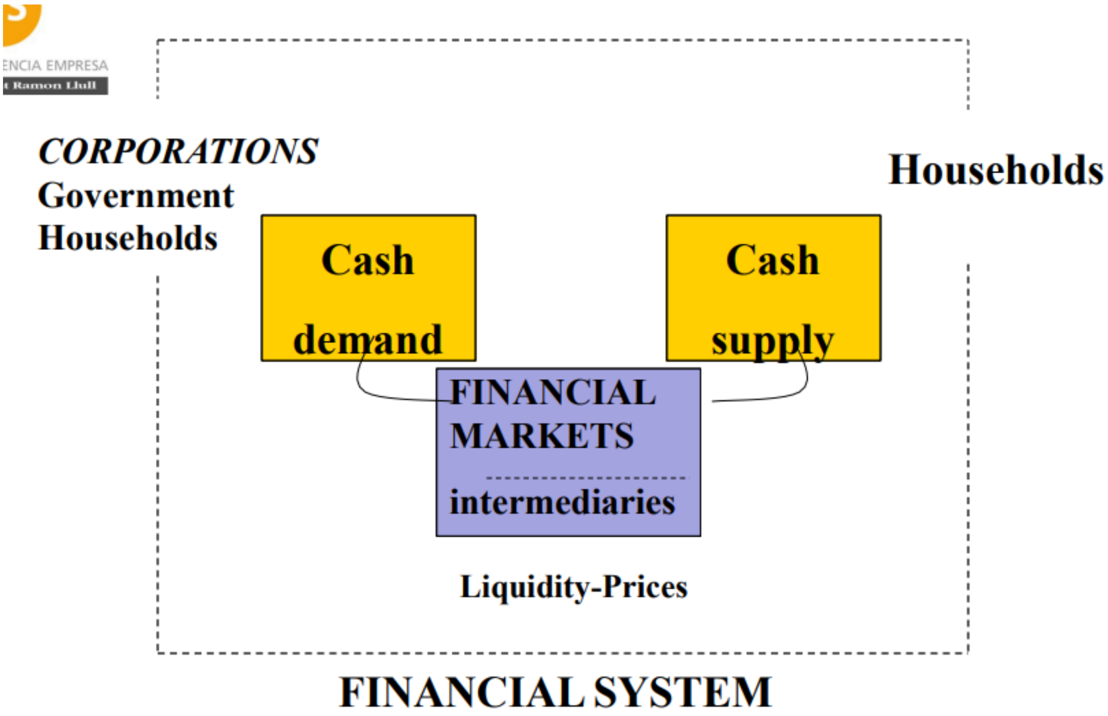
CHAPTER 5: EFFICIENCY

Book: A random walk down Wall-street

How the Financial Market works?



Set of institutions, markets, instruments, assets, and regulatory rules.

Functions

The functionalities of the market are:

- **Assign savings to fund demand:** When companies ask for money.
- **Determines the interest rate:** Nothing to say on this.
- **Determines the risk premium:** Nothing to say on this.

It does so by making **trades** between the different players, and it **determines prices** thanks to the relation between demand and offer.

Efficiency

Efficiency is what determines if a market is able to perform correctly, **representing the right valuation of the companies that form it**, without wasting time or energy.

Types:

1. **Internal:** It has low transaction costs combined with safe trades.
2. **External:** Prices are fair, allowing us to trust them.
   a. A fair price is basically the one which represents correctly the value of the company.

Forms of Efficiency

Efficiency Form	Information that prices incorporate
Weak	Past Information
Semi Strong	Past Information + Published Information
Strong	Past + Published + Obtain (from accurate analysis)

Prices reflect the value and only change when information arrives. Because of it, changes cannot be forecast in an efficient market. However, any opportunity for an inefficiency can be arrived through:

- **Speculation:** Having an overvalued company.
- **Arbitrage:** More rarely but Warren Buffet use it to win money.

These anomalies lay in one of the following causes or combinations of those causes:

- **Size.**
- **Frequency of trading.**
- **Seasonality.**
- **Asymmetric information.**

Technical Analysis vs Fundamental Analysis

Technical Analysis.

Consists of the search of **predictable patterns in stock prices**. Technical analysts (chartists) study records of past prices that they translate to charts and try to identify **trends** to predict the future. Assumes that the market is not efficient at all.

Fundamental Analysis.

Consists of determining the proper stock Price or **intrinsic value** by analyzing accountancy information of the company, macroeconomic information, and risk evaluation.

What does Reduce efficiency

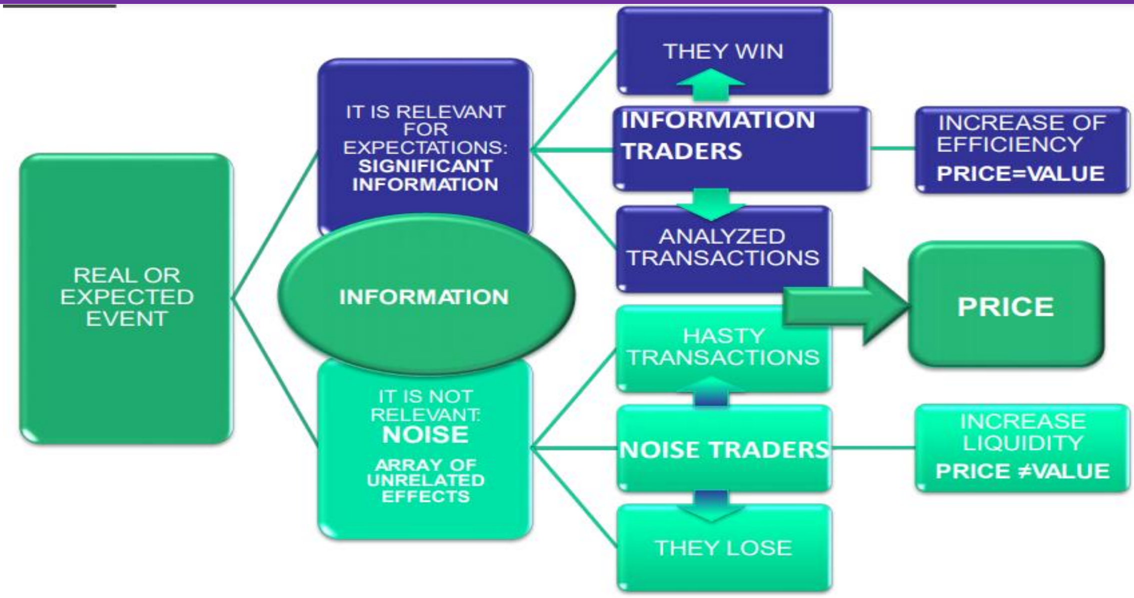
1. **Noise**

Wide array of unrelated effects, combined mainly with instability and uncertainty that leads to not knowing if those effects are affecting the company, increasing the probability of making a transaction. **Ex.:** Rumors + small and irrelevant pieces of information.

Noise is **something that we need to make markets liquid**.

2. **Fisher-black**

There are two types of traders, the noise traders and information traders. While the first one treat noise as information, the others are trading based on real information about the statements.



3. Bubbles

Is a systematic increase in prices not justified by objective facts. Prices increase but value does not increase, without the market being aware of that.

We all have seen the construction bubble, so that is the one. Everybody though the buildings prices would never fall until they did fall.

Optimism and irrational purchase is what leads the market.

Irrational Exuberance

The prices of today are higher than yesterday because of not reason, based only in optimism. This goes on until someone does the valuation and stops buying and start selling.

Then suddenly, when everybody is selling, we call it a crisis, instead of trust there is distrust, and instead of thinking that prices are low, investors thing they are too high.

Market Efficiency

Financial markets are efficient in the long run – Burton Malkiel

Passive strategy

This is when you think that the market is efficient, you buy a portfolio that replicates the stock market Index.

Goal: Obtain the same earnings than the stock market.

Active strategy

You can either consider the market not efficient so you take part on the inefficiencies to enrich yourself from them, **you want to earn more than the market.**

Types:

- **Bottom-up:** Speculation based on knowledge of the corporations.
- **Top-down:** Speculation based on knowledge of macroeconomics.