Cost of capital

Tata Green Energy Ltd. has provided key equity-related financial data to estimate its cost of capital. The company's Earnings Per Share (EPS) in 2019 was ₹0.75, projected to increase to ₹1.25 by 2024, with a payout ratio of 50%. The current stock price is ₹37.75, and the flotation costs associated with raising new equity are 1.5%.

On the debt side, the company plans to issue bonds with a face value of ₹25,000, a coupon rate of 4.75%, and a term to maturity of 15 years. The bonds will make quarterly payments, and the flotation costs for issuing debt are 1.25%. The company's corporate tax rate is 30%.

The stock has a beta of 0.89, and the current market return is 13.50%, while the risk-free return is 4.10%.

The capital structure comprises 40% debt and 60% equity.

Requirements:

1. Compute the **Cost of Debt**:
    - **Cost of Debt for Payment Period**.
    - **Annualized Cost of Debt**.
    - **After-Tax Cost of Debt**.
2. Compute the **Cost of Equity** using:
    - Growth-based Model for Retained Earnings.
    - Adjusted Model for New Equity considering flotation costs.
3. Calculate the **Weighted Average Cost of Capital (WACC)**:
    - Based on Retained Earnings.
    - Based on New Equity.
    - Based on Existing Equity (CAPM).

Reliance Infra Ltd.

Reliance Infra Ltd. has provided key financial data to estimate its cost of capital. The company's Earnings Per Share (EPS) in 2019 was ₹4.25, projected to increase to ₹8.25 by 2024, with a payout ratio of 35%. The current stock price is ₹45.50, and the flotation costs associated with raising new equity are 2.50%.

On the debt side, the company plans to issue bonds with a face value of ₹50,000, a coupon rate of 4.25%, and a term to maturity of 20 years. The bonds will make semi-annual payments, and the flotation costs for issuing debt are 1.75%. The company's corporate tax rate is 35%. The capital structure comprises 50% debt and 50% equity. Additionally, there is no redemption premium on the bonds.

The stock has a beta of 0.78, and the current market return is 14.65%, while the risk-free return is 3.85%.

Requirements:

1. **Compute the Cost of Debt**:
    - Cost of Debt for Payment Period.
    - Annualized Cost of Debt.
    - After-Tax Cost of Debt.
2. **Compute the Cost of Equity** using:
    - Growth-based Model for Retained Earnings.
    - Adjusted Model for New Equity considering flotation costs.
    - CAPM Model.
3. **Calculate the Weighted Average Cost of Capital (WACC)**:
    - Based on Retained Earnings.
    - Based on New Equity.
    - Based on CAPM-based Cost of Equity.

Reliance Ltd.

Reliance Ltd. has provided key financial data to estimate its cost of capital. The company's Earnings Per Share (EPS) in 2019 was ₹10.00, projected to increase to ₹11.25 by 2024, with a payout ratio of 50%. The current stock price is ₹37.75, and the flotation costs associated with raising new equity are 2.50%.

On the debt side, the company plans to issue bonds with a face value of ₹10,000, a coupon rate of 5.25%, and a term to maturity of 10 years. The bonds will make semi-annual payments, and the flotation costs for issuing debt are 2.75%. The company's corporate tax rate is 40%. The capital structure comprises 50% debt and 50% equity. Additionally, there is no redemption premium on the bonds.

The stock has a beta of 0.92, and the current market return is 15.65%, while the risk-free return is 5.10%.

Requirements:

1. **Compute the Cost of Debt**:
    - Cost of Debt for Payment Period.
    - Annualized Cost of Debt.
    - After-Tax Cost of Debt.
2. **Compute the Cost of Equity** using:
    - Growth-based Model for Retained Earnings.
    - Adjusted Model for New Equity considering flotation costs.

- CAPM Model.

3. **Calculate the Weighted Average Cost of Capital (WACC)**:
    - Based on Retained Earnings.
    - Based on New Equity.
    - Based on CAPM-based Cost of Equity.

HDFC Bank

HDFC Bank has provided key financial data to estimate its cost of capital. The company's Earnings Per Share (EPS) in 2019 was ₹25.00, projected to increase to ₹38.50 by 2024, with a payout ratio of 50%. The current stock price is ₹267.00, and the flotation costs associated with raising new equity are 2%.

On the debt side, the company plans to issue bonds with a face value of ₹1,00,000, a coupon rate of 5.25%, and a term to maturity of 10 years. The bonds will make semi-annual payments, and the flotation costs for issuing debt are 1.75%. Additionally, there is a redemption premium of 3.25% on the bonds. The company's corporate tax rate is 25%. The capital structure comprises 30% debt and 70% equity.

The stock has a beta of 0.65, and the current market return is 12.45%, while the risk-free return is 3.65%.

Requirements:

1. **Compute the Cost of Debt**:
    - Cost of Debt for Payment Period.
    - Annualized Cost of Debt.
    - After-Tax Cost of Debt.
2. **Compute the Cost of Equity** using:
    - Growth-based Model for Retained Earnings.
    - Adjusted Model for New Equity considering flotation costs.
    - CAPM Model.
3. **Calculate the Weighted Average Cost of Capital (WACC)**:
    - Based on Retained Earnings.
    - Based on New Equity.
    - Based on CAPM-based Cost of Equity.

Adani Ports Ltd

Adani Ports Ltd. seeks to estimate its cost of capital using the following financial details. The company's Earnings Per Share (EPS) in 2019 stood at ₹15.25 and is expected to grow to ₹26.75 by 2024, with a payout ratio of 25%. The stock is currently trading at ₹315.00, and flotation costs for issuing new equity are estimated at 2.65%.

For debt financing, the company plans to issue bonds with a face value of ₹10,000, offering a coupon rate of 4.15% and a maturity period of 20 years. The bonds involve semi-annual payments, flotation costs of 2.25%, and a redemption premium of 3.25%. The corporate tax rate applicable is 35%. The capital structure consists of 50% debt and 50% equity.

Additionally, the stock has a beta of 0.95. The market return is 16.25%, while the risk-free rate is 3.75%.

Requirements:

1. **Determine the Cost of Debt**:
    - Calculate the Cost of Debt for each Payment Period.
    - Derive the Annualized Cost of Debt.
    - Compute the After-Tax Cost of Debt.
2. **Determine the Cost of Equity** using:
    - Growth-based Model for Retained Earnings.
    - Adjusted Model for New Equity factoring in flotation costs.
    - Capital Asset Pricing Model (CAPM).
3. **Calculate the Weighted Average Cost of Capital (WACC)**:
    - Using Retained Earnings.
    - Using New Equity.
    - Using CAPM-based Cost of Equity.

Bharti Airtel Ltd

Bharti Airtel Ltd. has shared its financial data to estimate the cost of capital. The company's Earnings Per Share (EPS) was ₹5.50 in 2019 and is expected to grow to ₹12.25 by 2024, with a payout ratio of 40%. The stock is currently priced at ₹65.75, and flotation costs for raising new equity are estimated at 3.25%.

On the debt side, Bharti Airtel plans to issue bonds with a face value of ₹50,000, offering a coupon rate of 5.25%, with a maturity period of 10 years. These bonds will make quarterly payments, have flotation costs of 2.25%, and include a redemption premium of 10.00%. The applicable corporate tax rate is 25%, and the company's capital structure consists of 35% debt and 65% equity.

The stock's beta is 0.75, while the market return stands at 14.25%, and the risk-free return is 4.75%.

Requirements:

1. **Determine the Cost of Debt**:
    - Calculate the Cost of Debt for each Payment Period.
    - Derive the Annualized Cost of Debt.
    - Compute the After-Tax Cost of Debt.
2. **Determine the Cost of Equity** using:
    - Growth-based Model for Retained Earnings.
    - Adjusted Model for New Equity, factoring in flotation costs.
    - Capital Asset Pricing Model (CAPM).
3. **Calculate the Weighted Average Cost of Capital (WACC)**:
    - Using Retained Earnings.
    - Using New Equity.
    - Using CAPM-based Cost of Equity.

Tata Motors Ltd

Tata Motors Ltd. has provided the following financial details for estimating its cost of capital. The company's Earnings Per Share (EPS) in 2019 was ₹100.00, projected to grow to ₹165.00 by 2024, with a payout ratio of 40%. The stock is currently priced at ₹4,250.00, and the flotation costs for issuing new equity are 2.50%.

Regarding debt financing, Tata Motors plans to issue bonds with a face value of ₹50,000, offering a coupon rate of 8.50%, with a maturity period of 20 years. The bonds will make quarterly payments, have flotation costs of 3.25%, and do not carry a redemption premium. The company's corporate tax rate is 40%, and its capital structure comprises 50% debt and 50% equity.

Additionally, the company's stock beta is 0.82, with a market return of 18.25% and a risk-free return of 5.25%.

Requirements:

1. **Compute the Cost of Debt**:
    - Calculate the Cost of Debt for each Payment Period.
    - Derive the Annualized Cost of Debt.
    - Compute the After-Tax Cost of Debt.
2. **Compute the Cost of Equity** using:
    - Growth-based Model for Retained Earnings.
    - Adjusted Model for New Equity, considering flotation costs.

- Capital Asset Pricing Model (CAPM).

3. **Calculate the Weighted Average Cost of Capital (WACC)**:
    - Using Retained Earnings.
    - Using New Equity.
    - Using CAPM-based Cost of Equity.

Cipla Ltd.

Cipla Ltd. has shared the following data for estimating its cost of capital. The company's Earnings Per Share (EPS) in 2019 was ₹55.25, which is expected to grow to ₹75.45 by 2024, with a payout ratio of 25%. The stock price is ₹555.00, and flotation costs for issuing new equity are 2.50%.

On the debt side, the company plans to issue bonds with a face value of ₹10,000, offering a coupon rate of 6.25%, with a 10-year maturity. These bonds involve quarterly payments, have flotation costs of 1.75%, and a redemption premium of 2.75%. The corporate tax rate applicable is 25%, and the capital structure is composed of 50% debt and 50% equity.

The company's stock beta is 0.92, while the market return stands at 16.25%, and the risk-free return is 5.75%.

Requirements:

1. **Determine the Cost of Debt**:
    - Calculate the Cost of Debt for each Payment Period.
    - Derive the Annualized Cost of Debt.
    - Compute the After-Tax Cost of Debt.
2. **Determine the Cost of Equity** using:
    - Growth-based Model for Retained Earnings.
    - Adjusted Model for New Equity, factoring in flotation costs.
    - Capital Asset Pricing Model (CAPM).
3. **Calculate the Weighted Average Cost of Capital (WACC)**:
    - Using Retained Earnings.
    - Using New Equity.
    - Using CAPM-based Cost of Equity.

Ambuja Cements Ltd

Ambuja Cements Ltd. has provided the following financial data to calculate its cost of capital. The company’s Earnings Per Share (EPS) in 2019 was ₹11.00 and is projected to grow to ₹17.50

by 2024, with a payout ratio of 75%. The current stock price is ₹75.25, and the flotation costs associated with raising new equity are 2.45%.

For debt financing, Ambuja Cements plans to issue bonds with a face value of ₹50,000, offering a coupon rate of 5.25%, with a term to maturity of 20 years. The bonds have semi-annual payments, flotation costs of 1.25%, and include a redemption premium of 10%. The applicable corporate tax rate is 35%, and the company's capital structure consists of 50% debt and 50% equity.

Additionally, the company's stock beta is 0.75, the market return is 14.25%, and the risk-free rate is 5.10%.

Requirements:

1. **Compute the Cost of Debt**:
    - Calculate the Cost of Debt for each Payment Period.
    - Derive the Annualized Cost of Debt.
    - Compute the After-Tax Cost of Debt.
2. **Compute the Cost of Equity** using:
    - Growth-based Model for Retained Earnings.
    - Adjusted Model for New Equity considering flotation costs.
    - Capital Asset Pricing Model (CAPM).
3. **Calculate the Weighted Average Cost of Capital (WACC)**:
    - Using Retained Earnings.
    - Using New Equity.
    - Using CAPM-based Cost of Equity.