VNIVERSITAT DE VALÈNCIA
Facultat d' Economia

# Unit 5. Payout Policy

## Corporate Finance

## Degree in International Business

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# Agenda

5.1. Introduction

5.2. Cash distributions to shareholders in perfect capital markets

5.3. The tax disadvantage of dividends

5.4. Dividend capture and tax clienteles

# REFERENCES

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GOMEZ, A. R.; PIÑOL, J. A.; REIG, A. i RODRIGO, A. (2006): Teoría de la financiación II: OPT, estructura de capital y dividendos. Madrid: Pirámide. → Chapter 4.

# 5.1. Introduction

**Payout Policy:** This is the way a firm chooses from  alternative methods how to pay cash to shareholders.

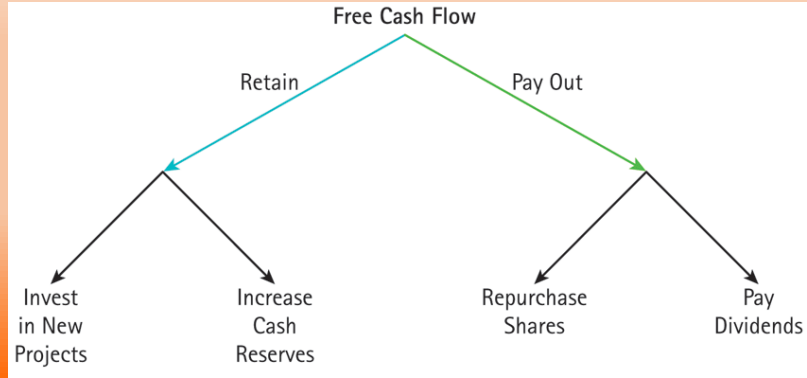
Companies that generate a free cash flow

a) Keep cash in the company's assets:

- **Invest it in new investment projects** for machinery, buildings, land, vehicles, etc.
- **Increase cash reserves:** freely available reserves, special reserves, etc.

b) Use cash to:

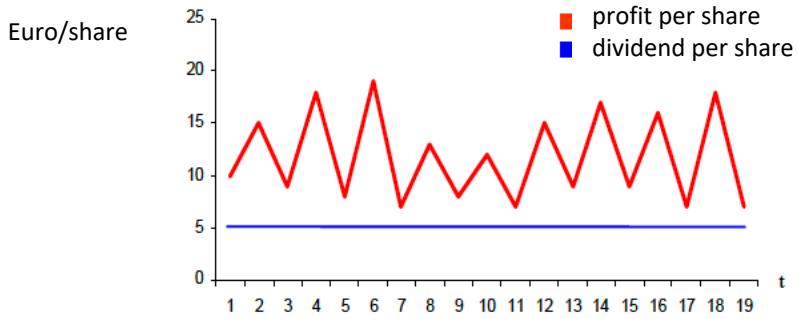
- **Pay dividends:** the way companies opt for one of the options to do so is called dividend policy.
- **Repurchase Shares**



# 5.1. Introduction

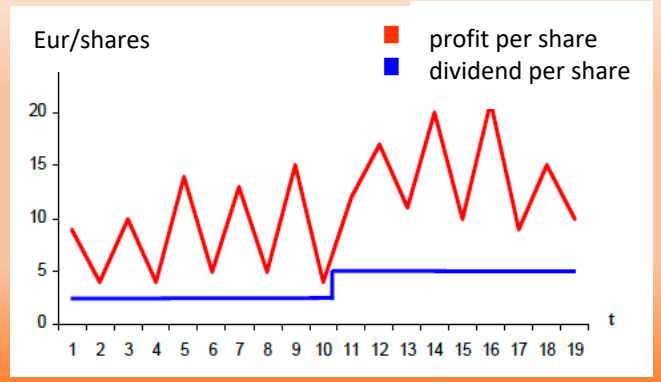
Dividend Policies:

**Policy 1: Constant or uniform growth dividends:** Identical distribution in euros per shares, whichever profit is obtained.




We need to examine the effects of having a very high profit or a very low loss:

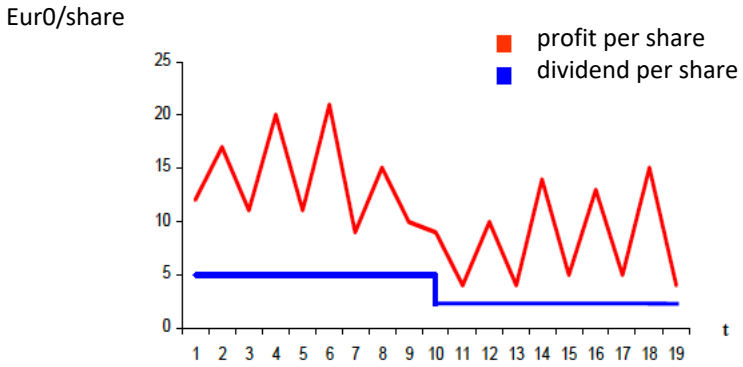
- If Y >> → Y> Div → undistributed profit (for reservations).
- Excessive accumulation of reserves over time.



# 5.1. Introduction

Dividend Policies:

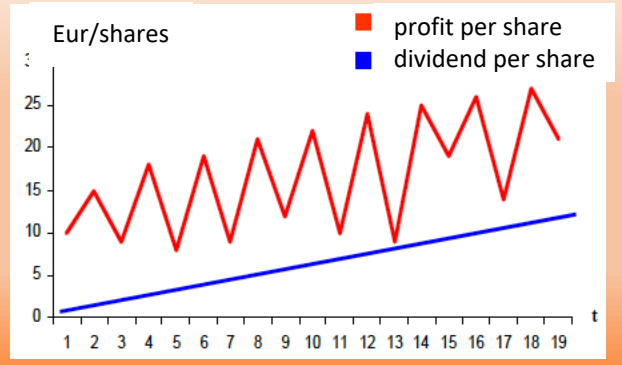
- If Y << →Y < Div→ to comply with the shareholders, some of the existing reserves will have to be settled.
- Considerable decapitalization of the company.




- Inflation → ΔY →The company sets an optimal rate of t dividend growth.

- This type of policy is one of those most often adopted by companies.

→ STABILITY IN THE TRADING OF SHARES

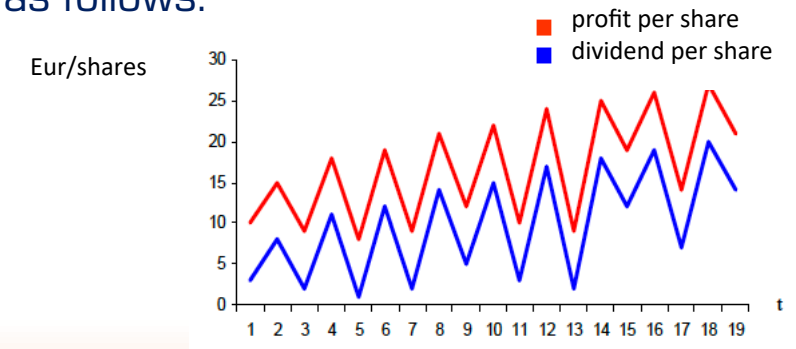


# 5.1. Introduction

Dividend Policies:

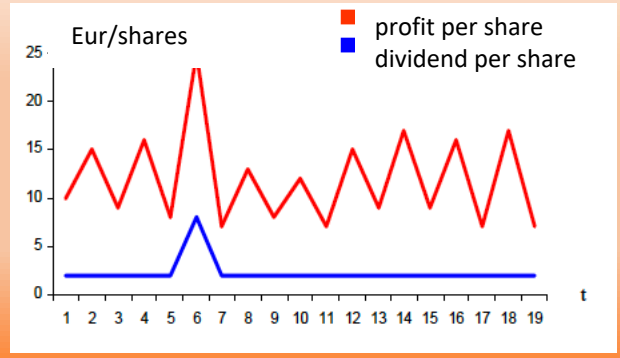
## Policy 2: Fixed percentage on profit

- Euros distributed change every year → variable dividend.
- Graphically, this can be expressed as follows:
- INSTABILITY IN THE TRADING OF THE SHARES




## Policy 3: Constant annual dividend with adjustments

- Distribute a constant dividend + complementary dividend.
- Shareholders are better satisfied in the most fruitful years.
- INSTABILITY IN THE TRADING OF SHARES

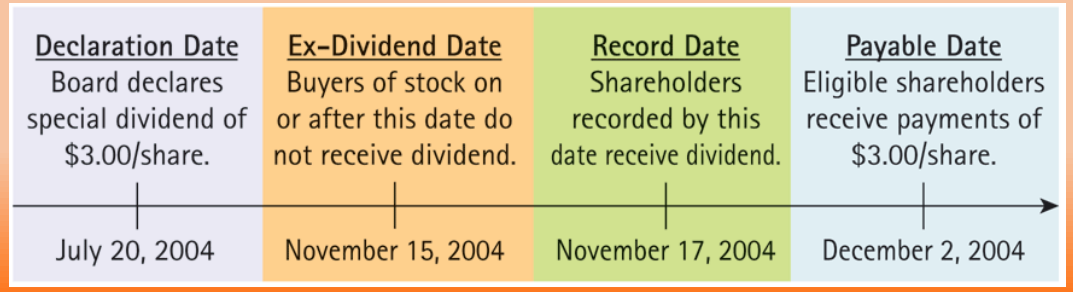


# 5.1. Introduction

**A DIVIDEND** is the part of a company's net profit that is paid in cash to its shareholders every fiscal year. The rest is retained profit, which is part of the company's SELF-FINANCE.

Definitions:

- **Declaration Date:** The date on which a public company's board of directors authorizes the payment of a dividend.
- **Ex-Dividend Date:** A date, two days prior to a dividend's record date, on or after which anyone buying the stock will not be eligible for the dividend.
- **Record Date:** The specific date set by a public company's board of directors such that the firm will pay a dividend to all shareholders of record on this date.
- **Payable Date: (**distribution date) A date, generally within a month after the record date, on which a firm mails dividend checks to its registered stockholders.



# 5.1. Introduction

Most companies that pay dividends pay them at regular quarterly intervals. Companies do not usually adjust the amount of their dividends and there is little variation in the amount of the dividend paid from quarter to quarter. Occasionally, a firm may pay a one-time, special dividend that is usually much larger than a regular dividend.

- **Special dividend:** A one-time dividend payment a firm makes that is usually much larger than a regular dividend.

Dividends are a cash outflow for a company. From an accounting perspective, dividends generally reduce the firm's current (or accumulated) retained earnings. In some cases, dividends are attributed to other accounting sources, such as paid-in capital or the liquidation of assets. In this case, the dividend is known as a return of capital or a liquidating dividend. Although the source of the funds makes little difference to a firm or to investors directly, there is a difference in tax treatment: a return of capital is taxed as a capital gain rather than as a dividend for the investor.

- **Return of capital:** When a firm, rather than paying dividends out of current earnings (or accumulated retained earnings), pays dividends from other sources, such as paid-in capital or the liquidation of assets.

- **Liquidating dividend**: A return of capital to shareholders from a business operation that is being terminated.

# 5.2. Cash distributions to shareholders in perfect capital markets

**Modigliani and Miller (MM)** with perfect capital markets

MM Dividend Irrelevance (1961): In perfect capital markets, where a firm's investment policy is held fixed, the firm's choice of dividend policy is irrelevant and does not affect the initial share price.

The **market value of the company (Proposition I MM)** is determined by:

- Its profit-making capacity → investment policy.
- Its type of risk → it does not depend on all the benefits distributed or retained.

- Consequently:

A change in dividend policy may not affect the investor's expected result, since an increase in dividend is balanced out by a fall in the ex-dividend price, with which wealth is maintained.

*Ex-dividend price means that the dividend price is deducted from the share price.*

# 5.2. Cash distributions to shareholders in perfect capital markets

Hypothesis:

*1. The capital markets are perfect.* Therefore, there are no taxes, transaction costs or information asymmetries, and individuals and companies can get into debt at the same interest rate.

*2. Investors behave rationally*. They prefer more wealth to less wealth and are indifferent to an increase in dividends or an equivalent increase in the price of their stocks.

*3. Environment of certainty: future dividends are as safe as current ones.*

*4. The company is not indebted.*

*5. The investment program is kept constant.*

If the above hypotheses are strictly fulfilled, according to MM, one Δ in the dividend per share:

- leads to an identical reduction in the price per share.
- does not alter shareholder wealth.

# 5.2. Cash distributions to shareholders in perfect capital markets

According to MM, the shareholder's return is a fair return on their investment based on the risk they assume; therefore:

(5.1.)

$$r_S = \frac{d_{t+1} + \Delta P_t^{ex}}{P_t^{ex}} = \frac{d_{t+1} + P_{t+1}^{ex} - P_t^{ex}}{P_t^{ex}}$$

$d_{t+1}$: Unitary dividend paid in t + 1.

$P_{t+1}^{ex}$: price of the ex-dividend share at the end of t + 1.

$P_t^{ex}$: price of the ex-dividend share at the beginning of t + 1

Remember: The ex-dividend price means that the dividend price is deducted from the share price.

$$r_S = \frac{d_{t+1}}{P_t^{ex}} + \frac{P_{t+1}^{ex}}{P_t^{ex}} - \frac{P_t^{ex}}{P_t^{ex}} \rightarrow \boxed{P_t^{ex} = \frac{d_{t+1} + P_{t+1}^{ex}}{r_S + 1}}$$

(5.2.)

# 5.2. Cash distributions to shareholders in perfect capital markets

If the company does not have debt in its financial structure (hypothesis), the value of the company will depend on the number of outstanding shares:

$$n_t \cdot P_t^{ex} = \frac{n_t \cdot d_{t+1} + n_t \cdot P_{t+1}^{ex}}{r_s + 1} \qquad (5.3.)$$

$V_t = n_t \cdot P_t^{ex}$ : value of the company (made up only of its own resources).

$D_{t+1} = n_t \cdot d_{t+1}$ : total dividends paid to shareholders.

If we rewrite equation 5.3. we obtain the current value of the company:

$$V_t = \frac{D_{t+1} + n_t \cdot P_{t+1}^{ex}}{r_s + 1} \qquad (5.4.)$$

# 5.2. Cash distributions to shareholders in perfect capital markets

Considering a constant investment program (hypothesis) and a non-indebted financial structure (hypothesis), shareholder wealth can be calculated based on two policies:

a) Distributing the remaining surplus once investments, such as dividends, are financed.

b) Carrying out a capital increase in order to distribute extra dividends.

## a) Residual dividend distribution

**If there are no debts,** the profit will be used to make new investments and the remaining monetary units will be distributed among the shareholders (dividends):

$$Y_{t+1} = D_{t+1} + I_{t+1}$$

$$D_{t+1} = Y_{t+1} - I_{t+1} \qquad (5.5.)$$

$D_{t+1}$ : is the excess of profit after serving the investments.

# 5.2. Cash distributions to shareholders in perfect capital markets

## a) Residual dividend distribution

If we substitute (5.5) for (5.4) and assu$V_t = n_t \cdot P_{t+1}$ ar$n_t = n_{t+1}$,that we will have the present value of the company if the residual distribution of dividends is:

$$V_t = \frac{(Y_{t+1} - I_{t+1}) + V_{t+1}}{r_s + 1} \qquad (5.6.)$$

## b) Capital increase

The money available for dividend distribution is now derived from:

- profits generated at the end of the period (insufficient).
- liquid resources generated by the extension of capital (emission of $m_{t+1}$ new shares).

$$\underbrace{Y_{t+1}}_{} + \underbrace{m_{t+1} \cdot P_{t+1}}_{} = D_{t+1} + I_{t+1} \qquad (5.7.)$$

# 5.2. Cash distributions to shareholders in perfect capital markets

## b) Capital increase

$$Y_{t+1} + m_{t+1} \cdot P_{t+1} = D_{t+1} + I_{t+1} \qquad (5.7.)$$

Insufficient gross profit to meet dividends and new investments

Issue of new shares

In equation 5.7, we obtain the dividend:

$$D_{t+1} = Y_{t+1} + m_{t+1} \cdot P_{t+1} - I_{t+1} \qquad (5.8.)$$

After the capital increase, the number of outstanding shares (old + new) has been modified and reached a total value. Therefore:

- Before the capital increase, where $V_{t+1} = n_t \cdot P^{ex}_{t+1}$ and $n_t = v$, v are the old shares.

- After the capital increase, where $V_{t+1} = n_{t+1} \cdot P^{ex}_{t+1}$ and $n_{t+1} = v + n$, v are the old shares and n are the new shares.

- Consequently:

$$V_{t+1} = (n_t + m_{t+1}) \cdot P^{ex}_{t+1} = n_t \cdot P^{ex}_{t+1} + m_{t+1} \cdot P^{ex}_{t+1} \qquad (5.9.)$$

# 5.2. Cash distributions to shareholders in perfect capital markets

## b) Capital increase

The value of the investment from the former shareholder is therefore deducted from:

$$n_t \cdot P^{ex}_{t+1} = V_{t+1} - m_{t+1} \cdot P^{ex}_{t+1} \qquad (5.10.)$$

It follows from expression (5.10) that the old shares lose value by the amount: $m_{t+1} \cdot P_{t+1}$, thus coinciding with the distributed dividends

$m_{t+1} \cdot P_{t+1} \equiv$ receiving the dividend implies giving up the same amount to a capital gain in the market → they balance out

This is because by issuing new shares:

- ∃ more outstanding shares.
- ∃ more demands to be met by shareholders.
- The profits to be shared are reduced → more shares.

# 5.2. Cash distributions to shareholders in perfect capital markets

## b) Capital increase

Consequences:

- ∇ the share price → distributed dividend.

→The market value of the company will not be altered.

If we substitute the expressions (5.9) and (5.10) in (5.6), we verify the above statement and obtain the company's current value if it makes a capital increase:

$$V_t = \frac{Y_{t+1} + m_{t+1} P_{t+1} - I_{t+1} + V_{t+1} - m_{t+1} P_{t+1}}{r_s + 1}$$

$$V_t = \frac{Y_{t+1} - I_{t+1} + V_{t+1}}{r_s + 1} \qquad (5.11.)$$

It is therefore demonstrated that in both options:

- A residual dividend is distributed.
- A new capital increase is undertaken.

→This leads to the same current value as the company.

- Expressions (5.11) and (5.6) are the same.

# 5.2. Cash distributions to shareholders in perfect capital markets

## HOMEMADE DIVIDENDS

According to the irrelevance of MM's dividend policy, how do the investors obtain the liquidity (L) they want?

- If L < dividends: by selling some of their shares.
- If L > dividends: by buying more shares.

The shareholders design guidelines to enable them to obtain the liquidity desired, i.e. "homemade dividends".

The shareholders will no longer value the company that distributes the most/fewest dividends:

→ Dividend policy is IRRELEVANT.

## Gordon Model

In a perfect market → you obtain liquidity →by receiving dividends or selling shares in the market (MM thesis).

- Main criticism of MM:

1. The dividend is safe: → Critical: it is relatively safe.
2. Capital gain does not involve risk. → Critical: possible capital gains involve risk.

The investor will show PREFERENCE over DIVIDENDS.

# 5.2. Cash distributions to shareholders in perfect capital markets

**Gordon Model: Bird in the hand fallacy**

"Bird in the hand" → investors' preference for liquidity.

- Gordon points out that $\Delta$ $r_S$ if investors now receive income further away in time.
- If higher dividends are now distributed in exchange for lower dividends expected in the future → $\Delta V_t$.

Investors will value more highly those companies that distribute more dividends at the moment.

- **Gordon → Defends the "bird in the hand" effect, according to which investors prefer a certain return at the present time in the form of dividends rather than the prospect of future, uncertain dividends.**

→Dividend policy is RELEVANT.

# 5.2. Cash distributions to shareholders in perfect capital markets

**Conclusions of the Gordon Model:**

- If $r > r_S$ → the expected return on new investments is higher than the return required by shareholders:

  if $D_{t+1}$ <<<< → $V_t$ >>>> (provides more value for the company to reinvest the profits)

- If $r < r_S$ → the expected return on new investments is lower than the return required by shareholders.

  It is advisable to distribute the entire profit as a dividend ($Y_{t+1} = D_{t+1}$) since the return that would be obtained in the company from this profit would be less than the profitability that the shareholder could obtain in the market with the same level of risk.

- If $r = r_S$ → the expected return on new investments is equal to the return required by shareholders.

  The value of the firm does not vary with the retained profit. → Only in this case would the dividend policy be irrelevant.

# 5.3. The tax disadvantage of dividends

We now introduce into our analysis:

- **Personal taxes**, which are levied differently on dividends and capital gains.
- **Transaction costs** (purchase and issuance of titles).

As a general rule, the dividend tax rate ($t_D$) is different from (higher than) the tax on capital gains ($t_G$).

Therefore, investors will not be indifferent when it comes to:

- Receiving capital gains: they are taxed when the transfer of assets takes place.
- Receiving dividends: they are taxed when dividends are distributed.

→ Investors who do not need liquidity will not want to receive dividends that force them to pay taxes.

# 5.3. The tax disadvantage of dividends

An investor who is facing two companies (A and B) with identical economic risks and levels of indebtedness (i.e. same "class") will penalize much more the company that follows a policy of dividends that is detrimental to their tax purposes:

- How? By paying less for their shares, bidding down on their listing, to offset the higher tax payments involved.

What is the required profitability for those companies that follow different dividend policies, where $t_D > t_G$?

—Before taxes: $Div^A > 0$ and $Div^B = 0$

Company income is penalized Company A income → the shareholder will demand a higher profitability to offset the effect of the tax ($r_S^A > r_S^B$).

—After taxes: $Div^A > 0$ and $Div^B = 0$

The shareholder will demand the same return (equilibrium condition):

$$\left(r_S^A\right)^t = \left(r_S^B\right)^t$$

# 5.3. The tax disadvantage of dividends

Shareholders who need cash have two alternatives:

– Sell some of their shares.

– Collect an extraordinary dividend financed by the issuance of shares.

a) They will prefer to sell some of their shares because the tax that must be paid on the profits of which are lower than those that support the dividends ($t_D > t_G$).

b) Investors who do not want liquidity will prefer the company not to distribute dividends.

Return before taxes, using (5.4), can be separated into "dividend yield" and "return on capital gains or capital gains":

$$r_s = \frac{d_{t+1} + P^{ex}_{t+1} - P^{ex}_t}{P^{ex}_t} = \frac{d_{t+1}}{P^{ex}_t} + \frac{P^{ex}_{t+1} - P^{ex}_t}{P^{ex}_t} \qquad (5.12.)$$

# 5.3. The tax disadvantage of dividends

Return after personal taxes will be:

$$r_S^t = \frac{d_{t+1}\cdot(1-t_D)}{P_t^{ex}} + \frac{(P_{t+1}^{ex} - P_t^{ex})(1-t_G)}{P_t^{ex}} \qquad (5.13.)$$

$d_{t+1}$ : expected dividend per share at the end of period t + 1.

$P_t^{ex}$ : price of a share (ex-dividend) at the beginning of period t + 1.

$P_{t+1}^{ex}$ : price of a share (ex-dividend) at the end of period t + 1.

$(P_{t+1}^{ex} - P_t^{ex})$: expected capital gain in the period t + 1.

$r_S$ : return, before taxes, required by shareholders.

$t_D$ : tax on return received in the form of dividends.

$t_G$ : tax on return received in the form of capital gains.

$d_{t+1}\cdot(1-t_D)$: net dividends after deducting taxes.

$(P_{t+1}^{ex} - P_t^{ex})(1-t_G)$: net capital gain after deducting taxes.

$r_S^t$ : return after taxes, demanded by shareholders.

# 5.3. The tax disadvantage of dividends

If $t_D > t_G \rightarrow$ the company $\Delta dt + 1$ in impairment of capital gains:

The numerator will be smaller and, as the return must be maintained, since neither the economic risk nor the indebtedness will change, the denominator (the price of the shares) must decrease.

$$\left(r_s^t\right)' = \frac{\Delta d_{t+1} \cdot (1 - t_D) + \left(P_{t+1}^{ex} - P_t^{ex}\right)(1 - t_G)}{\nabla P_t^{ex}} = r_s^t \qquad (5.14.)$$

If $t_D < t_G$ → capital gains are penalized:

Investors will prefer higher dividends as they will pay less tax so, faced with two equal companies that differ only in the distribution of dividends, one will require greater profitability before taxes.

If $t_D = t_G$ → the dividend policy will not affect firm value.

# 5.3. The tax disadvantage of dividends

Investors also incur the following financial costs:

- **Costs in trading securities in the secondary market**, which prevent them from obtaining the liquidity they want through the purchase and sale of shares in the market.
- **Costs in issuing new securities:** they are no longer perfect replaceable the two sources of financing of the company: profits with holding and issuance of shares.

The two sources of company finance are no longer perfectly replaceable. As they cannot neutralize the company's decisions regarding the distribution of dividends, they act directly in the capital market and influence the price of shares.

# 5.4. Dividend capture and tax clienteles

**Clientele Effects:** a company's tendency to attract a type of investor who is attracted to its dividend policy.

Shareholder investment criteria:

- Investors with a low level of income (and who do not pay taxes); these investors are looking for liquidity and will invest in tax-exempt companies that pay large dividends, since all income generated is net.
- Investors with a high level of income (and who do pay taxes); if these investors are not looking for liquidity, they will invest in companies that pay small dividends.

Depending on the dividend policy established by the company, it will attract a certain type of "clientele", though this is not sufficient reason to alter the value of the shares:

This means that no particular clientele is better than another; therefore, **the theory of MM is maintained.**

# 5.4. Dividend capture and tax clienteles

Companies tend to maintain a fairly stable dividend policy because:

- ❖ It enables the training of tax clients.
- ❖ It inspires investor confidence.

– The clientele effect has certain limitations:

- ❖ Belonging to a specific tax clientele involves giving up a specific type of share.
- ❖ Changes in the investor's taxable income can alter their preferences for dividends and force them to change their portfolio.