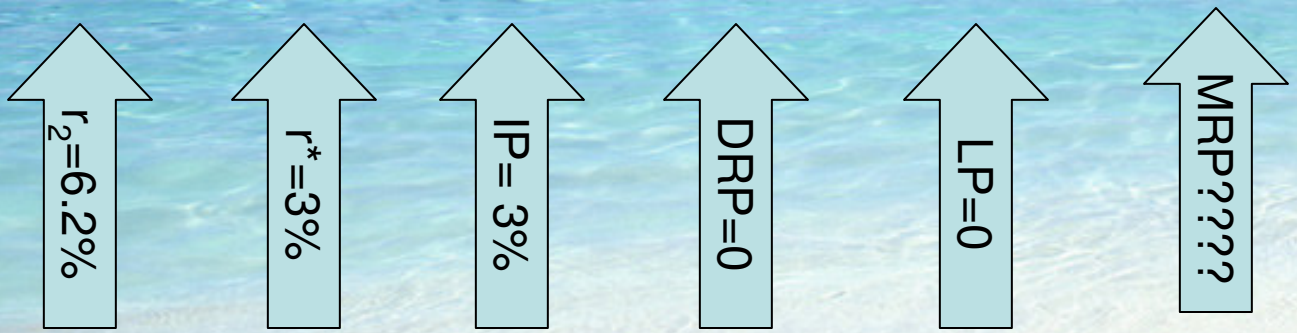
DRP = 1.5%

Problem 1-3

- The real risk free rate is 3%, and the inflation is expected to be 3% for the next 2 years. A 2 years treasury security yields 6.2%. What is the maturity risk premium for the 2 years security?

Solution

- $r = r^* + IP + DRP + LP + MRP$



6.2%= 3% + 3% + 0 + 0 + MRP

Solution

- $r = r^* + IP + DRP + LP + MRP$