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Co-opetition in Finacial markets

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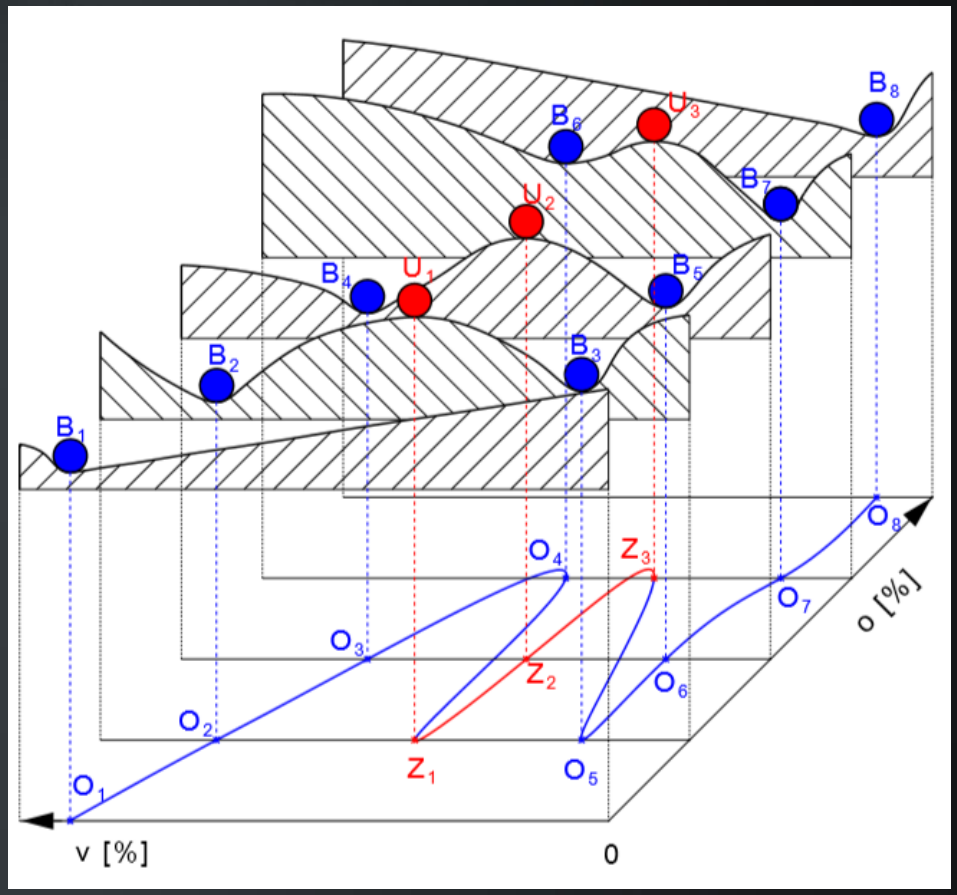
How to start – introduction – main goal

The concept of co-opetition was described by Nalebuff and Brandenburger (1997), who attempted to analyze and describe it in more detail. They derived the concept using game theory, which allows them to go beyond simplistic notions of competition and co-operation in order to arrive at the benefits of co-opetition.

And fundamental problem:

In other words, more suitable opportunities to exploit the chances for Pareto improvements and mutual savings resulting from collective action in the financial markets.



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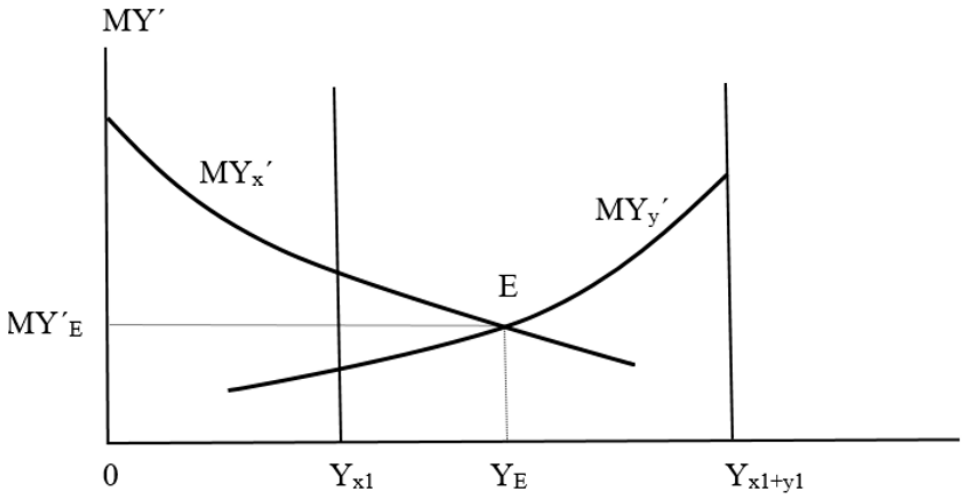
Example of a financial market with co-opetition

Figure 1



Basic model of supply and demand of investment funds and investment opportunities using marginal variables: microeconomic issues, standard equilibrium, can be expressed analytically.

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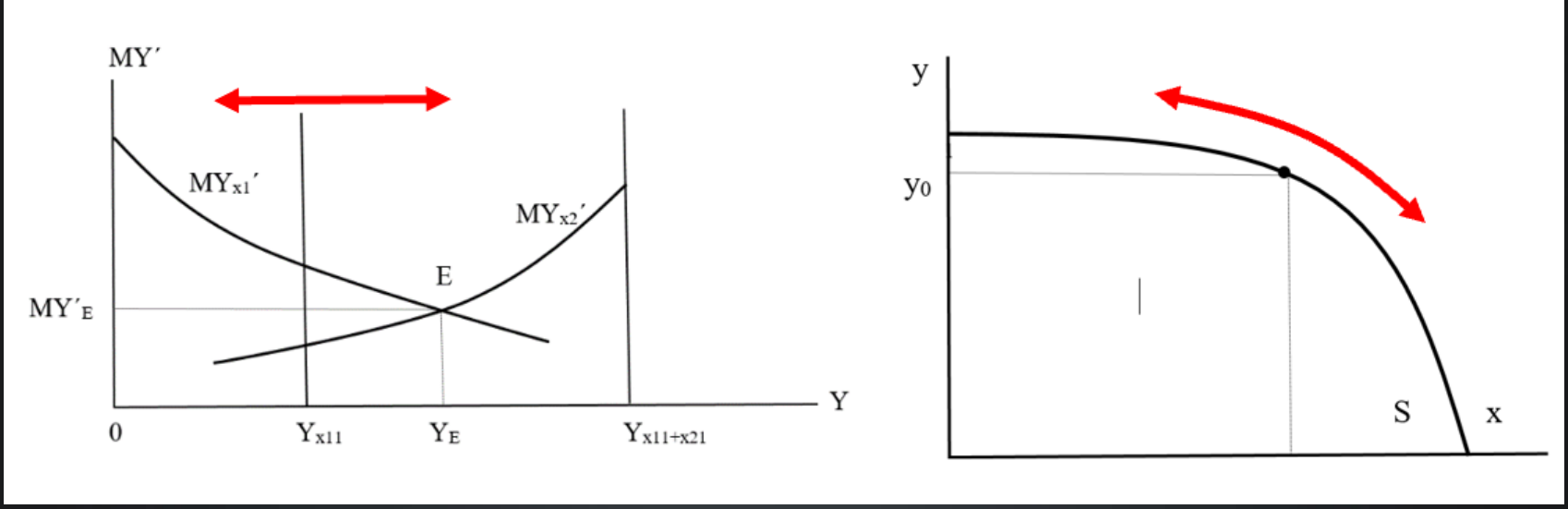
Type of collective action – [in total quantities]

One way of projecting players' ideas about future - relationship between two agents (players = competitors), each of whom has investment opportunities (i.e., what can be invested in expecting a certain payoff) and investment resources, funds (i.e., what can be invested to exploit the investment opportunities)



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How to negotiate co-opetition

Ken Binmore (1994) demonstrated how one can elegantly translate an Edgeworth box diagram (describing the market in marginal quantities) into a graph in total quantities that merges with the Nash (S, d) bargaining problem (1950), cf:

And fundamental problem:
Which of the points by the indifference curves is the "right" one? That is, which of the points that satisfies the assumptions of: individual rationality, collective rationality, and reachability?

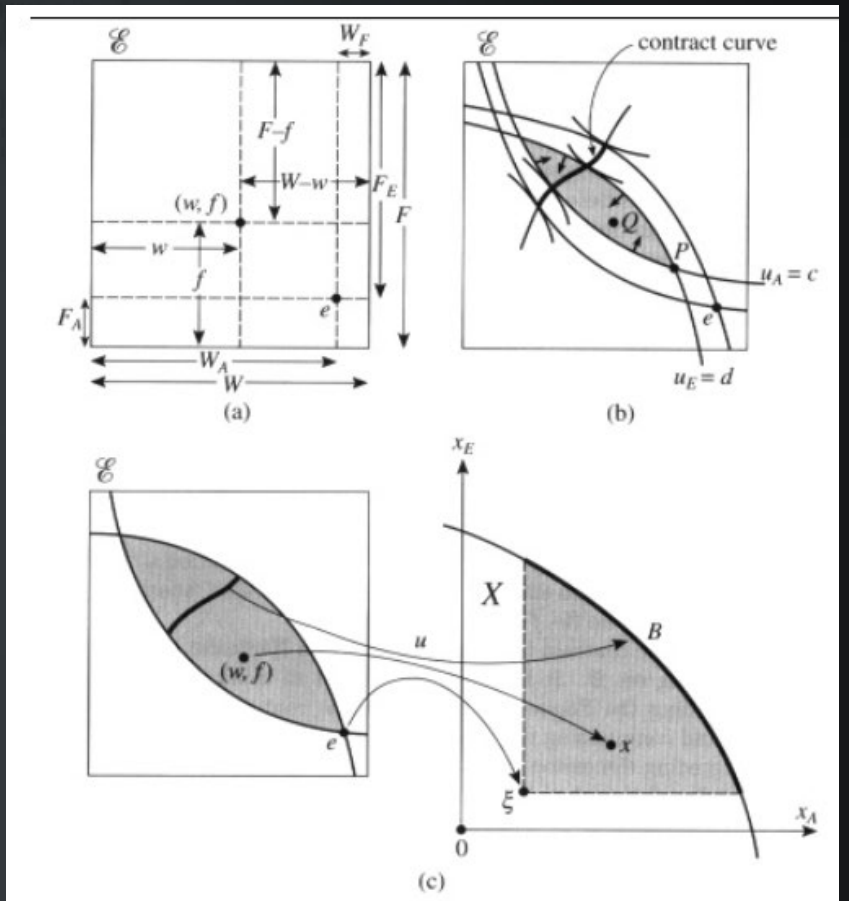

Figure 1.4:
The Edgeworth box.

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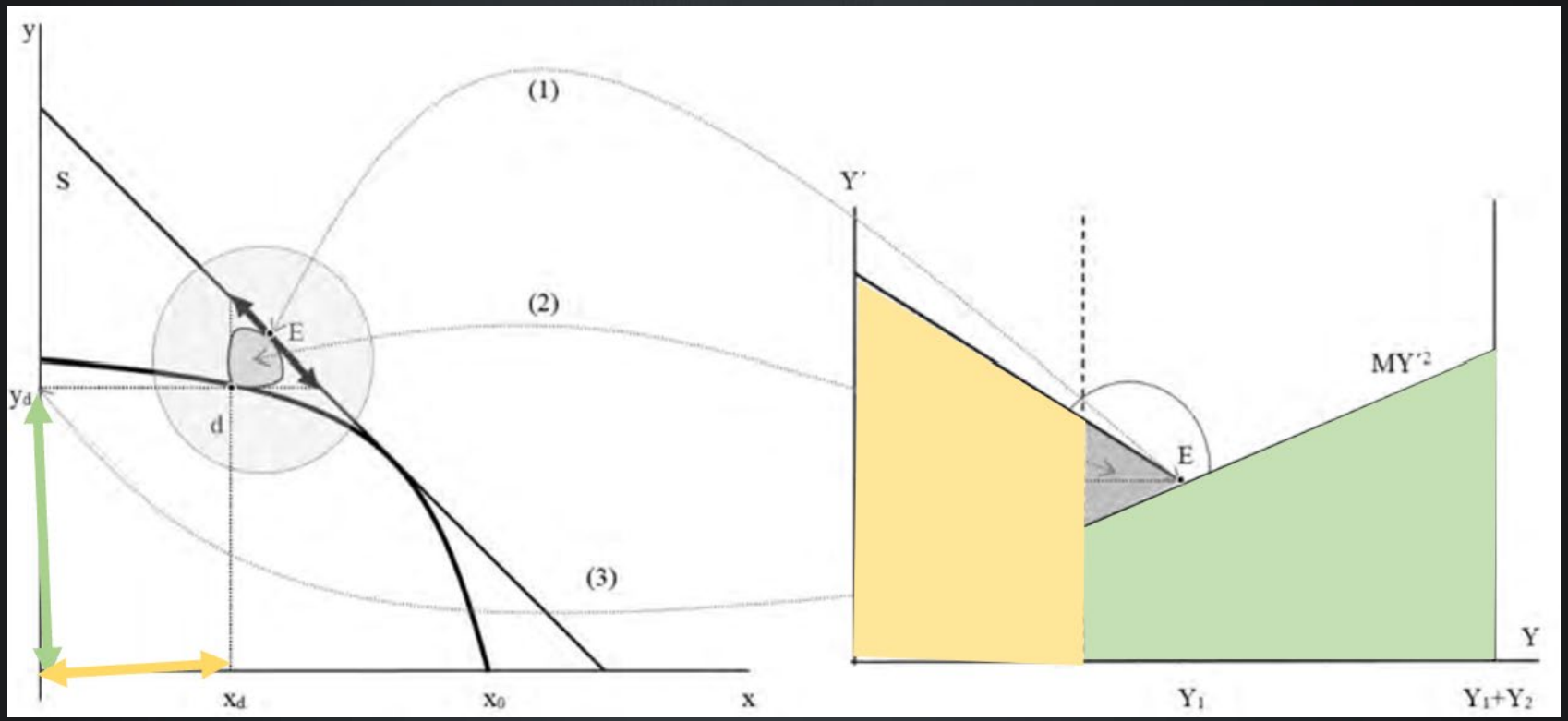
Division in collective action of competitors



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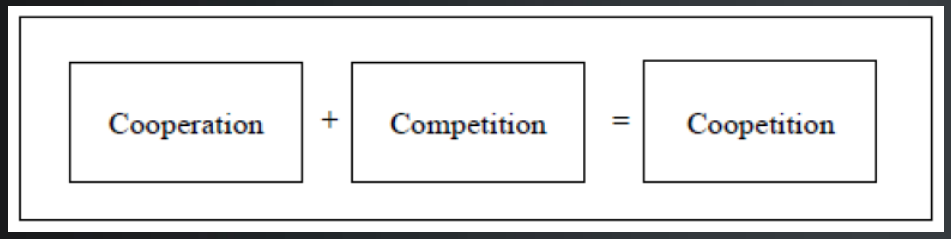
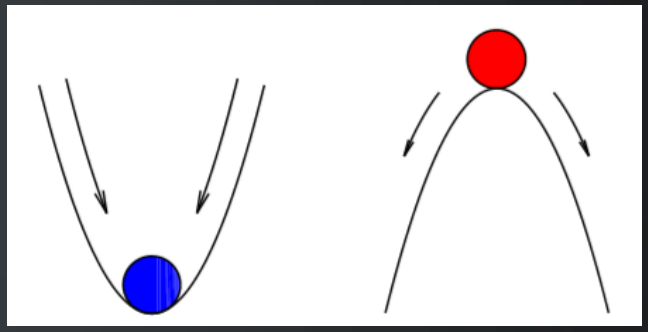
Benefits and risks of co-opetition

Co-opetition combines the advantages of both competition and cooperation with a new dynamic that can be used not only to generate higher profits, but also to change the trend of financial market development to the benefit of the players involved.





We must not forget that this is cooperation between competitors, which can be very risky or even destructive. There are situations where co-opetition is stable and unstable, as shown in the figures.

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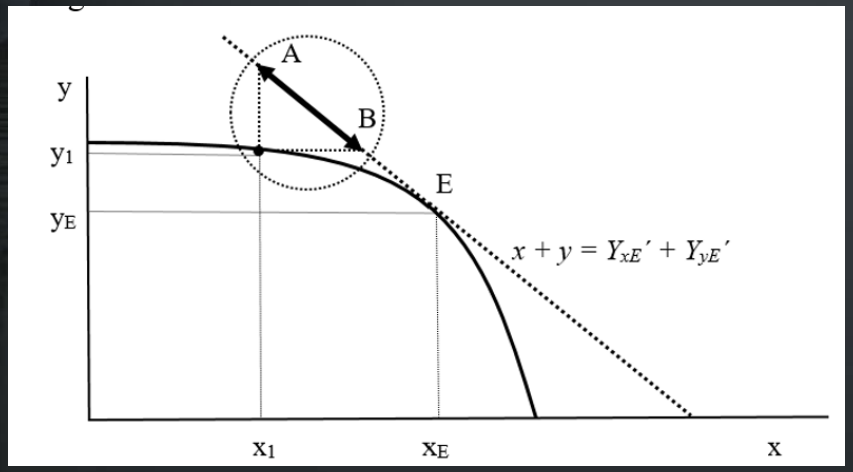
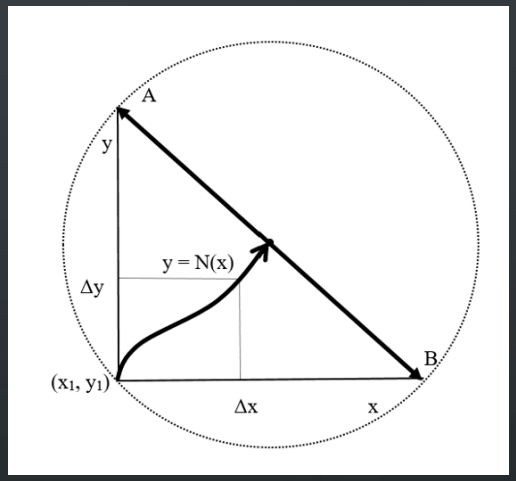
Optimum assumption of co-opetition

The line **AB**, represented by the bold line terminated by arrows, **represents the set** of all **maximal payoff distributions** for which both players are better off than the initial state.





All points on that line should be recognized by both players **as acceptable payoff distributions,** they satisfy the requirements of **reachability**, **individual** and **coalition rationality**.

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Thank you all for your attention and we will be happy to answer any additional questions.

Special thanks for preparation and consultation meetings to Associate Professor Radim Valenčík.

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