National Research University – Higher School of Economics

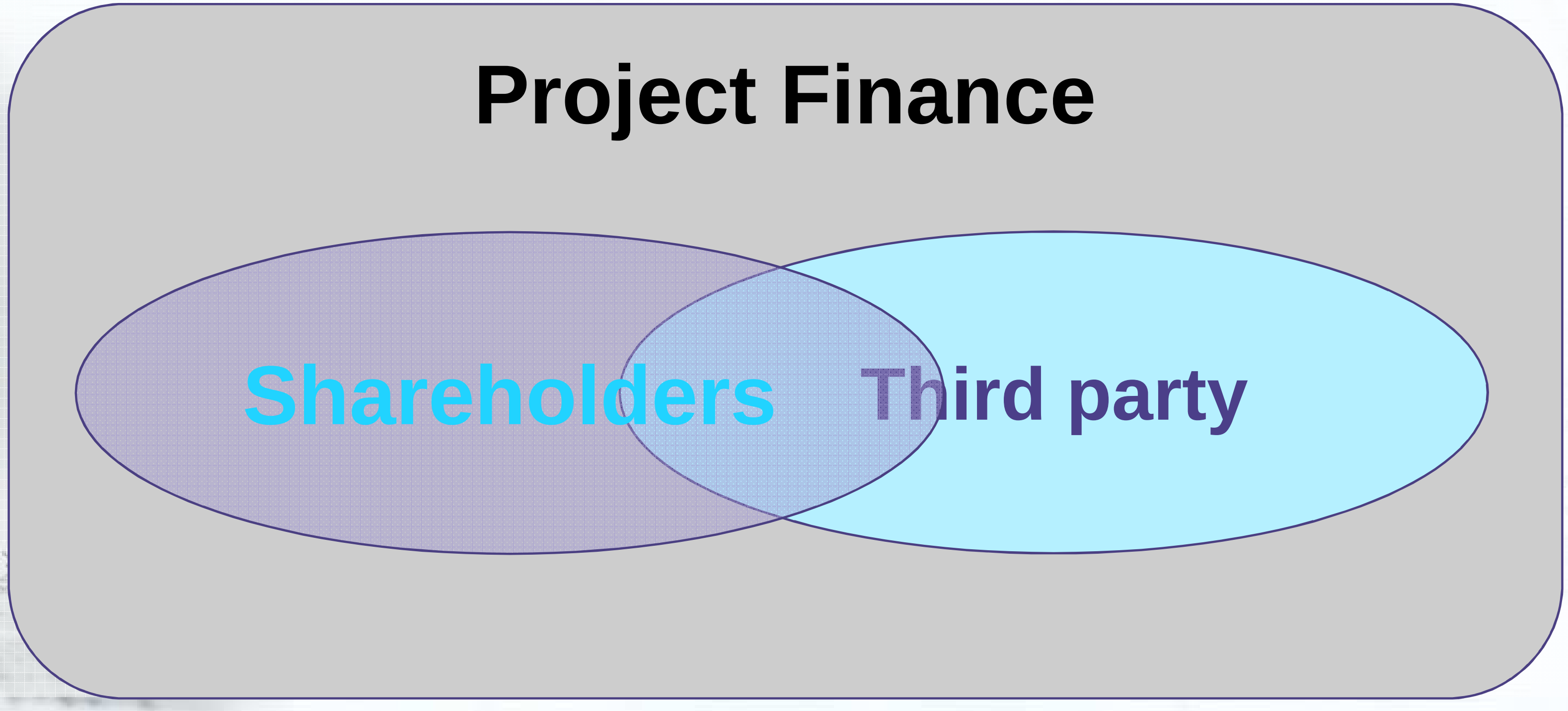
Investment Project Management

Lecture 4. «Project Capital Structure. Equity financing»

Moscow, 2014

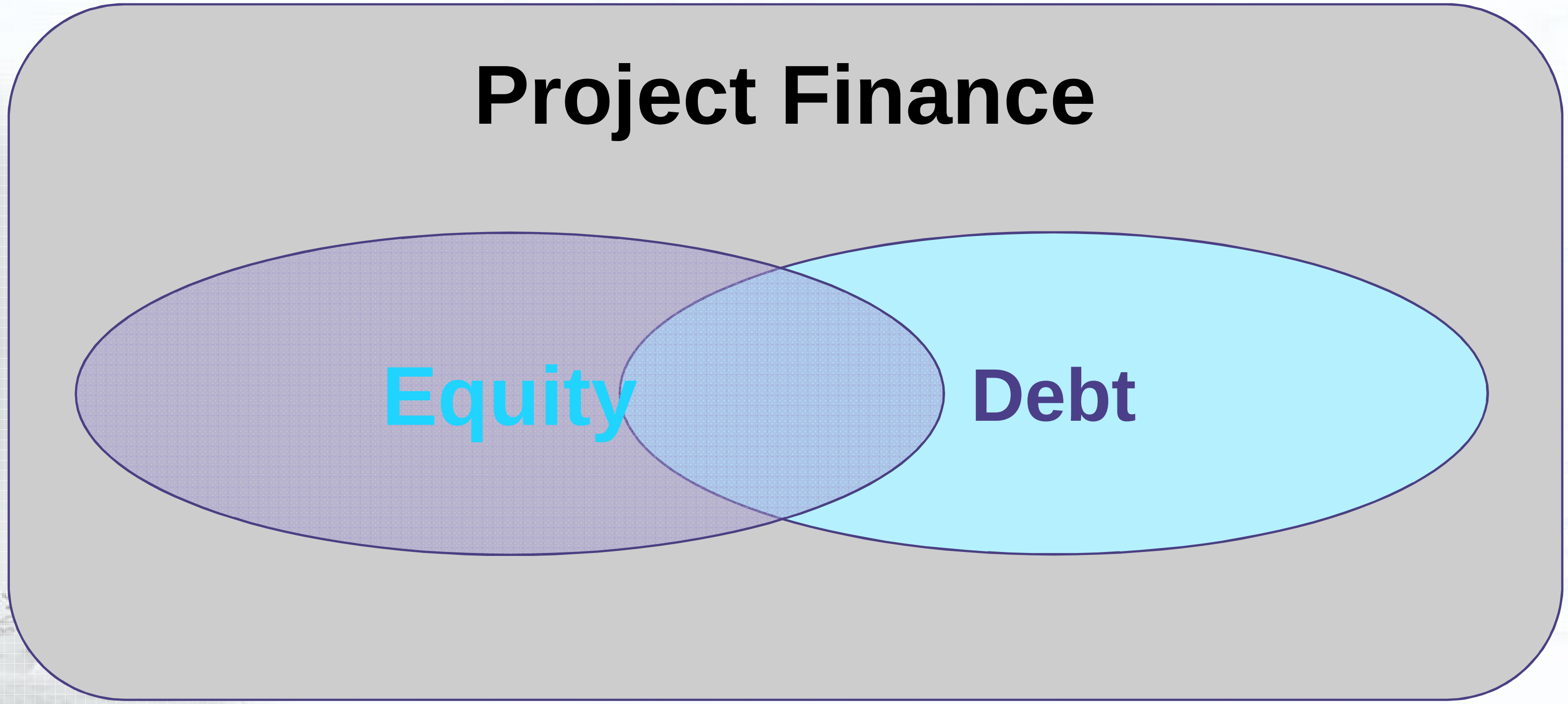
Project Capital Structure. Sources

Financing of projects can be accomplished either by **shareholders** or by the **third parties** with **combined structure**: whatever the case, the stakeholders (enterprise owners or project initiators) should bring a share of demanded capital and the expertise which allows project implementation.



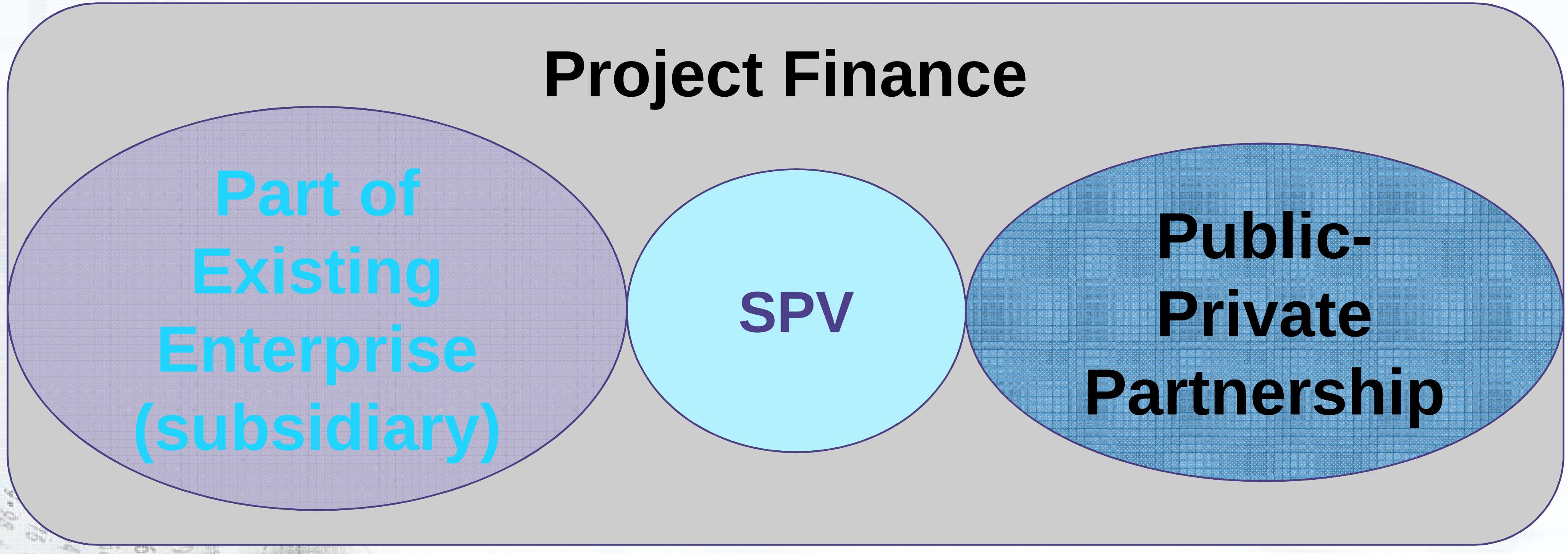
Project Capital Structure. Sources

Financing of projects can be accomplished either by **equity** (given by existing shareholders or new ones) or by borrowed funds (**debt** given by existing shareholders, third party investors, banks, public or government) or by **combination** of mentioned sources.



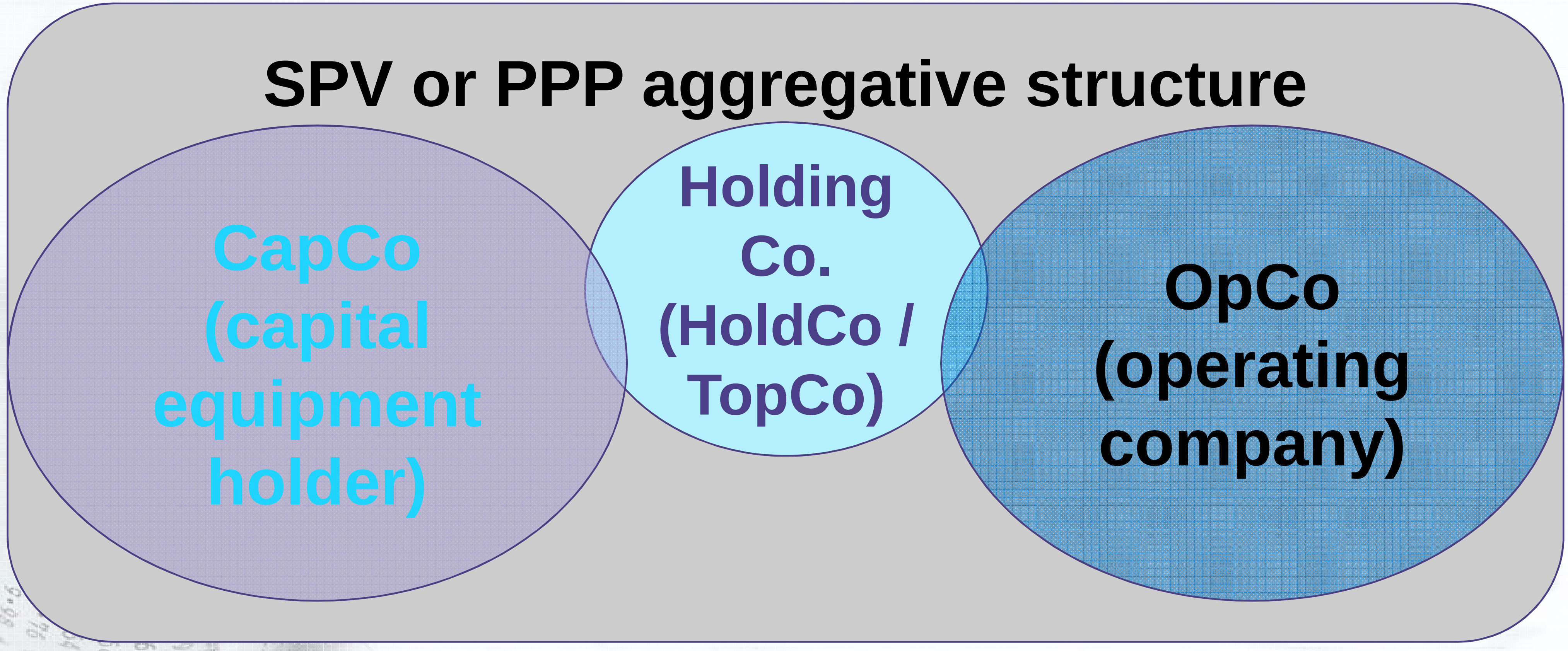
Project Capital Structure. Forms

Financing of projects can be accomplished in the form of either existing company subdivision (or legal **Subsidiary**) or **SPV** (**Special Purpose Vehicle**) or **PPP** (**Public-Private Partnership**).



Project Capital Structure. Forms

If Project Capital Structure is shaped as an **SPV** or a **PPP** the Project organization chart looks more often as follows:



Equity Finance. Forms

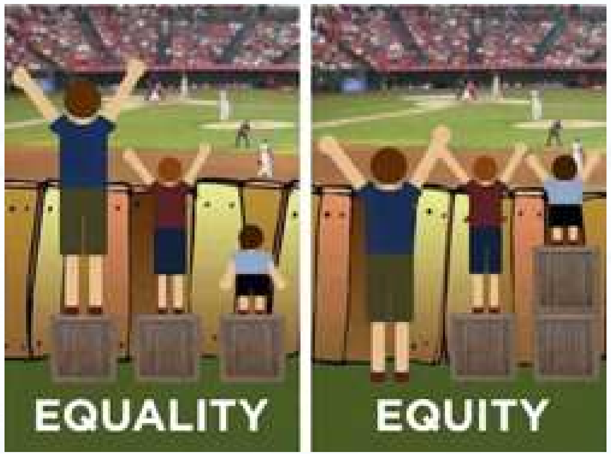
The equity for the Project can be given by:

- **Existing enterprise** as separated investment cash flow – *Exact schedule mandatory for Treasure Dept to provide funds for equipment and material procurement and maintenance costs.*
- **Existing shareholders** as new additional investment or supplementary or subordinated **capital** to existing enterprise – *Exact schedule of injections.*
- **Existing shareholders** to special newly established **subsidiary** – *The shareholders agreement for new entity.*
- **Outside investor** as a **private placement** of existing company shares – *Offering memorandum plus the shareholders agreement.*
- **Outside investor** as a **private placement** of newly established **SPV** shares – *Offering memorandum plus the shareholders agreement.*

Equity Finance. Forms

The equity for the Project can be given by:

- **Public investors** within **IPO** or **SPO** of existing company shares – *Public Offering procedure.*
- **Government** as a participation in the **Public-Private partnership** of existing company shares – *Special legal regulation in each country and even for each case.*
- **Public investors** within **Equity Crowdfunding** through the placement of existing company/SPV **shares** – *Accession memorandum – the investor buys company's shares.*



Private Placement

Private placement (via versa "Public placement"): the sale of minority stake of common shares or any quantity of preferred shares (as well as the wide range of related options and warrants) to limited number of outside investors. Private placement is performed without (as a rule) numerous legal procedures typical for **IPO**. The basic document – ***Offering Memorandum*** provided to definite potential investors.

Existing company shares are named "**secondary**" ones, new shares are "**primary**". The sale of secondary shares is called "**sell out**" because of the proceeds is paid to the existing shareholders and the new funds do not come into the company. The sale of primary shares is called "**sell in**" because the entire sales proceeds are injected inside the company and Company's cash position increases equally.

The investors **do hate** an idea to buy secondary shares.

$$\%\ ownership\ acquired = \frac{New\ Shares}{(New\ Shares + Old\ Shares)}$$

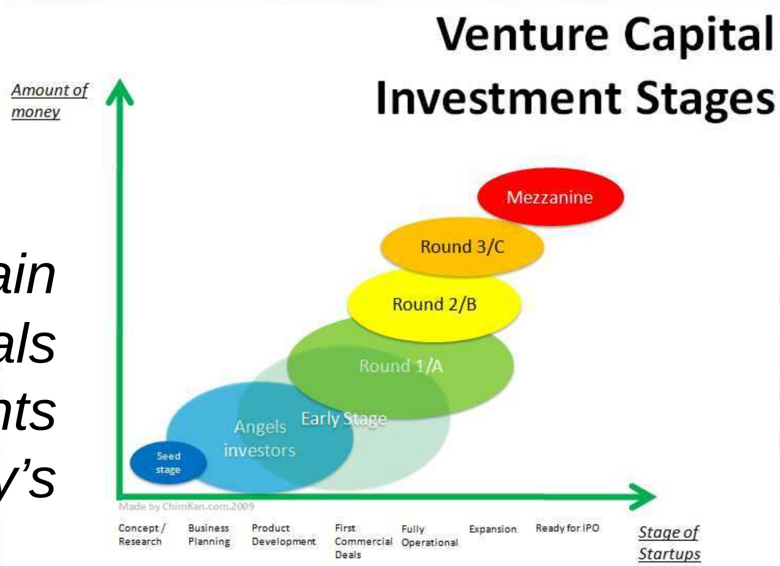
or

$$Newly\ issuing\ shares = \frac{\%\ ownership\ required}{(1 - \%\ ownership\ required)} \times Old\ shares$$

Private Placement

Private placement procedure is a simplified IPO process. There are no statutory procedures but many stages are the same: the engagement of the arranger/coordinator (the investment bank which takes a responsibility for search of investors but does not underwrite the shares); the issuer puts on a mini-road show (dogs-and-ponies show) for investors; the principles of company valuation for price-fixing are analogous to IPO, etc. The private placement investors always take the seats at the Company's Board of Directors.

***Venture** (start-up) **financing** is a chain of consequent Private placement deals with increasing amounts of investments and, correspondingly, higher Company's valuation at each stage.*



Private Placement

Types of investors as for behavior type:

Strategic investors – the large companies working in the same industry segment who intends to keep the investment for a long time. The key target – is to try to adjust the Project to own production standards and finally to acquire 100% of the enterprise/project.

Investment funds (**Financial investors**) - the specialized institutions who have the exact mandate for investing to the specific country, industry segment or company type. The key target – is to sell the shares with high return and to quit the Project.

Rich individuals – the private persons/companies who would prefer the most efficient scenario: either to sell their shares to the Strategic investor or to keep the control on the Project/Company for a long time.

Private Placement

At each stage of the private placement the parties evaluate **pre-money** and **post-money** shares price. If we buy 20 % of company's shares for USD 1M:

Post-money value = USD 1M * (100% / 20%) = USD 5M.

Pre-money value = USD 5M (Post-money) – USD 1M (Investment) = USD 4M.

In order to obtain 20 % of shares after the deal the investor has to buy (and the Company has to additionally issue) 250 new shares. One share price = USD 1M / 250 shares = USD 4 000 per share. Various scenarios of calculation:

1. **Pre-money** value = Total number of secondary shares * New share price.
2. **Pre-money** value = Post-money value – Investments amount.
3. **Post-money** value = Pre-money value + Investments amount.
4. **Post-money** value = Investments amount / % share of equity obtained by the Investor.
5. **Post-money** value = Total amount of shares (Secondary + Primary) * Share price.
6. **Share price** = Invested amount / Primary shares.

Private Placement

The increase of Company's value (**step up**) is a process of increase of share price from previous private placement to the next one. The each next round can be executed by the same investor(s) or by new ones. At this case the "new" investors have to "agree" with existing ("old") ones.

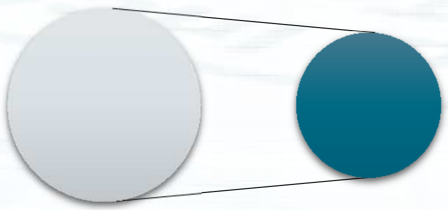
1. **Share Price growth** = Share price of the new stage / Share price of the previous stage.
2. **Share Price growth** = Post-money value of the new stage / Post-money value of the previous stage.

The reverse side of multi-stage financing is a **dilution** of existing stakeholders' parts of equity. When new funds are invested into the company's equity the shares (the % of equity) belonging to all "existing" shareholders are getting lower.

The placement of Company's shares can be executed by:

- Issuing of new "**primary**" shares;
- Issuing of the **warrant** in Investor's favour for additionally issuing shares at the certain moment of time in the future;
- Acquiring of existing "**secondary**" shares or CALL option for existing "secondary" shares (**incredibly rare!!!**);
- Acquiring of newly issued **Convertible preferred stocks** or non-convertible **preferred shares**.

The **Option** assumes the deals with **EXISTING** shares.



The **Warrant** assumes the deals with **NEWLY ISSUING** shares.

Private Placement

The majority of early stages investors establish the **retention ratio**. It's a per cent level of Company's total equity which should be always kept in favour of holding stake owner. This requirement is fixed in an Anti-dilution option agreement which has 2 main formulas of calculation: **Full-ratchet** and **Weighted average**.

Weighted Average Anti-Dilution Formula:

New Conversion Price (post-issue) **= Old conversion price * (Prior shares + $/Old)/(Prior shares + New shares)**,

where **$/Old** - Aggregate received for new issue divided by the previous conversion price (Old).

This formula has 2 variations for mentioned aggregate factor calculation **broad-based** and **narrow-based** weighted average. But both are based on linear programming solutions.

Full-Ratchet Anti-Dilution:

This method is based on several iterations of adjusting of all parameters.

The key target for both methods **to keep the constant per cent ownership** in the Company's equity for new and existing investors through all new deals of equity increase.

Private Placement

			Shareholders % ownership			
	Pre-money value	**Post-money value**	**FFF**	**SF**	**A**	**SA**
FFF financing	0	0	100,0%			
Seed financing (**SF**)	0	0	95,0%	5,0%		
Angel (invests **$1M** for **30%** of shares)	2 000 000	3 000 000	66,5%	3,5%	30,0%	
Series **A** financing (invests **$5M** for **20%** of shares)	20 000 000	25 000 000	53,2%	2,8%	24,0%	20,0%

Private Placement

The agreements concluded by investors and existing stakeholders at the Private Placement deals comprise various options and warrants:

- **Tag-along option** (Опцион «Следуем-по-пятам») – if the majority shareholder sells his shares to the third party the minority shareholders have **an option to sell** their stakes to incoming buyer on the same terms as a majority owner. (**PUT option** belonging to minority against the majority: "**minority shareholders oppression**").
- **Drag-along option** (Опцион «Вас втянули») - if the majority shareholder sells his shares to the third party the minority shareholders might be enforced **to sell** their stakes to incoming buyer on the same terms as a majority owner. (**CALL option** belonging to majority against the minority).
- **Pre-emption Right** (Pre-emptive right) – the obligation of the majority shareholders to offer **new issuing shares** to the Pre-emption right holder (**CALL option** belonging to minority shareholder).
- **Right of First Refusal** – if the stakeholder **has found** a buyer for his stake (at any price) he has an obligation to offer the shares initially to the Right holder with the same price. In case of refuse the stakeholder may close a deal with a third party buyer.
- **Right of First Offer** – if the stakeholder **intends** to sell his shares he is obliged to offer the shares initially to the Right holder on "fair" terms. In case of refuse he's able to sell the shares to anyone at the price not lower than the offered to the Right holder.
- **Anti-dilution option** – if the majority stakeholder sells a part of his shares to the third party buyer he has to **adjust the deal terms** with all participants in order to keep Option holder's shares retaining ratio. All other existing options and warrants should be taken into consideration.

Private Placement

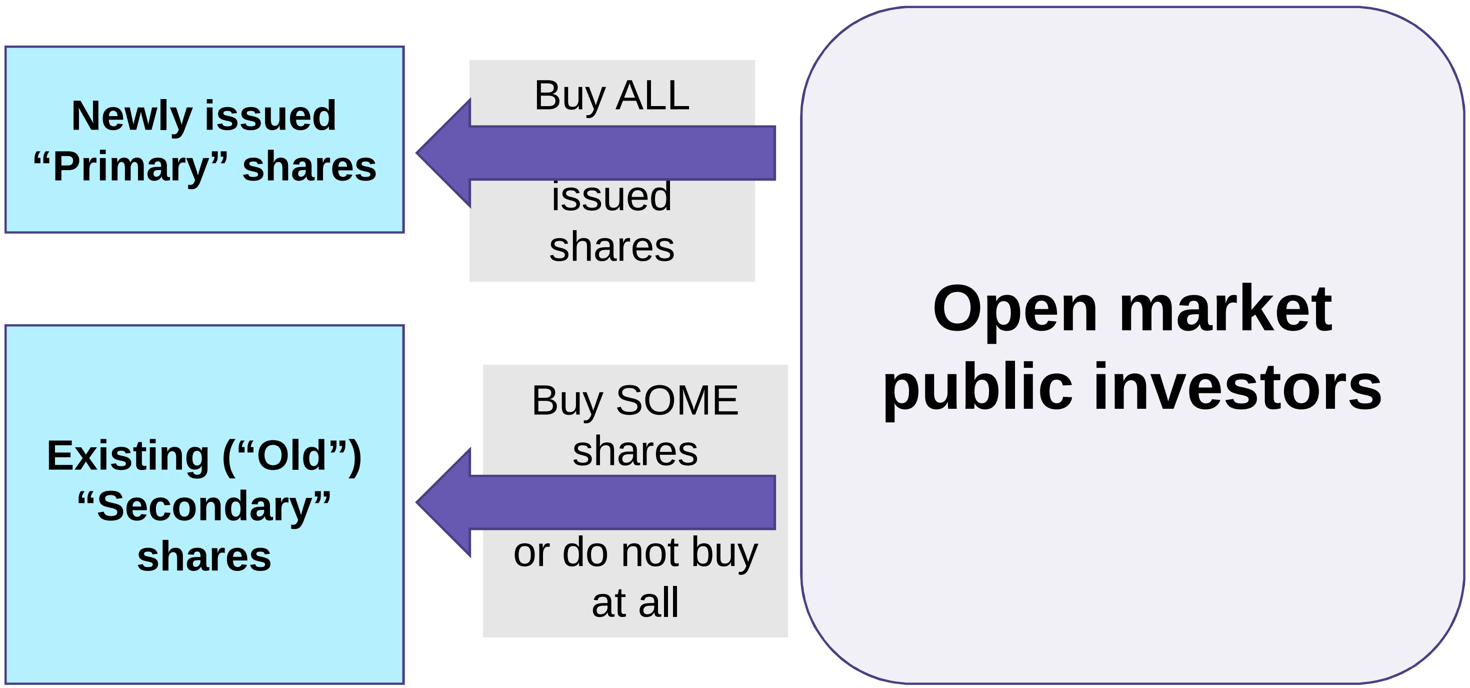
The **Deadlock provisions** arising in case of unbridgeable contradictions between existing shareholders (these provisions are established by the initial shareholders' agreement when the company is established or the first tranche of shares is sold to the third party investor):

- **Russian Roulette Option**: any stakeholder has a right to offer an immediate (by cash) acquisition of opponents' shares at the fixed price **per share**. In case of refuse the opponent is obliged to immediately buy-out (by cash) the initiator's stake at the same price **per share**.
- **Texas shoot-out**: both sides of conflict do the **simultaneous offers** to each other about the desired price of opponent's shares **buy-out**. The party who offers higher price is a winner and has to immediately buy-out (by cash) the opponent's shares. The parties are able to agree about the installments plan of the repayments. But in case of deadlock the buy-out should be done immediately.
- **Dutch auction** – a sort of Texas Shoot-out: the **simultaneous offers** include a **selling price** per share which is acceptable for each party. The winner is that party who offered a lower price.
- **Deterrence approach** – the ascertainment of the penalty for the party whose actions led to the dead-end. The party is found guilty by specially designated (by initial agreement between the parties) arbitrator. In this case the arbitrator states the average market price for the shares and offers to the guilty party either to sell its shares for 75% of the average price or to buy the shares owned by opponent for 125% of the average price.

Initial/Secondary Public Offering

IPO (**Initial Public Offering**) – First/Initial distribution of company's shares in the public (open market). The shares of 2 types can be sold: the **common stock** and the **preferred stock**. The Company is able to enter the public market only after 3 full years of audited financial reporting. The IPO target is increase of the company equity or monetizing of prior investments of existing shareholders. In the process of IPO the Private company becomes Public. All subsequent (after Initial one) public offerings are called **SPO** (Secondary or Seasonal Offerings).

Initial/Secondary Public Offering



Initial/Secondary Public Offering

IPO Pricing method – the Dutch Auction.

Long before IPO the analysts define the broad price range. Straight away before IPO settlement date the Syndicate members (the Issuer and the banks-arrangers) define the narrow price range. The investors requests are adopted to the IPO book when they lay within the narrow price range. Exactly at the Settlement date the price offered to the investors is descending from the upper level (of the price range) till the moment when the sum of investors' demands on shares covers Company's estimation of IPO proceeds. This price level is fixed as a Settlement Price.

The number of shares to be sold – is an optional value. The **higher** is investor's **demand**, the **less** is number of **shares sold**. (If the Company wants USD 1M and 1% of share was evaluated at needed sum, Company sells just 1 % of shares. If assessment is lower – Company sells 10-20-30% of shares).

The key number of IPO – **Company's** IPO sales proceeds **estimation**. If the Book doesn't cover substantially an Estimation the IPO is recognized **failed**.

Initial/Secondary Public Offering

IPO Pricing method – the Dutch Auction.

Price level	300	290	280	270	260	250
Number of requests on shares	20	30	20	50	80	150
Number of approved requests	20	30	20	50	0	0
The total amount of funds according to requests at ranged price	6 000	8 700	5 600	13 500		
Company's estimation of IPO proceeds	30 000			120		
The total cumulative amount of funds according to the supposed Settlement price	20*270= 5 400	5 400 + 8 100 = 13 500	13 500 + 5 400 = 18 900	18 900 + 13 500 = 32 400		
The total proceeds from approved requests	32 400					

Number of requests (equal and higher) when the Settlement price exceeds COMPANY's ESTIMATION.

We satisfy all requests for the price EQUAL or HIGHER than the Settlement price. The Settlement price fixes the level where the cumulative sum of all satisfied requests multiplied to Settlement value exceeds COMPANY's ESTIMATION.

Initial/Secondary Public Offering

The **key milestones** for the Issuer and its Underwriters: the **first day** of trading after IPO, then – first **30 days** and then **210 days*.***

Within the first day of trading all investors whose target was the immediate speculative income sell their shares. At the average the speculative sales take up to 40% of daily turnovers in certain shares in the first day of trading. (Грег Грегориу. IPO. Опыт ведущих экспертов. Минск, 2008, с. 250).

Then within first 30 days after IPO the Underwriters keep the obligation of market support – they sell large quantities of shares if the market extremely goes up or buy – if it goes down. For that aim the members of Syndicate (banks-arrangers/coordinators/book-runners/underwriters) have an Option **Green Shoe** (**over-allotment option**) granted by the "old" majority shareholders of the Company. The Option holders possess a right to exercise it within mentioned period of 30 days. After 30 days the total "**Free Float**" of company's shares is limited by the number of the shares originated from IPO and the ones sold by the Green Shoe owners (if exercised).

For the first 180 days the "old" shareholders (owners of secondary shares) as well as Company's management are strictly prohibited to sell their shares. This ban is called **lock-up**.

Only after 210 days the share price comes to the level which can be assessed as a "fair" market value.

Company **Market Capitalization** (**Market Cap**) is calculated as a total number of outstanding shares (excluding Treasury stocks) multiplied on share market price.

Initial/Secondary Public Offering

Aftermarket trading, the first second of Facebook first day trading:

Initial/Secondary Public Offering

Lock-ups withdraw from Facebook shares owned by the management and the prior shareholders:

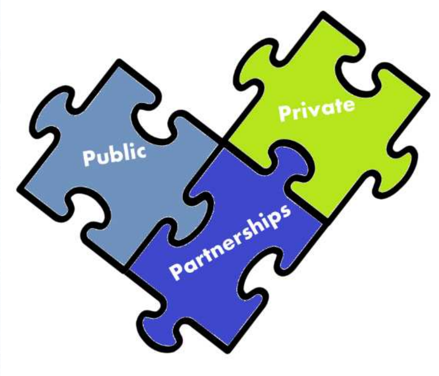
Crowdfunding

Crowdfunding is an accumulation of funds through internet from public investors or groups. Crowdfunding started in Aug, 2006. Since that time millions of people became the shareholders of numerous projects. There are 2 forms: **Reward** (more often; the form of debt financing) and **Equity** crowdfunding.

Project name	Category	% of demanded financing	Total USD	Number of contributors
Pebble: E-Paper Watch for iPhone and Android	Design	10 266	10 266 845	68 928
Game console OUYA	Video games	905	8 596 475	63 416
Project Eternity	Video games	362	3 986 929	73 986
Reaper Miniatures Bones: An Evolution Of Gaming Miniatures	Board games	11 430	3 429 236	17 744
Double Fine Adventure	Video games	834	3 336 371	87 142
Wasteland 2	Video games	325	3 040 299	61 290
Professional 3D-printer with high resolution	Technics	2 945	2 945 885	2 068
Homestuck Adventure Game	Video games	355	2 485 506	24 346
Oculus Rift Step Into the Game	Technics	974	2 437 430	9 522
Planetary Annihilation	Video games	247	2 229 344	44 161
Shadowrun Returns	Video games	459	1 836 447	38 276
Elevation Dock: the best dock for iPhone	Design	1 952	1 464 706	12 521
Reedition The Order of the Stick	Comics	2 171	1 254 120	14 952

Public-Private Partnership

Public-Private Partnership (or **3P**) is a venture or project financed and operated in collaboration by the government and private company(ies).



PPP exists in following main forms:

- **Concession Agreement**;
- **Production Sharing Agreement** (PSA);
- **Private Finance Initiative** (PFI)

and various combined and special forms.

The special conditions of the cooperation are described by the abbreviations which define the PPP status: B (Build), O (Operate), O (Own), T (Transfer), D (Design), F (Finance), M (Maintain).

There are following types of PPP: **BOT** (the Private partner builds the object then operates and transfers to the Authorities after the contract expiration), **BOO**, **BOOT**, **BTO**, **BOMT**, **DBOOT**, **DBFO**. Mainly, the projected assets finally are to be transferred to the governmental authorities.

Public-Private Partnership

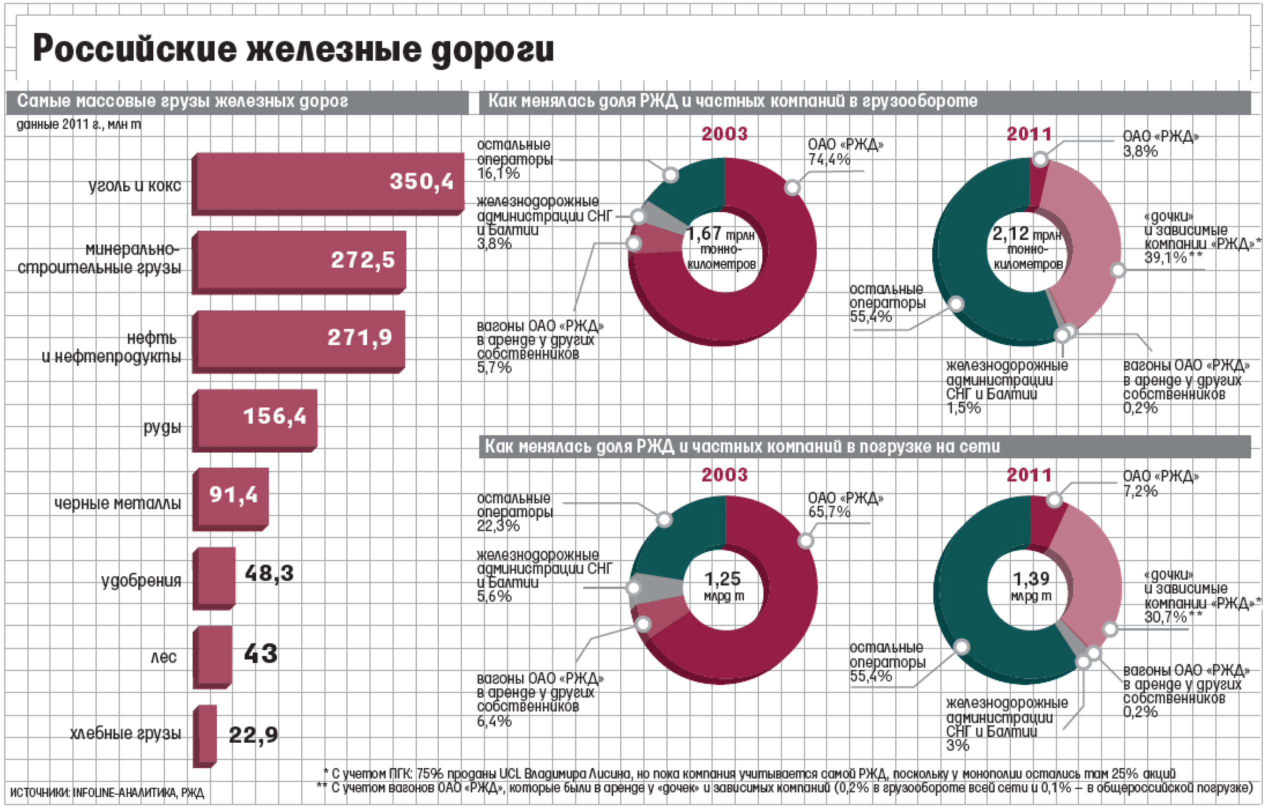
The **Concession agreement** stipulates that the Private partner manages and operates the asset owned by the State. All revenues are split between the participants but the ownership remains governmental and all the investments are done by the authorities. **No Private Investments to Public assets**.

The **Production Sharing Agreement** (**PSA**) (mainly related to mineral resources extract) foresees that the investment is done by the Private partner. All risks and maintenance costs are carried out by Private partner as well as income tax, VAT, social taxes and mandatory payments. The Private partner pays the Bonus at the moment of agreement signing. Then regular payments named “rentals” are paid until the project completion. And only after the beginning of real materials mining/extraction the Public and Private partners share the produced mineral resources. The fixed part of materials is attributed as a coverage of Private partner’s initial costs. The remaining part is shared between the Government and the Partner in the ratio (actually) 20% to 80% respectively.

The **Private Financing Initiative** (**PFI**) is a method of providing funds for major capital investments where Private firms are contracted to complete and manage Public projects. After completion the assets remain in the governmental property. **Private investments to Public assets**.

Public-Private Partnership

In Russia the most visual sample of PPP is represented as a reformation of Railway system. The key assets remain in hands of state-owned company (RZD) but operating side of the business is transferred to the private companies. That’s a sort of **Concession agreement**.



Public-Private Partnership

In Russia the **Production Sharing Agreements** are implemented in numerous areas of mineral resources extraction. Example: **Sakhalin 1 & 2** gas-oil projects.

The case of **Private Financing Initiative** is being implemented in Saint-Petersburg: the Public toll highway is constructed for private investments – **Western high speed diameter**. Furthermore the same name company issues the public bonds.