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MREŽNA STRUKTURA TRŽIŠTA KAPITALA I NJENE UROĐENE DEVIJACIJE

Rezime

Kapitalizacija je jedna od ključnih ekonomskih, ali i društvenih pojava. Ona obezbeđuje ekonomski i društveni napredak. Kapital može nastati od dobra samo u određenim društvenim uslovima, koji su pravno regulisani preko instituta imovine i privatne svojine, i u kojima stupa u međudejstvo sa radom, stvarajući novu vrednost. Prometovanje kapitala zahteva posebnu društveno - ekonomsku celinu, uobličenu u tržište kapitala.

U kapitalizaciji i prometovanju kapitala, uspostavlja se mrežna struktura tržišta kapitala, sledeći mrežne strukture društva i šireg tržišta. Njeni pripadnici okupljeni su oko posebnog čvorišta - berze, odnosno multilateralne trgovinske ustanove.

Samoj prirodi mrežne strukture i protoku informacija kroz nju, svojstveni su neki urođeni nedostaci, zbog kojih je neophodna posebna regulacija tržišta kapitala.

Ključne reči: tržište kapitala, ekonomska mreža, društvena mreža, devijacija tržišta kapitala

JEL: F65, G15

THE NETWORK STRUCTURE OF CAPITAL MARKETS AND ITS INTRINSIC DEVIATIONS

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Summary

Capitalisation is one of the key economic and social phenomena. It enables economic and social progress. Capital can only arise from goods in certain social conditions, which are legally regulated through the institutes of ownership and private property, and where it interacts with labour, creating a new value. Capital flow requires a special socio-economic entity, shaped into the capital market.

With capitalisation and capital flows, the network structure of the capital markets is established following the network structure of the society and the wider market. Its members are gathered around a specific hub - a stock exchange or a multilateral trading facility.

The very nature of the network structure and the flow of information through it have some inherent defects, which require the special regulation of capital markets.

Keywords: capital market, economic network, social network, capital market deviation

JEL: F65, G15

Uvod

Tržište, sa tržištem kapitala kao svojim najorganizovanijim delom, istovremeno je i društvena i ekonomska pojava. Naravno, i sama ekonomija je, pre svega i nadasve, društvena. Ona zbog potreba društva nastaje, a društvo se zatim oko nje svija, gradi i, zajedno sa njom menja i razvija. Međuzavisnost društvenog i ekonomskog nerazlučiva je i uzajamno uslovljavajuća, štaviše i uzajamno opredeljujuća.

Živost ove veze nešto je što je neophodno za razvoj i društva i ekonomije. Ta se veza grana na bezbrojne mnogostruke tokove. Tržište se pokazalo, do sada, kroz ekonomsku i društvenu istoriju, kao jedino poznato okruženje u kome ti tokovi mogu da se usmeravaju, sabiraju, fokusiraju na način koji ne sputava razvoj ni ekonomije, ni društva. Svaka intervencija u tokove između ekonomskog i društvenog, koja je koristila sredstva izvan tih tokova, uvek je i nužno izazivala distorzije povezujućih tokova, uzrokujući zaostajanja, dugotrajne stagnacije, nepovoljna kretanja svake vrste, koja bi na koncu razarala i same ekonomije i društva izložene takvim mešanjima.

Tržište, opet, iako nastalo spontano, izniklo iz potreba činilaca ekonomije i društva, ukoliko se ostavi spontanom razvoju, lako i jednostavno dolazi do sopstvene negacije i ono samo proizvede iste efekte u „punjoj slobodi“, kao i kada je lišeno svake slobode. Tržište svakako ne trpi intervenciju, kao što ni ekonomija ne trpi ni suspenziju tržišta; no, ekonomija ne trpi ni hipertrofiju uloge tržišta. Tržištu je neophodna regulacija da bi se izbegli negativni efekti njegovog spontanog razvoja.

Kapital kao društveni odnos

Ova se tvrdnja može dokazivati na tržištu kapitala tim jednostavnije, jer je ono najorganizovaniji deo tržišta, zbog prirode predmeta svog postojanja - samog kapitala. I on sam nastaje i opstaje samo i isključivo na spoju ekonomskog i društvenog. Neko dobro može se kapitalizovati, dakle postati kapital, samo u ekonomskom procesu proizvodnje ili razmene.

Takav se proces može uspostaviti isključivo između ljudi, gde jedan kupuje, a drugi prodaje, gde jedan ulaže, a drugi proizvodi i gde se,

konačno, stvara nova vrednost od koje namiruju deo svoje egzistencije i neposredni učesnici, ali i oni koji su samo posredno u vezi sa njima. Iz poreza plaćenog od novostvorene vrednosti namirivaće, tako, svi pripadnici nekog društva svoje potrebe u zdravstvu ili obrazovanju.

Kapital se izjednačava sa društvenim odnosom, i tokom ekonomskih procesa transformacije iz dobra, preko prometovanja ili proizvodnje, do korišćenja rezultata takve transformacije od dobra u kapital, koji poprimaju obličje nove vrednosti. Bez društvenog odnosa kapitala ne bi bilo, jednostavno zato što bi sama transformacija dobra u kapital bila nemoguća, ne bi imao ko da je organizuje i upriličava. Štaviše, kapital je vezan za društvo ne samo kroz puteve sopstvenog ostvarenja, nego i postvarenja.

On postoji kroz društvo i za društvo, za njegove pripadnike. Ako se izgubi veza postvarenja, ukoliko transformacija dobara u kapital postane sama sebi svrhom, i pretvori se u proces stvaranja veće količine dobara, kapital gubi suštinu. Njegovo ostvarenje, jednako kao i postvarenje mogu biti vezani samo za društvo i upotrebu unutar društva, postvarenje samo po sebi i isključivo radi sebe, radi procesa kao takvog, ne postoji. Nagomilavanje bogatstva dekapitalizuje dobra, lišava samo to bogatstvo svrhe.

Kapital je ekonomska kategorija zasnovana na društvenom odnosu. I kao što društvo čine jasno izdvojene individue, koje se potvrđuju i svoju egzistenciju verifikuju kroz uzajamni odnos sa drugim individuama u društvu, tako i kapital postoji samo unutar društvenih odnosa i radi njih. Oko takvog odnosa nastaju i granaju se i drugi društveni odnosi, sve dok celo društvo ne počiva, neposredno ekonomski i posredno preko društvenih ustanova, na kapital-odnosu.

Društvene ustanove, onih bar društava koja svesno i sa namerom brane ovu vrstu odnosa, trude se da pravno utemelje i zaštite ove procese. Dobra tako postaju, registracijom i nominacijom, dakle individuacijom i personalizacijom, imovina i privatna svojina, posebno zaštićena kategorija prava, kao i svi odnosi koji na njoj počivaju. Ustanovljuju se i posebne državne agencije koje štite tokove kapitala, odnosno procese i institucije kojima se dobra kapitalizuju.

Introduction

The market, with the capital market as its most organised part, is simultaneously a social and economic phenomenon. Of course, the economy itself is, above all, social. It develops due to the society's needs and the society then forms and builds around it, changing and developing along with it. The interdependence of the social and the economic is inextricable and mutually conditional, and what is more, mutually defining.

The vitality of this connection is something that is necessary for the development of societies and economies. This connection branches out into innumerable and multiple flows. The market has so far proved itself, through economic and social history, as the only known environment in which these flows can be directed, collected, focused in a way that does not hinder the development of either the economy or society. Any intervention in the flows between the economic and the social, which uses resources beyond these flows, necessarily causes the distortions of connecting flows, causing lagging, long-standing stagnation, unfavourable movements of any kind, which could ultimately ruin the very economies and societies exposed to such integrations.

The market, although spontaneously emerging, and originating from the needs of economic and social factors, if left to spontaneously develop, easily comes to its own negation, and it produces the same effects in "full freedom", as it does when it is deprived of all freedom. The market certainly does not suffer interventions, as neither the economy suffers the suspension of the market; however, the economy does not suffer the hypertrophy of the market's role, either. The market needs regulation in order to avoid the negative effects of its spontaneous development.

Capital as a Social Relation

This claim can be proven in the capital market all the more simply because that is the most organised part of the market, due to the nature of the subject of its existence - the capital itself. And it itself develops and survives only

and solely on the union of the economic and the social. Some goods can be capitalised, i.e. can become capital, only in the economic process of production or exchange.

Such a process can be established exclusively between people, where one buys, and the other sells, where one invests, and the other produces, which ultimately creates a new value which settles parts of the livelihood of immediate participants, as well as those indirectly related to them. The tax paid from the newly created value will, therefore, go to all members of a society, for their health or education needs.

Capital is equated with social relations, and during the economic processes of transformation from the goods, through transport or production, to the use of the result of such a transformation from goods to capital, which takes on the form of a new value. Without the social relation the capital would not exist, simply because the transformation of goods into capital would be impossible, there would be no one to organise and realise it. Moreover, capital is tied to the society not only through the paths of its own actualisation, but also in its objectification.

It exists through the society and for the society, for its members. If the bond of objectification is lost, if the transformation of goods into capital becomes the goal in itself, and becomes a process of creating a larger quantity of goods, capital loses its essence. Its actualisation, just as well as its objectification, can only be tied to the society and its use within the society, there is no objectification solely for its own sake, for sake of the process as such. The accumulation of wealth decapitalises goods, and deprives that very wealth of purpose.

Capital is an economic category based on a social relationship. And as society is made up of clearly isolated individuals, who confirm and verify their existence through a mutual relationship with other individuals in society, so does the capital exist only within and for social relations. Around this relationship, other social relations are emerging, until the entire society rests, directly economically and indirectly through social institutions, on capital-relationships.

Social institutions, at least in those societies that consciously and intentionally defend this

Samo su takva društva dugoveka i napredna, u smislu stalnog usavršavanja tehnologije i poboljšavanja uslova života svojih pripadnika. Velika, civilizacijska zaostajanja čak, vezuju se za odsustvo mogućnosti kapitalizacije, zbog nepostojanja odgovarajućih ustanova i procesa. Slikovit primer je carska Kina, koja je i pored velikog bogatstva i značajnih tehnoloških inovacija, do prošlog stoleća značajno zaostala za zemljama tržišne ekonomije, dakle onima koje je logika kapitalizacije gonila ka napretku (Landes, 2004, str. 353-366).

U ekonomskom i sociološkom smislu kapital određuje njegova aktivnost, on bez procesa transformacije ne može da postoji. Kapital, dakle, postoji, videli smo, samo kroz društveni odnos, samo preko delovanja zainteresovanih pojedinih pripadnika društva. Do njega se drugačije ne može doći, osim preko individualizovanih i vlasnički opredeljenih dobara. Ako nema zainteresovanog pojedinca kao vlasnika, nema nikoga ko bi se bavio transformacijom dobara u kapital. Ideološke iluzije sa takozvanom društvenom svojinom, skupo su plaćene neefikasnošću, uništavanjem ekonomske supstance i degradacijom čitavih društava.

Državna svojina, takođe, nije odgovor. I u sistemu državnog vlasništva na dobrima, preobražaj tih dobara u kapital počiva na upravljačima koji se staraju o svom interesu, a pošto ne mogu taj interes da izraze kroz dobra kojima upravljaju - jer ona nisu njihova, nego državna, pojava isisavanja kapitala iz državnih firmi i prebacivanje u ličnu imovina ostaje pravilo u sistemima gde državna svojina preovlađuje. Korupcija je sistemski činilac i jedini način funkcionisanja centralizovanih autoritarnih režima bez ekonomskih sloboda i sa potisnutom individuacijom kapitala.

Otuda nužnost pravnog uobličavanja koncepta svojine i privatnog vlasništva. Hernando de Soto, u izuzetnoj studiji *Misterija kapitala*, čak tvrdi da se kapital ni ne može uspostaviti bez prethodnog opredeljivanja privatnog vlasništva, njegove zakonske zaštite preko temeljnih načela svake društvene zajednice i, konačno, registracije vlasništva (de Soto, 2001, p. 47). On početni i pokretački

razlog za civilizacijski napredak Zapadnog sveta smešta u rani trinaesti vek i sastavljanje Velike povelje slobodâ, koja predstavlja pravno uobličavanje zaštite, između ostalog, i imovine (Magna Carta..., 1215, art. 2-7, 30-32); i sama Povelja nastala je na temelju prethodnog dokumenta, kojim je dva stoleća ranije popisana imovina i, tako, registrovani njeni vlasnici u Engleskom kraljevstvu, takozvane *Knjige Sudnjeg dana* (de Soto, 2001, p. 60).

Zaštita privatne svojine ostaje od tada pravni institut formulisan i normiran u osnovnim pravnim aktima, uključujući i njenu zaštitu kroz nezavisne institucije. Same institucije koje je štite, ako ih i nema u ustavima, a ono bi uvek trebalo da budu kodifikovane, sa jasnim ingerencijama i nezavisnošću, u sistemskim zakonima, u pravnoj hijerarhiji odmah do ustava. Zaštita kapitala preko zaštite privatne svojine, njegovih interesa, načina nastanka i prometovanja na naročitom delu tržišta, od Velike ekonomske krize, postepeno je u tržišnim ekonomijama bivala prepuštena posebno uspostavljenim regulatornim ustanovama.

Društvo i ekonomija kao mreže

Društvo je, opet, preplet raznih interesnih mreža svojih pripadnika. Ovakvo shvatanje razvila je posebna teorija koja se bavi društvom i ljudskim ponašanjem, i kao pojedinaca, i grupno. Svako od nas postoji u okruženju drugih pojedinaca, i to ne pasivno, nego u aktivnom sadejstvu, međudejstvu i protivdejstvu. Tražeći mesto u društvu i gradeći položaj u njemu, uspostavljamo veze sa ostalim njegovim pripadnicima, znali za njih ili ne. Postojimo u mreži isprepletenih kontakata, utisaka, usluga, mišljenja i činjenja. Čovek postoji kao ličnost tek u odnosu na druge, kroz druge gradi spoznaju o sebi, potvrđuje se i ostvaruje. Čovek je društveno i političko biće, u smislu postojanja i delanja u društvu i kroz društvo.

Ovo je veoma staro naučno i filozofsko saznanje, od Aristotelovog čoveka kao „društvenog bića“¹, a ono što je savremena misao tom saznanju dodala i unapredila ga, jeste saznanje da se delanja pojedinaca u društvu i njihova osobna potvrda društvenosti odigrava

1 ζῶον πολιτικόν, ispravniji prevod od „društvenog bića“ bio bi, možda, „biće zajednice“.

kind of relationship, strive to legally establish and protect these processes. Goods thus become, via registration and nomination, i.e. individuation and personalisation, property and private property, a specially protected category of rights, together with all the relationships that rest on it. Special state agencies are also established that protect capital flows, i.e. the processes and institutions that capitalise goods.

Only such societies are long-lasting and advanced, in terms of continuous improvement of technology and improvement of the living conditions of their members. Large civilization lags even relate to the lack of capitalisation capabilities, due to the lack of appropriate institutions and processes. A picturesque example is the Imperial China, which, despite its great wealth and significant technological innovations, significantly lagged behind the market economy countries, i.e. those driven by the capitalisation logic to progress, up until the last century (Landes, 2004, pp. 353-366).

In economic and sociological terms, capital is determined by its activity, it cannot exist without a transformation process. Capital, therefore, exists, as we have seen, only through social relations, only through the activities of interested individual members of the society. It cannot be reached through different terms, except through individualised and proprietary goods. If there is no interested individual as the owner, there is no one to deal with the transformation of goods into equity. Ideological illusions with the so-called social property are costly paid by inefficiency, the destruction of the economic substance and the degradation of entire societies.

State ownership is also not the answer. And in the system of state ownership of goods, the transformation of these goods into capital rests on managers who care about their own interests, and since they cannot express that interest through the goods they manage - because they are not theirs, but owned by the state, the emergence of capital withdrawal from state firms and transfer to personal property remains the rule in systems where state ownership prevails. Corruption is a systemic factor and the only way centralised authoritarian regimes function without economic freedom and with suppressed capital individuation.

Hence stems the necessity of legalising the concept of ownership and private property. Hernando de Soto, in an extraordinary study entitled *Mystery of Capital*, even claims that capital cannot be established without prior definition of private property, its legal protection through the fundamental principles of each community, and, finally, the registration of ownership (de Soto, 2001, p. 47). It is the initial and driving reason for the civilisation progress of the Western world in the early 13th century and the drawing up of the Great Charter of Liberty, which represents the legal formulation of protection, among other things, of property (Magna Carta ..., 1215, art. 2-7, 30-32); the Charter itself was created on the basis of the previous document, which, two centuries earlier, listed the property and, thus, its registered owners in the English Kingdom, the so-called *Domesday Book* (de Soto, 2001, p. 60).

Protection of private property has since been a legal institute formulated and standardised in basic legal acts, including its protection through independent institutions. The institutions that protect it, if they do not exist in the constitutions, should always be codified, with clear jurisdictions and independence, in systemic laws, in the legal hierarchy immediately below the constitution. The protection of capital through the protection of private property, its interests, the way of creation and marketing in a particular segment of the market, has been gradually left, since the Great Economic Crisis, to the specially established regulatory institutions in market economies.

Society and Economy as Networks

Society is, again, a mix of various interest networks of its members. This understanding was developed by a special theory dealing with society and human behaviour, both individually and as a group. Each of us exists in the environment of other individuals, and not passively, but in active collaboration, interdependence and opposition. By seeking a place in society and building a position in it, we establish links with other members of our community, whether we are aware of them or not. We exist in a network of interwoven contacts, impressions, services, opinions and actions. Man exists as a person only in relation to others, through others we build self-knowledge,

preko mreže kontakata koja se uspostavlja između pripadnika društva.

Mrežna teorija društva, dakle, posmatra društvo, ili pojedine njegove delove, kao splet uzajamno uspostavljenih veza između svih pripadnika. Veze se mogu posmatrati odvojeno prema sopstvenoj suštini, kao emotivne veze unutar šire porodice, ili poslovne veze između preduzeća jedne oblasti, ili veze na osnovu tradicije i kodeksa časti jednog staleža. Mrežne strukture su otporne, lakše mogu da preprode razne krizne situacije, solidarnost unutar mreže je veća. Sve što se unutar jedne mreže radi, ima uticaj na sve njene pripadnike, i sve na neki način, posredno ili neposredno, doprinose rezultatima aktivnosti koje se obavljaju unutar mreže. Otuda se može, sa jakim argumentima, dokazivati postojanje društvene odgovornosti preduzeća u konceptu društveno korporativne odgovornosti, ili odgovornosti svakog pojedinca za stanje na tržištu, ili društvu uopšte.

Odnose između pojedinačnih članova društvene grupe, kao opredeljujuće za osobine same grupe i njen povratni uticaj na sopstvene pripadnike, počeo je da izučava još Ferdinand Tenis, krajem pretprošlog stoleća. Na osnovu vrste veza između članova, uspostavio je znamenitu razliku između zajednice i društva, opisujući obe: zajednica nastaje ako su njene članice povezane međusobno lično i neposredno, a društvo ukoliko su veze formalizovane i obezličene, i počivaju samo na nekom interesu, uobličenom u normu (Tönnies, 1887.). U takvom pristupu, tržište kapitala mogli bismo nesumnjivo svrstati u društveni fenomen.

Po Emilu Dirckemu, drugom sociologu iz istog doba, lako bismo došli do istog zaključka i prepoznali tržište kapitala kao društvenu pojavu, jer je on društvene pojave opisao kao one koje, jednom nastale, nadilaze sve pojedinačne učesnike čijim su naporom stvorene. Za njegove analize se u enciklopediji filozofa tako i kaže: „Dirckemove analize pokazuju da, da bismo mogli da razumemo pojedinca, nužno je da ga smestimo u mrežu društvenih odnosa iz koje

u njegov život dolaze informacije i uticaji“² (Internet Encyclopedia of Philosophy).

Krajnji izraz ove teorijske postavke sažet je u Metkalfovom zakonu (Technopedia), koji objašnjava da što jedna društvena mreža ima više učesnika, tim je vrednija za svakog učesnika ponaosob.³ Ne samo da se međusobnim umrežavanjem stvara sinergetski efekat koji daje novi kvalitet, novi fenomen - zajednicu, nego se i vrednost te zajednice za članice može matematički pokazati: jednaka je kvadratu broja učesnika. Mreža od pet učesnika imaće, tako, vrednost za svakog od njih brojčano izraženu 52, odnosno 25, dok će mreža od 10 učesnika, iako tek duplirana po broju učesnika, imati vrednost četiri puta veću: $10^2=100$.

Tenisove i Dirckemove postavke sledila su istraživanja od početka prošlog stoleća, sa uzletom tridesetih godina, te novim teorijskim prodorima pedesetih, koja su se bavila prirodom mreža nastalih ukrštanjem veza između pojedinih njihovih učesnika. Jednom uspostavljena teorija koja društvo i društvene pojave, te razne oblike organizovanja posmatra kroz učestalost, rasprostranjenost, uzajamanost i druge kvalitete uspostavljenih veza između učesnika, doživela je stalno proširivanje i primene na sve nove društvene oblike, tokom čitavog dvadesetog veka.

Novi uzlet doživljava pojavom društvenih medija i povezivanja članova društvenih grupa elektronski. Posebna se pažnja obraća na mogućnosti samoorganizovanja, ili usmerenog organizovanja. Ispituje se i otpornost uspostavljenih društvenih mreža na uticaje koji im dolaze iz okruženja, međudejstva mreža, mogućnost pokretanja, ali i upravljanja društvenim zbivanjima (Liu e.a, 2017.). Jedna od novijih studija na tu temu je i knjiga Najla Fergusona *Trg i kula*, u kojoj protivistavlja difuzne mrežne društvene organizacije onima koje počivaju na čvršćem hijerarhijskom poretku, i ispituje njihovu interakciju kroz istoriju, uključujući i najnovija velika društvena pomeranja (Niall, 2018.).

2 „... Durkheim’s analyses demonstrate that in order to understand the individual, it is necessary to situate them within the network of social relations that informs and influences their life.“

3 Sam zakon formulisao je Džordž Frenklin Gilder (George Franklin Gilder), američki ekonomista, pisac i izumitelj koji se proslavio za vlade Ronalda Regana; zakon je, međutim, imenovan po Robertu Melanktonu Metkalfu (Robert Melancton Metcalf) zbog rada na povezivanju sredstava komunikacije i stvaranja eterneta (ethernet), čiji je jedan od tvoraca.

we confirm and realise ourselves. Man is a social and political being, in the sense of existing and acting in society and through society.

This is a very old scientific and philosophical knowledge, from Aristotle's man as a "social animal"¹, and what the contemporary thought has added and improved on this knowledge is the idea that the workings of individuals in society and their personal confirmation of sociality are played through a network of contacts that are established between the members of a society.

The network theory of society, therefore, observes the society, or some of its parts, as a set of mutually established links between all members. Relationships can be viewed separately from one's own point of view, as emotional connections within a wider family, or business relationships between the enterprises of one area, or the relationships based on the traditions and codes of honour of a particular class. Network structures are resilient, can overcome various crisis more easily, and the solidarity within the network is higher. Everything done within a network affects all its members, and all in some way, directly or indirectly, contribute to the results of activities that are performed within the network. Hence, with strong arguments, it can be proved that there is a social responsibility of the company in the concept of corporate social responsibility, or the responsibility of each individual for the state of the market, or society in general.

Relations between individual members of the social group, as distinct from the characteristics of the group itself and its backward influence on its own members, began to be studied by Ferdinand Tönnies, at the end of the previous century. On the basis of the types of connections between members, he established a notable distinction between a community and a society, describing both: a community is created if its members are interconnected personally and directly, and a society is created if the connections are formalised and disbarred, and rest on a matter of interest formulated through a norm (Tönnies, 1887).

In such an approach, the capital market could undoubtedly be classified as a social phenomenon.

According to Émile Durkheim, another sociologist from the same period, we would easily arrive at the same conclusion and recognise the capital market as a social phenomenon, as he described social phenomena as those which, once formed, transcend all the individual participants through whose efforts they were created. The Encyclopaedia of Philosophy says the following on his analysis: "Durkheim's analyses demonstrate that in order to understand the individual, it is necessary to situate them within the network of social relations that informs and influences their life" (Internet Encyclopaedia of Philosophy).

The ultimate expression of this theoretical setting is summarized in Metcalfe's law (Techopedia), which explains that the more participants one social network has, the more valuable it is for each participant separately². Not only does networking create a synergistic effect that creates a new quality, a new phenomenon - a community, but also the value of that community for the members can be mathematically shown: it is equal to the square value of the number of participants. The network of five participants will have a value of 52 and 25 respectively for each of them, while a network of 10 participants, although only doubled in the number of participants, will have a four times higher value: $10^2 = 100$.

Tönnies' and Durkheim's findings were followed by research from the beginning of the previous century, with the rise of the 1930s, and the new theoretical breakthroughs of the 1950s, which dealt with the nature of networks created by cross-links between some of their participants. The once established the theory that observes society and social phenomena, and various forms of organisation, through the frequency, distribution, mutuality and other qualities of the established relationships between the participants, has undergone continuous expansion and implementation to all new social forms throughout the 20th century.

1 ζῷον πολιτικόν, perhaps a more equivalent translation than "social animal" would be "societal being".

2 The law itself was formulated by George Franklin Gilder, an American economist, writer and inventor who made a name for himself during the presidency of Ronald Reagan; The law, however, was named after Robert Melancton Metcalfe for his work on linking the means of communication and creating ethernet, him being one of its creators.

Društvene mreže, prema ovim teorijskim postavkama, mogu se klasifikovati na sledeći način:

1. egocentrične, koje čini osnovni član, od koga polazi grananje prema drugim članovima, koji su svi u neposrednoj vezi sa polaznim članom, i bez koga bi se mreža urušila - na primer, preduzeće sa svojim poslovnim partnerima, ili svaka osoba sa ljudima sa kojima stupa u određene veze, nadasve profili na Facebook-u ili LinkedIn-u;
2. sociocentrične, u kojima su svi pojedini članovi od jednake važnosti za održanje mreže, a kvalitet same mreže zavisi kumulativno od svih članova, zbog čega je i povezanost među članovima, spontano ili naknadno uređeno, višeg tipa - primer takve mreže je vojna jedinica, zatim učesnici korporativnog upravljanja unutar jednog preduzeća, ili članovi jedne berze;
3. otvorene mreže, koje su lako pristupne novim članovima, isto kao što se iz njih lako i istupa, što ih čini brojčano najvećima - takve su društvene klase, poput srednje klase, ili tržište najšire shvaćeno.

Ekonomске pojave, budući da su tako duboko uronjene u društveno i da su zavisne od društvenih pojava, poprimaju i društvene pojavne oblike. Ako je društvo sačinjeno od isprepletanih uzajamnih veza svojih pripadnika, onda je to i ekonomija. Posebni naročiti oblici grupisanja tih veza dešavaju se tamo gde se grupišu interesi, oko kojih se te veze društvene, ekonomske i političke i uspostavljaju. Tako će se kao poseban segment društvenog i ekonomskog onih njihovih pripadnika koji trguju, koji razmenjuju dobra, oformiti tržište.

Druge društvene mreže biće šire, poput nacije, koju čine društvene veze koje se uspostavljaju oko istog tržišta na istom jeziku kao sredstvu komunikacije. Nacija, dakle, nije ideološki pojam, niti samo sociološki, ona je političko-ekonomski pojam, jer je čini kombinacija tržišta i jezika, jednog tržišta na kome se komunicira istim jezikom.

Isto tako, klasa nije društvena, niti ekonomska, nego ideološka kategorija, zato što razni pripadnici onoga što ideologija prepoznaje kao klasu, nemaju istovetne interese, i zato se radije efektivno grupišu prema svojim interesima, nego prema ideološkoj

svesti (ako tako nešto i postoji). Grupisanje na osnovu čistog ekonomskog interesa, praktično oformljuje tržište; u okviru tržišta, grupisanje na osnovu posebnog interesa prometovanja kapitala, daje tržište kapitala.

Društvena mreža mora da počiva na interesu, a za njeno održavanje podjednako je bitna i komunikacija. Da bi se jedna mreža uspostavila, povezala, komunikacija među njenim činionicima mora da bude uz pomoć istog sredstva, istog jezika. Činioci jedne mreže moraju se međusobno razumevati, ali mimo toga, neizostavno je potreban i interes. Radnička klasa, na primer, jeste samo ideološka kategorija, ona nije društvena mreža. Pod određenim uslovima, ona može postati društvena mreža, ako su prava svih i svakog radnika na jednak način ugrožena, interes uspostavljanja prava delovaće tada privlačnom silom na uspostavljanje efektivne društvene mreže.

To je, međutim, samo teorijska pretpostavka u okviru jednog modela: čak ni Oktobarsku revoluciju nisu izveli radnici umreženi u radničku klasu, nego oni koji su imali zajednički interes da prekinu rat i bedu koju on izaziva - vojnici i mornari, dezertteri, sa njima radnici, nezavisno od toga da li su radili u nekim fabrikama ili ne, delovi inteligencije... Zato je mnogo prirodnije i uputnije posmatrati društvo kao preplet raznih društvenih mreža, nego preko ideološki uspostavljenih kategorija.

Srednja klasa, naprotiv, nije ideološka kategorija, pripadnici srednje klase imaju zajednički interes, koji se na koncu izražava i kroz demokratizaciju društva i uspostavljanje jakih institucija. Nacija, isto tako, može predstavljati meta društvenu mrežu samo onda kad, uz komunikaciju, razvije i tržište kao mrežni mehanizam, preko koga se ostvaruju interesi njenih pripadnika. Nacija je, dakle, spoj komunikacije i tržišta.

Mreža tržišta kapitala

Mreže su idealna okruženja za širenje informacija, njihovi tokovi zavise od prirode veza između učesnika. Ovo valja posebno imati na umu pri ispitivanju primene teorije društvenih mreža na tržište kapitala, jer je ono okruženje u kome posrednici trgujući razmenjuju novac drugih ljudi, za obećanja ljudi koje predstavljaju, dakle koje počiva prvenstveno

It experienced a new breakthrough with the emergence of social media and the electrical connection of the members of social groups. Special attention is paid to the possibility of self-organisation, or targeted organisation. The resistance of established social networks to the influences that come from the environment, network interaction, the possibility of launching, as well as the managing social events (Liu et al, 2017) is also being tested. One of the more recent studies on this subject is Niall Ferguson's book, *The Square and the Tower*, in which he contrasts diffused network social organisations with those which rest on a firmer hierarchical order, and examines their interaction through history, including the latest major social movements (Niall, 2018). Social networks, according to these theoretical settings, can be classified as follows:

1. Egocentric, made up of a core member, with branching connections towards other members, all of which are in direct contact with the starting member, and without which the network would collapse - for example, a company with its business partners, or any person with people with which they have a certain connection, most of all accounts on Facebook or LinkedIn;
2. Sociocentric, in which all individual members are of equal importance for the maintenance of the network, and the quality of the network itself depends cumulatively on all members, which is why the connections among the members are spontaneously or subsequently arranged, of a higher type - examples of such a network are a military unit, the participants in corporate governance within a single company, or members of a single stock exchange;
3. Open networks, which new members can easily access, and just as easily leave, making them numerically the largest - such as social classes, like the middle class, or the market in the most general sense.

Economic phenomena, since they are so deeply immersed in society and dependent on social phenomena, also take on social manifestations. If a society is made up of intertwined mutual connections of its members, then so is the economy. Particular specific forms of grouping these links occur where

the interests are grouped, around which these social, economic and political connections are established in the first place. Thus, as a separate segment of the social and economic aspects of those members who trade and exchange goods, a market will form.

Other social networks will be broader, like a nation, made up of social connections that are established around the same market, in the same language as the means of communication. A nation, therefore, is not an ideological notion, nor just a sociological one - it is a political-economic concept, being a combination of a market and a language, a market in which participants communicate in the same language.

Likewise, a class is not a social, nor an economic, but an ideological category, because various members of what ideology recognises as a class do not have identical interests, and therefore they are more effectively grouped according to their interests than ideological consciousness (if there even is such a thing). Grouping based on purely economic interest, practically forms the market; within the market, a grouping based on a particular interest in capital circulation creates the capital market.

A social network must be based on interest, and communication is equally important for its maintenance. In order for one network to be established, connected, the communication among its factors must be through the same means, the same language. The members of one network must understand each other, but besides this, a joint interest is indispensable. The working class, for example, is just an ideological category, it is not a social network. Under certain conditions, it can become a social network, if the rights of all and every worker are equally threatened, in which case the interest in establishing rights will act as an attractive force to establish an effective social network.

This, however, is only a theoretical assumption within a single model: even the October Revolution was not executed by workers networked into the working class, but those who had a common interest to end the war and misery that it caused - soldiers and sailors, deserters, together with the workers, regardless of whether they worked in some factory or not, parts of the intelligence system...It is, therefore, much more natural and appropriate to observe

na razmeni informacija. Standardizovanih i formalizovanih, svakako, ali tek informacija.

Standardizacija i njena pravna formalizacija izdvajaju mrežu tržišta kapitala unutar šire mreže jednog tržišta. Tržište kapitala je uređeno, normirano i regulisano. Veze koje se na njemu uspostavljaju, i koje tvore njegovu mrežu, moraju da se uspostavljaju i razvijaju na propisani način. Cilj ove visoke standardizacije i pravnog uobličavanja jeste održanje same mreže tržišta kapitala, koja bi se bez toga urušila.

Njeni pripadnici, takođe, moraju da ispunjavaju određene uslove, kako bi se kvalifikovali za nju. U tom smislu, mreža tržišta kapitala jeste polu-zatvorena, pošto ne preči ulazak uopšte, poput neke staleške mreže, nego ističe uslove za pristup. Iz staleške mreže, jednom kada se u njoj nađe, pripadnik kroz generacije njene izaci, bez obzira na sve unutrašnje promene, dok je iz mreže tržišta kapitala izlazak nužan čim promene unutar učesnika postanu takve da ugrožavaju održanje uslova za prijem.

Veze između pripadnika tržišta kapitala kratke su, ali učestale. Svaki pripadnik trudiće se da uspostavi što više veza sa što je većim mogućim brojem drugih pripadnika mreže, i da one budu što češće. Po svojoj prirodi te su veze uzajamne, odnosno nastaju da bi se zadovoljio određeni ekonomski interes, koji se opet može zadovoljiti samo i ukoliko bar dva pripadnika ostvaruju neku korist u zadovoljenju tog interesa. Ostvarenjem koristi i zadovoljenjem interesa, pojedinačna veza se gasi.

Mreža tržišta kapitala takođe je strukturisana: kružnog je oblika, difuzna, i prema centru zahteva strože uslove za pripadnike; od centra ka periferiji kriterijumi pripadništva smanjuju se i po zahtevnosti, i po broju, dok se učesnici mreže tržišta kapitala ne izjednače sa učesnicima šire tržišne mreže. Mreža tržišta kapitala tako se uspostavlja kao meta-mreža, u odnosu na samo tržište.

Sam njen centar svojevrsno je čvorište⁴, u koje se slivaju sve veze pripadnika koji

neposredno okružuju to čvorište, a preko njih i sve veze ostalih učesnika na tržištu kapitala. U najrazvijenijem, savremenom, obliku mreže tržišta kapitala, realizacija interesa koji pokreću veze ne zaključuje se više u neposrednom kontaktu između pripadnika, nego u interakciji pripadnika mreže i čvorišta u sredini.

Čvorište čini berza i prateća struktura kliringa i saldiranja, bilo kao deo berze, ili kao posebna privredna jedinica. U potonjem slučaju, mreža tržišta kapitala imaće dva čvorišta u centru: berzu, na kojoj se zaključuje posao zadovoljenja interesa uspostavljenjem konkretne veze između pripadnika mreže, i kliring, na kome se taj posao izvršava, a konkretna veza između pripadnika gasi.

Razlike između vrsta poslova na tržištu, da li su brokerski ili dilerski, i koji preovlađuju, te da li je berza klasična ili je elektronsko dilersko tržište, kao i da li je kliring deo berze ili posebna organizacija, sve to nema značaj za prirodu same mreže tržišta kapitala. Ona je nastala iz poslova posrednika, štiti njihov poslovni integritet i kvalitet usluga koje pružaju onima koji su izvan mreže.

Sama suština mreže tržišta kapitala ostala je ista, od njenog nastanka u okviru šireg tržišta, tokom razvoja i održanja do danas: uzajamno višestruko povezivanje trgovaca. Tako je danas, na primer, sledeći ovu logiku mrežne organizacije, definiše i savremeno zakonodavstvo. Direktiva Evropske Unije kojom se uređuje tržište kapitala govori o generičkom pojmu multilateralnog sistema (MiFID II, 2014.). Taj mrežni koncept istovremeno je i dovoljno širok da obuhvati sve moguće učesnike, a i dovoljno dubok, da uredi veze koje se između njih uspostavljaju. U čl. 4 Direktive, koji daje definicije ključnih pojmova, u tački 19, kaže se: „multilateralni sistem“ znači svaki sistem ili platforma unutar kojih je omogućena interakcija više trgovinskih interesa trećih strana za kupovinu ili prodaju finansijskih instrumenata.⁵

4 Teorija društvenih mreža, u razvijenom obliku, koristi termine „nod“, „edge“ i „hub“. Oni su ovde prevedeni, redom, kao: „pripadnik“ ili „učesnik“ (iako bi doslovno bilo „čvor“) mreže, „veza“ (doslovno „ivica“) i „čvorište“.

5 ... „multilateral system“ means any system or facility in which multiple third-party buying and selling trading interests in financial instruments are able to interact in the system.

society as a mix of various social networks than through ideologically established categories.

The middle class, on the contrary, is not an ideological category, middle class members have a common interest, which is ultimately expressed through the democratisation of society and the establishment of strong institutions. A nation can also represent a target social network only when, along with communication, it develops the market as a network mechanism, through which the interests of its members are realised. The nation is, therefore, a blend of communication and the market.

Network of the Capital Market

Networks are ideal environments for information distribution, since their flows depend on the nature of the connections between the participants. This should be especially borne in mind when examining the implementation of the social network theory to the capital market, because this is the environment in which mediators exchange the money of other people via trade, for the promises of the people they represent, i.e. the environment which primarily rests on the exchange of information. Standardised and formalised information, as it is, but merely information.

Standardisation and its legal formalisation distinguish the network of capital markets within a wider network of a single market. The capital market is organised, normed and regulated. The relationships that are established on it, and which form its network, must be established and developed in the prescribed manner. The goal of this high level of standardisation and legal formulation is to maintain the network of capital markets itself, which would have collapsed without this.

Its members must also meet certain criteria in order to qualify for it. In this sense, the capital market network is semi-closed, as it does not bar entry in general, such as some class networks, but highlights the conditions for access. Once in a class network, a member of the network will not leave it in generations, regardless of all internal changes, while leaving the capital market network is necessary as soon as the changes in

the participants become such that they endanger the maintenance of the entry criteria.

Relations between members of the capital market are short but frequent. Each member will endeavour to establish as many connections as possible with as many other network members as possible, and to make them as often as possible. By their very nature, these relationships are interconnected, that is, they are created to satisfy a certain economic interest, which can only be satisfied again if at least two members realise some benefit in satisfying this interest. After achieving the benefits and satisfying the interests, the individual connection is extinguished.

The network of capital markets is also structured: it is circular in shape, diffused, and requires more stringent conditions for the members of the centre; from the centre to the periphery, the criteria for membership are reduced in both complexity and number, while the participants in the network of capital markets do not equate themselves with the participants of the wider market network. The network of capital markets is thus established as a meta-network, in relation to the market itself.

Its very centre is somewhat of a hub³, which gathers all the edges of the nodes which immediately surround that hub, and through them all the edges of the other nodes on the capital market. In the most developed, modern, form of a network of capital markets, the realisation of the interests that initiate connections is no longer concluded in direct contact between the nodes, but in the interaction of the nodes of the network and the hub in the middle.

The hub is a stock exchange and the accompanying structure of clearing and settlement, either as part of the stock exchange, or as a separate economic unit. In the latter case, the capital market network will have two hubs in the centre: the stock market, where the job of satisfying the interest is conducted by establishing a connection between the network members, and the clearing, where this business is executed, and the concrete link between the members is extinguished.

The differences between the types of

3 The theory of social networks, in its developed form, uses the terms 'nod', 'edge', and 'hub'.

Negativne pojave

Ne postoji savršena organizacija, svaka društvena pojava, koliko god pozitivnog donosila, uvek ima i prateće efekte koji mogu da ugroze boljitak koji ona omogućuje. Uočavanje i opisivanje takvih negativnih pojava u okviru šireg konteksta, organizacije društva, na primer, preduslov su za dalji napredak i usavršavanje, kroz nalaženje mera, ili reorganizaciju, kojom se negativnosti mogu smanjiti.

Mrežna struktura tržišta kapitala, poput mrežne strukture šireg tržišta i celog društva, nosi sobom neke urođene mane. Prva od njih ugrožava jednakost pripadnika društva, odnosno učesnika na tržištu kapitala.

Efekat Sv. Mateja

Ovu je pojavu opisao, kao društvenu pojavu, usudili bi se da kažemo čak i zakonomernost, američki sociolog Robert K. Merton sa svojom suprugom, krajem šezdesetih godina prošlog veka, nazvavši je prema jevanđelisti Sv. Mateju zbog parabole u njegovom jevanđelju, koja glasi: „Jer svakom koji ima daće se, i preteći će mu; a od onoga koji nema, i što ima uzeće se od njega“ (Matej, 25:29).

Merton je u studiji koja se bavi sistemom komunikacija i nagrada u naučnim krugovima, a preko primera ograničenog članstva u francuskoj Akademiji nauka, opisao sociološku i psihološku podlogu ove pojave (Merton, 1968, p. 159). Društvo se sastoji od mnogih isprepletanih uzajamnih veza kojima njegovi pripadnici komuniciraju i stupaju u različite međusobne odnose. Nisu, međutim, svi pripadnici društva podjednako inkorporirani u društvene strukture. Oni koji se bolje pozicioniraju, oko njih je mreža uzajamnih komunikacionih veza gušća i oni lakše mogu da ostvare težnje i interese. To ih čini privlačnijima za druge pripadnika društva, koji će nastojati da se povežu sa njima, a njima će to, opet, povećati povezanost i mogućnost ostvarivanja interesa, što će ih dodatno popularizovati i proširivati njihovu mrežu. Naprotiv, slabije pozicionirani, imaju sve izglede

da im se mreža kontakata smanjuje. To se, na primer, jednostavno objašnjava i na početku rada Matjaža Perca, objavljenog pre četiri godine: „Metjuov efekat opisuje pojavu da u društvu bogati postaju bogatiji, a moćni još moćniji. Tesno je povezan sa konceptom preferencijalnog povezivanja u mrežnoj teoriji društva, gde su povezanije tačke predodređene da privuku tim više veza u budućnosti, nego one tačke koje se smatraju pomoćnima (sa manje veza, prim. aut.).“⁶ (Perc, 2014, p. 11).

Metjuov efekat kao pojava lako je uočljiv na tržištu kapitala. Njegova nužna urođenost u svakoj društvenoj mreži možda je najočiglednija i najlakše obšanjiva baš na tržištu kapitala. Prirodno je da investitori biraju one posrednike koji su bolje pozicionirani na tržištu; što su posredničke veze brojnije i gušće, oni će za svoje klijente - investitore moći bolje da plasiraju poverenu im aktivu i da im obezbede veću zaradu. Nije, takođe, teško zaključiti da će dolazak novih klijenata činiti te posrednike interesantnim i onima kojima su ulaganja potrebna, što će samo uvećavati njihove mogućnosti jednostavnije i brže oplodnje kapitala.

Razvijen do kraja, efekat Sv. Mateja mogao bi da dovede do kornerovanja tržišta, bilo samo jednog finansijskog instrumenta, bilo tržišta u celini. Što je tržište manje po broju pripadnika (tačaka u mreži) i pliće po količini finansijskih instrumenata i njihovoj vrednosti, ovaj će efekat biti izraženiji. Pretpostavka je da do toga ne bi moglo da dođe u okolnostima gde je tržište prepušteno svojim učesnicima, jer će se drugi boriti da na njemu povrate uticaj šireći mrežu komunikacije i usluga.

Pretnja od prekomernog razvijanja efekta Sv. Mateja, štaviše, može da bude stalni i efikasni podsticaj širenju tržišta kapitala na nove klijente i kreiranju novih finansijskih proizvoda. Jedino stupanjem jakog učesnika na tržište kapitala, mimo njegove originalne mreže, poput neke državne agencije ili ministarstva, ili poput nekog monopola, njihovim izborom preferencijalnog posrednika, moglo bi da naruši mehanizam odbrane samog tržišta od efekta Sv. Mateja.

6 „The Matthew effect describes the phenomenon that in societies, the rich tend to get richer and the potent even more powerful. It is closely related to the concept of preferential attachment in network science, where the more connected nodes are destined to acquire many more links in the future than the auxiliary nodes.“

operations on the market, whether brokers' or dealer', which of them prevail, whether the stock market is classical or an electronic dealer market, and whether clearing is part of a stock exchange or a special organisation, all of this does not matter to the nature of the capital markets network itself. It is derived from the mediators' operations, protecting their business integrity and the quality of services provided to those who are not in the network.

The very essence of the capital market network has remained the same since its emergence within the wider market, in the course of its development and maintenance to date: the mutual and multiple connectedness of traders. Today, for example, following this logic of network organisation, it is also defined in this way by modern legislation. The European Union Directive governing the capital market talks about the generic term of a multilateral system (MiFID II, 2014). This network concept is also broad enough to include all possible participants, and deep enough to regulate the links that are established between them. In Article 4 of the Directive, which provides definitions of key concepts, Item 19, states: "multilateral system" means any system or facility in which multiple third-party buying and selling trading interests in financial instruments are able to interact in the system.

Negative Effects

There is no perfect organisation, every social phenomenon, no matter how positive it is, always has accompanying effects that can jeopardise the prosperity it provides. Recognising and describing such negative phenomena within a wider context, the organisation of a society, for example, is a prerequisite for further advancement and improvement, through the relevant measures, or reorganisation, by which the negative effects can be mitigated.

The network structure of the capital market, such as the network structure of the wider market and the entire society, entails some intrinsic disadvantages. The first one endangers the equality of the members of the society, i.e. the participants in the capital market.

The Matthew Effect

This effect was described as a social phenomenon, one could dare say even as a pattern, by the American sociologist Robert K. Merton and his wife, at the end of the 1960s, who named it after St. Matthew, the evangelist, for the parable in his gospel, which reads: "For whoever has will be given more, and they will have an abundance. Whoever does not have, even what they have will be taken from them" (Matthew 25:29).

Merton described the sociological and psychological background of this phenomenon (Merton, 1968, p. 159), in a study dealing with the system of communications and awards in scientific circles, and through the example of limited membership at the French Academy of Sciences. The society consists of many intertwined mutual links through which its members communicate and enter different interactions. However, not all members of a society are equally incorporated into social structures. Those who are better positioned have a denser network of reciprocal communication links around them and they can more easily achieve their aspirations and interests. This makes them more attractive to other members of the society, who will try to connect with them, and they will, again, increase their connection and the possibility of gaining interest, which will further popularise and expand their network. On the other hand, those with poorer positions have a higher chance of their network of contacts dwindling down. For example, this is simply explained at the beginning of the paper of Matjaž Perc, published four years ago: "The Matthew Effect describes the phenomenon that in societies, the rich tend to get richer and the potent even more powerful. It is closely related to the concept of preferential attachment in network science, where the more connected nodes are destined to acquire many more links in the future than the auxiliary nodes (with fewer connections, author's comment)." (Perc, 2014, p 11).

The Matthew Effect as a phenomenon is easily visible in the capital market. Its necessary innateness in every social network may be most obvious and easiest to see on the capital market. It is natural for investors to choose those intermediaries that are better positioned on

Golubovi na trgu

Ova pojava nije opisana do sada u naučnoj literaturi, ali je prisutna na svim tržištima kapitala i, kao takva, poznata svim njegovim učesnicima i imenovana posebnim izrazima u njihovom argou, poput „Pigeons-in-Piazza“, na primer, na engleskom. Podloga joj je brzina širenja informacija u mreži tržišta kapitala, veća od brzine u drugim mrežama, što se onda prelama kroz određena ponašanja velikih grupa ljudi.

Tržište je skoro idealni primer mreže za širenje informacija, ono na protoku informacija delom i počiva; tržište kapitala, videli smo, i postoji samo kao protok informacija - protok novca i hartija od vrednosti, odnosno finansijskih derivata nalaze se u predelu pred i posle samih tržišnih transakcija. Zaustavi li se protok informacija, zaustavlja se i tržište kapitala.

Protok informacija zavisi od same strukture tržišta kapitala, njegove produbljenosti i razuđenosti, kao i stepena regulacije i načina na koji je uređeno. Ali je taj protok svakako brži i učestaliji nego na drugim tržištima, ili u društvu. Otuda su i reakcije učesnika na tržištu kapitala, način na koji postupaju u skladu sa primljenim informacijama, po mnogo čemu osobene, i u nekim slučajevima naglašenije nego kod pripadnika društva mimo tržišta kapitala.

Osobnost reakcija učesnika na tržištu kapitala objašnjavali su teoretičari bihejvoristi, čija se osnovna tvrdnja može svesti na to da se učesnici na tržištu ne rukovode u postupanju efikasnošću, ili najkraćim putem za zadovoljenje najvećeg broja interesa, nego rezonovanjem koje se može objasniti samo ako se u promišljanje uključi i psihologija, nadasve psihologija masa. U relativno skorijoj studiji *Uticao bihejviorističkih finansija na berzu*, kaže se: „Bihejviorističke finansije proučavaju uticaj psiholoških činilaca na razvoj finansijskih tržišta. Finansijski investitori su ljudi sa veoma raznolikim brojem devijacija u racionalnom ponašanju, što je uzrok različitim efektima koji objašnjavaju tržišne anomalije.“⁷ (Birău, 3/2012)

Ovom pristupu dugujemo i saznanje da profit nije uvek i nije jedini pokretač aktivnosti

unutar tržišnih mreža. Uspostavljanje novih veza, bolje pozicioniranje, zaduživanje uslugama, videli smo, može biti podjednako jak motiv tržišnim aktivnostima. Takve aktivnosti obezbeđuju i dugovečnost i održivost mreža. Da je profit jedini pokretač i motiv, uzajamne veze između pripadnika mreže brzo bi se iscrple i mreža bi se rasula.

U efektu „golubova na trgu“ koji ispitujemo, brzina protoka informacija obezbeđena mrežom tržišta kapitala dovodi do ishitrenih reakcija investitora. Naziv ovog efekta već sam po sebi upućuje na oblik devijacije tržišta: ako bacite par mrvica hleba na gradski trg, svi golubovi sjatiće se na mesto gde su mrvice bačene, bez obzira koliko neznatna bila mogućnost da se svi njima nahrane; a čim pljesnete dlanovima, svi će se golubovi razleteti sa trga.

Jedan od najočiglednijih primera ovakvog ponašanja tržišnih učesnika predstavlja azijska kriza od leta 1997. godine. Stalni rast manjih ekonomija na zapadnim obalama Tihog okeana, takozvanih azijskih tigrova, privlačio je, i dve decenije pre krize, strane investicije. U ekonomijama u zaletu novac je lako nalazio isplative projekte, sve do trenutka kada je samo priliv novca stvarao privid realnog rasta. Po najzastupljenijim procenama, saturacija tržišta novčanim kapitalom dogodila se oko jedne decenije pre izbijanja krize. Velike investitore sledili su oni srednji i mali, poput golubova na trgu, čineći tim više da na ovim tržištima kapital postane jevtin i da se ulaže i u neisplative poslove.

Lokalne valutne krize, započete tog leta, pokazale su veličinu diskrepance između količine raspoloživog kapitala i mogućnosti apsorpcije lokalnih privreda. I, opet, ponovila se priča o golubovima: prvo su velike investicijske banke počele da napuštaju ova tržišta, prodajući hartije od vrednosti iz svojih portfolija.

A potom su njih, u panici, sledili i mali investitori zasipajući berze svojim portfolijima. Cene vrednosnica bile su u oštrom padu, jer je tržište bilo njima preplavljeno. Paničnom reakcijom i neograničenom ponudom, investitori su, praktično, doprineli još većem obezvređivanju sopstvenih portfolija (Wong, 2000.).

⁷ „Behavioral finance is the study of the influence of the psychological factors on financial markets evolution. Financial investors are people with a very varied number of deviations from rational behaviour, which is the reason why there is a variety of effects, which explain market anomalies.“

the market; the more numerous and denser the mediators' connections are, the better they will be able to market the assets entrusted to them to provide their clients with higher profits. It is also not difficult to conclude that the arrival of new clients will make these intermediaries interesting to those who need investments, which will only increase their opportunities for easier and faster capitalisation.

Developed to the limit, the Matthew Effect could lead to a cornered market, either of a single financial instrument or any market in general. The smaller the market is in terms of the number of nodes (points in the network) and the amount of financial instruments and their value, the more pronounced this effect will be. The assumption is that this could not happen in the circumstances where the market is left to its participants, because others will struggle to regain influence on it by expanding the network of communications and services.

The threat from the over-developing Matthew Effect can, moreover, be a permanent and efficient incentive to expand the capital market to new clients and create new financial products. Only a strong participant entering the capital market, past its original network, such as a state agency or ministry, or as a monopoly, by selecting a preferential broker, could damage the defence mechanism of the market itself from the Matthew Effect.

Pigeons-in-Piazza

This phenomenon has not been described in scientific literature so far, but is present in all capital markets and, as such, is known to all its participants and named by special phrases in their arguments, such as 'Pigeons-in-Piazza', for example, in English. Its basis is the speed of information dissemination in the capital market network, higher than the speed in other networks, which then reflects through certain behaviours of large groups of people.

The market is an almost ideal example of the information dissemination network and it partly relies on the flow of information; capital market, as we have seen, exists only as a flow of information - the flows of money and securities or financial derivatives are found before and after the market transactions themselves. If the flow of information stops, the capital market also stops.

The flow of information depends on the very structure of the capital market, its deepening and dissemination, as well as the degree of regulation and the way it is regulated. But this flow is certainly faster and more frequent than in other markets, or in society. Hence, the reactions of the participants in the capital market, the way they act in accordance with the information received, are in many respects specific and, in some cases, more pronounced than in the members of the society, outside the capital market.

The peculiarities of the reactions of the capital market participants were explained by the theoretical behaviourists, whose basic assertion can be reduced to the fact that the market participants are not guided in their actions by efficiency, or the shortest way to meet the greatest number of interests, but rather by reasoning that can be explained only if the consideration includes psychology, and most importantly crowd psychology. A relatively recent study, *The Impact of Behavioural Finance on Stock Markets*, says: "Behavioural finance is the study of the influence of the psychological factors on financial markets evolution. Financial investors are people with a very varied number of deviations from rational behaviour, which is the reason why there is a variety of effects, which explain market anomalies." (Birău, 3/2012).

This approach also provided us with the awareness that profit is not always the only driver of activity within the market networks. The establishment of new connections, better positioning, borrowing services, we have seen, can be equally strong motives for market activities. Such activities also provide the longevity and sustainability of networks. If profit were the only driver and motive, the interconnection between members of the network would quickly be eroded and the network would be dispersed.

In the Pigeons-in-Piazza effect that we are researching, the speed of information flows provided by the capital market network leads to the hasty reactions of the investors. The name of this effect is a clear reference to the shape of the market deviation: if you throw a few bread crumbs on the piazza, all the pigeons will flock to the place where the crumbs were thrown, no matter how small the possibility of them all

Ograničavanje raspona dozvoljenih dnevnih fluktuacija cene na berzama može donekle da ublaži ovaj efekat, čak u početnoj fazi i da ga zauzda. Najbolja odbrana od njega, ipak, jeste investicioni mentalitet, odnosno svest igrača da će bolje zaštititi svoje dugoročne interese ako ne podležu panici. Drugim rečima, ako svoje ponašanje podvrgnu pretpostavkama teorije efikasnog tržišta, pre nego biheviorizma.

Poznati su slučajevi kada je logika profita nadvladala paniku na tržištu i time sačuvala sveukupnu ekonomsku stabilnost. Specijalisti na američkim berzama tako su, kada su cene vrednosnica počele da padaju posle ubistva predsednika Kenedija, nastavili da ih kupuju i preko količine na koju su bili obavezani ugovorima sa berzama (*Financial Post*, 22 November 2013; *USA Today*, 21 November 2013). To je umirilo silazni trend i u kratkom roku oporavilo stanje pre eventualnog izbijanja krize, pokazujući kako se javni interes može braniti i sledeći privatnu zaradu.

Slična situacija zabeležena je i tri decenije pre toga, na Beogradskoj berzi: po marseljskom atentatu porastao je broj zaključenih terminskih poslova sa rokom od šest meseci; posrednici su tako prebacili odlučivanje o investicijama za pola godine, tokom kojih se videlo da sistem opstaje i da atentat neće izazvati negativne ekonomske posledice (Štimac, 1998, str. 163-166). Mogućnost terminskog trgovanja tako je bila iskorišćena za izbegavanje ishitrenog odlučivanja.

Refleksivnost

Donekle slična pojava „golubovima na trgu“ jeste refleksivnost, ali je smer kretanja informacija kroz mrežu tržišta kapitala kod nje obrnut. Osnovno kretanje koje uspostavlja i održava trend na tržištu kapitala ne dolazi iz okruženja, bilo ono ekonomsko ili društveno, već od samih učesnika na tržištu kapitala, i to onih najvećih. Ukoliko poseduju dovoljno veliku finansijsku snagu i ukoliko su u stanju da deluju

u određenom pravcu dovoljno dugo, pokrenuće kretanje na tržištu koje im ide na ruku.

Najočigledniji primer refleksivnosti jeste špekulacija vednošću britanske funte prema nemačkoj marki 1992. godine, koju je preduzeo investicioni fond Džordža Soroša, Kvantum (Quantum). Računajući na precenjenost funte u okviru sistema evropskih tečajeva,⁸ Sorošov fond počeo je *en mass* da prodaje funtu unapred, bez pokrića, računajući da će o dospeću ugovora funta toliko pasti, da će je on kupiti ispod ugovorene cene i tako zaraditi na razlici između cene koju je ugovorio i one po kojoj je funte nabavio.⁹

Činjenica jeste da je funta, u odnosu na stanje matične ekonomije, bila precenjena, i da je bila neophodna korekcija njene vrednosti, pre svega prema marki, ali je i činjenica da bez špekulantskog Kvantumovog napada, do njene devalvacije ne bi došlo još za neko vreme. Impuls kretanju na tržištu došao je, dakle, od samog učesnika na tržištu, koji se rukovodio sopstvenim procenama i sve aktivnosti u datoj špekulaciji preduzeo o sopstvenom trošku i na sopstveni rizik (Wolters, 1996.).

Tržište je, na ovu akciju, odgovorilo sledeći je. Praktično, ono je preslikavalo ono što je Soroš radio, reagujući poput odraza. Otuda i naziv: refleksivnost, od odražavanja slike, od refleksije (eng: *reflecting the image*). Samu pojavu refleksivnosti teorijski je obrazložio upravo Džordž Soroš u knjizi *Kriza globalnog kapitalizma* (Soros, 1998.). On ju je definisao na sledeći način: „Ali finansijska tržišta pokušavaju da predvide budućnost koja zavisi od odluka koje ljudi donose u sadašnjosti. Umesto da tek pasivno odslikavaju stvarnost, finansijska tržišta aktivno stvaraju stvarnost, koju onda, povratno, odslikavaju. Veza između sadašnjih odluka i budućih događaja dvosmerna je, i ja je nazivam refleksivnost.“¹⁰ (Soros, 1998, p. 23).

Informacije o postupcima ključnih, velikih igrača, izazivaju tako očekivani odraz na tržištu, koji odgovara onome radi čega su ti veliki igrači

8 ERM - European Exchange Rate Mechanism, uveden marta 1979. godine, u okviru koga je svaka valuta mogla da oscilira u vrednosti prema drugim evropskim valutama samo u unapred dogovorenom opsegu, ne bi li se tako obezbedila podrška monetarnoj stabilnosti u okviru, tada, Evropske ekonomske zajednice.

9 To je uobičajeni način prodaje unapred, kada se prodata aktiva nabavlja tek o dospeću ugovora, i koji se naziva *short sale*.

10 „But financial markets attempt to predict a future that is contingent on the decisions people make in the present. Instead of just passively reflecting reality, financial markets are actively creating the reality that they, in turn, reflect. There is a two-way connection between present decisions and future events, which I call reflexivity.“

being fed; and as soon as you clap your hands, all pigeons will scatter from the piazza.

One of the most obvious examples of this behaviour of market participants is the Asian crisis of the summer of 1997. Two decades before the crisis, the steady growth of smaller economies on the western coasts of the Pacific Ocean, the so-called Asian Tigers, attracted foreign investments. In emerging economies, money was easy to find for worthwhile projects until the moment when the inflow of money only created an illusion of real growth. According to the most common estimates, the saturation of the market with capital took place about a decade before the outbreak of the crisis. Large investors followed the middle and small ones, like pigeons in the piazza, making it so that the capital in these markets became cheap and investments were made in unprofitable activities.

The local currency crises, which began that summer, revealed the size of the discrepancy between the amount of available capital and the local economies' ability to absorb. And, again, the pigeon story was repeated: First, large investment banks began to leave these markets by selling securities from their portfolio.

And then, they were followed by small investors in panic, flooding the stock exchanges with their portfolios. The prices of the securities were in sharp decline, as the market was flooded with them. Through this panic reaction and unlimited offer, the investors practically contributed to the further deterioration of their own portfolios (Wong, 2000).

Limiting the range of allowed daily fluctuations in stock prices can somewhat mitigate this effect, even at the initial stage, and reign it in. The best defence from this, however, is the investment mentality, i.e. the consciousness of the players that they will better protect their long-term interests if they do not panic, i.e. if they behave in accordance with the efficient market theory, rather than behaviourism.

There are cases where the profit logic prevailed over panic on the market and thus

preserved overall economic stability. The specialists on US stock exchanges, when the value of securities began to decline after President Kennedy's assassination, continued to buy them, surpassing the amount they were obliged to by stock exchange agreements (*Financial Post*, 22 November 2013; *USA Today*, 21 November 2013). This slowed down the downward trend and in the short term recovered the situation before the possible outbreak of a crisis, demonstrating that the public interest can be defended even while following private profit.

A similar situation was noted three decades prior to this, on the Belgrade Stock Exchange: after the Marseille assassination, the number of concluded futures contracts with a maturity of six months increased; the mediators thus postponed investment decision-making for half a year, during which the system seemed to persist and the assassination did not seem as if it would have negative economic consequences (Štimac, 1998, pp. 163-166). The possibility of futures trading was thus used to avoid hasty decision-making.

Reflexivity

A somewhat similar phenomenon to 'Pigeons-in-Piazza' is reflexivity, but the direction of movement through the network of capital markets is reversed. The basic movement that establishes and maintains a trend in the capital market does not come from the environment, whether economic or social, but from the very participants in the capital market, specifically the largest ones. If they have the sufficient financial strength and if they are able to act in a certain direction for a long time, they will initiate the market movements favourable to them.

The most obvious example of reflexivity are the speculations of value of the British pound sterling against the Deutsche Mark in 1992, undertaken by the George Soros' investment fund Quantum. Counting on the overestimation of the pound within the ERM⁴, the Soros' fund started to sell the pound *en mass*

4 ERM - European Exchange Rate Mechanism, introduced in March 1979, in which each currency could oscillate in value to other European currencies only in a predetermined range, in order to provide support for monetary stability within the European Economic Community.

i krenuli u akciju. To je zapazio i opisao u knjizi *Veliki slom 1929.* i Džon Kenet Galbrajt, sledećim rečima: „... Negde u blizini uvek se nalaze veliki igrači koji značajno utiču na pitanje raste li vrednost akcija, ili pada.“, i dalje: „... ti su veliki igrači postajali sve moćniji i moćniji u očima javnosti...“¹¹ (Galbraith, 2010, str. 30).

Sam Galbrajt nije do kraja zaokružio naučno objašnjenje ove pojave i njenih krajnjih posledica, zadovoljavajući se tek konstatacijom njenog postojanja: „Postoji mišljenje da ozbiljnim uveravanjem javnosti kako će se napredak nastaviti i u budućnosti, doista možemo doprineti tome da se napredak u konačnici i ostvari. Ta je vera u efikasnost reči i izjava naročito izražena među poslovnim ljudima.“ (ibid, str. 33).

Ovako bi se opisana reakcija tržišta teško mogla zamisliti bez njegove mrežne strukture, po kojoj se informacije šire difuzno i ponovo spajaju u određena čvorišta. Pripadnici mreže koji tim čvorištima naginju, opet, preduzimaju akcije na osnovu tako dospelih informacija, prateći kretanja čiji impuls dolazi od inicijalnog učesnika na tržištu.

Pojava refleksivnosti ukazuje na stratifikaciju unutar mreže tržišta kapitala, jer ona ne može da nastane bez jasne podvojenosti na krupnije igrače - pripadnike mreže sa velikim brojem veza i one sa manjim brojem. Po tome je refleksivnost slična efektu Sv. Mateja. Efekat Sv. Mateja konstatuje situaciju unutar mreže, odnosno postojanje i (eventualno) dalje razvijanje podvojenosti, a refleksivnost ukazuje na njene moguće posledice u kreiranju tržišnih tokova.

Nauk za regulaciju

Mrežna struktura tržišta, odnosno posmatranje tržišta kapitala kao splet veza komunikacije između raznih pripadnika mreže, pomaže nam da shvatimo i neke pojave na

njemu, ranije opisane, na drugačiji i, možda, smisleniji način. U tom sagledavanju dolazimo lako i do potrebe za regulacijom tržišta kapitala, kao i do nivoa same te regulacije. Veber je još na početku prethodnog stoleća, razmatrajući nastanak i ulogu tržišta u društvu, ustanovio: „... (da) tržište predstavlja uzajamno postojanje i sled racionalnih udruživanja, od kojih je svako specifično efemerno utoliko što se gasi kad se razmene dobra, osim ako nije već oktroisan neki poredak koji učesnicima u razmeni, u odnosu na njihove partnere u razmeni, nameće jemstvo zakonskog sticanja razmenskog dobra ...“¹² (Veber, 1976, str. 531). Ovim očigledno ukazuje na nametnuto jemstvo izvan-tržišnog autoriteta za izvršavanje ugovora, dakle zaključićemo države, i dodaćemo, koja to čini kroz regulatorna tela, i to u ambijentu koji Veber opisuje skoro istovetno kao mrežu učesnika: „... utoliko što oba učesnika u razmeni svoje ponude orijentišu prema potencijalnom delanju neodređenog broja realnih ili mogućih drugih konkurenata zainteresovanih za razmenu ...“¹³ (Weber, 1922, S. 364).

Neophodnost svojevrsne organizacije sa uspostavljenim normama za održanje svake društvene mrežne strukture ostala je opšteprihvaćena konstatacija, koju je, u naše vreme, potvrdio i Frensis Fukujama (Fukuyama, 2000.). On je, u studiji *Veliki poremećaj: ljudska priroda i obnavljanje društvenog poretka*, obrazložio razloge zbog kojih se svako društvo može jednostavno rasuti, ukoliko se odnosi u njemu, odnosi između njegovih pripadnika, ne podvrgnu poretku koji može biti uspostavljen na osnovu normi proisteklih iz religije, morala, pravnog poretka. Razvijajući ove tvrdnje, zaključio je da jedino ona društva koja su zasnovana na liberalnom društvenom modelu i tržišnoj ekonomiji mogu sebi da obezbede ne samo održivost, nego i svakovrsni napredak.

Tržište kapitala, svakako, može da postoji

11 Citati, ovaj i naredni, uzeti iz hrvatskog prevoda knjige *The Great Crash 1929*, prebačeni su sa ijkavice na ekavicu, uz upotrebu sinonima, isključivo radi stilske ujednačenosti celog teksta.

12 „... stellt der Markt ein Mit- und Nacheinander rationaler Vergesellschaftungen dar, deren jede insofern spezifisch ephemer ist, als sie mit der Uebergabe der Tauschgüter erlischt, sofern nicht etwa bereits eine Ordnung oktroyiert ist, welche den Tauschenden ihren Tauschgegnern gegenüber die Garantie des rechtmäßigen Erwerbs des Tauschgutes ... auferlegt.“ Radi poredenja pogledati i: *Privreda i društvo*, Maks Veber, Prosveta, Beograd, 1976, str. 531. Poglavlje iz koga je uzet ovaj i naredni citat u originalnom izdanju iz 1922. godine numerisano je kao peto, po jednostavnim naslovom „Tržište“ („Markt“), dok je u srpskoj redakciji, pod numeracijom šestog poglavlja, nazvano „Tržišna zajednica“.

13 „... insofern die beiden Tauschreflektanten ihre Angebote an dem potentiellen Handeln unbestimmt vieler realer oder vorgestellter mitkonkurrierender anderer Tauschinteressenten ...“.

and in advance, without security, expecting that upon maturity of the contract the pound would depreciate so much that he would buy it below the contracted price, thus earning profit from the price difference between the contracted and the initial prices.⁵

The fact is that the pound was overestimated in relation to the state of the home economy, and that it was necessary to correct its value, first of all towards the Deutsche Mark, but it is also certain that, without the speculative Quantum attack, its devaluation would not have happened for another while. The movement impulse on the market came from a market participant himself, who managed his own estimates and undertook all the activities in the given speculation at his own expense and at his own risk (Wolters, 1996).

The market responded to this action in the following manner. Practically, it reflected what Soros was doing, reacting like a mirror. Hence the name: reflecting of the image. The very phenomenon of reflexivity is theoretically explained by George Soros himself in the book *The Crisis of Global Capitalism* (Soros, 1998). He defined it as follows: "But financial markets attempt to predict a future that is contingent on the decisions people make in the present. Instead of just passively reflecting reality, financial markets are actively creating the reality that they, in turn, reflect. There is a two-way connection between present decisions and future events, which I call reflexivity." (Soros, 1998, p. 23).

Information about the actions of big, key players provokes such an expected reflection on the market, which corresponds to why the big players initiated the action in the first place. This was noticed and described in the book *The Great Crash of 1929* by John Kenneth Galbraith, in the following words: "... Somewhere nearby there are always big players that significantly influence the question of whether the value of the shares increases or declines", and further: "... these big players have become ever more powerful in the eyes of the public..." (Galbraith, 2010, p 30).

Galbraith himself did not fully complete the scientific explanation of this phenomenon

and its ultimate consequences, satisfied only by the statement of its existence: "There is an opinion that by seriously convincing the public that progress will continue in the future, we can indeed contribute to the progress that is ultimately achieved. This belief in the effectiveness of words and statements is particularly pronounced among business people." (Ibid, p 33).

The reaction of the market described in this way could hardly be imagined without its network structure, according to which the information spreads diffusely and re-connects to certain hubs. Network members that lean towards these hubs, again, take actions based on such mismatched information, following the movements whose impulse comes from the initial participant in the market.

The phenomenon of reflexivity points to the stratification within the capital market network, because it cannot occur without a clear discrepancy between the larger players - members of the network with a large number of connections and those with fewer connections. Accordingly, the reflexivity is similar to the Matthew Effect. The Matthew Effect identifies the situation within the network, i.e. the existence and (possibly) further development of discrepancy, and reflexivity points to its possible consequences in creating market flows.

Lesson for Regulation

The network structure of the market, i.e. the view of the capital market as a network of communications between various members of the network, helps us to understand some of the phenomena in it, described earlier, in a different and perhaps more meaningful way. In this regard, we easily come to the need for the regulation of the capital market, as well as to the level of the regulation itself. At the beginning of the previous century, Weber, considering the emergence and role of the market in society, established: "... (that) the market is a coexistence and consequence of rational associations, each of which is specifically ephemeral inasmuch as it is extinguished when the goods are exchanged,

5 This is the usual method of selling in advance, when the sold assets are acquired only upon maturity of the contract, which is also called *short sale*.

samo u liberalnom, tržišnom modelu ekonomije i društva. To, međutim, ne znači da je moguće da ono funkcioniše samo na spontano uspostavljenim odnosima između svojih učesnika. Ekonomska istorija pokazala nam je da se mreže trgovaca uglavnom uspostavljaju spontano, onako kako oni proširuju svoju delatnost i pristupaju drugim tržištima; takve mreže mogu uspostaviti i neku vrstu kodifikovanog autonomnog pravnog poretka, poput pravila objedinjenih u Zakonu trgovca (novolat: *Lex Mercatoria*, eng. *Law Merchant*) u srednjem veku, ili grupe pravila o tome šta valja i šta ne valja trgovci da čine, u knjizi Dubrovčanina Bena Kotruljevića, u odmakloj renesansi. No, za trajnost strukture koju trgovci između sebe izgrade, koja se uglavnom svodi na tržište, bilo ono šire, ili meta-tržište poput berze, nužna je podrška autoriteta izvan tržišta, onog oličenog u državi i njenim ustanovama.

Ova regulacija čuva sam liberalni karakter tržišta kapitala. Paradoks se produbljuje tim više, kada se primeti da što je regulacija razvijenija i diverzifikovanija, tim je slobodno kretanje dobara i novca na tržištu zaštićenije. Ovo jasno dokazuje Stiven Vogel u knjizi *Slobodnija tržišta, više pravila* (Vogel, 1996.). U knjizi se govori o tome kako je takozvana deregulacija, u stvari samo nova regulacija, koja je poprimila drugačije oblike, ne bi li na adekvatniji način zaštitila tržišne učesnike i njihovo poslovanje.

Izmena okolnosti i nužnost drugačije i detaljnije regulative, usledila je, po njemu, zbog nekoliko činilaca, od globalizacije, do razvoja različitih vrsta poslova na tržištima, te napretka tehnologije (ibid, p. 10-11). I danas je tehnologija među ključnim podstrekačima stvaranja sve novih i novih pravila. Tako vodeće regulatorne agencije u svetu, poput Komisije za terminsko trgovanje (eng: *Commodity Futures Trading Commission - CFTC*) u Sjedinjenim Američkim Državama, pokušavaju danas da pronađu odgovarajući set normi koje bi onemogućile da takozvano trgovanje visoke učestalosti (Investopedia) obesmisli finansijsko tržište kao mesto na kome se sučeljavaju ponuda i tražnja generisana različitim procenama učesnika, a ne zatrpavanjem naložima za kupovinu i prodaju, od kojih preko devedeset procenata nije nastalo na osnovu realnih poslovnih odluka, već im je jedina svrha da odmah po plasiranju budu povučeni sa tržišta.

Ovakvo trgovanje, bolje reći simulacija trgovanja, nešto je što je dospelo do tržišta naknadno, pošto je prethodno bilo nastalo mimo njega. Trgovanje visoke učestalosti, prema tome, nije urođeno tržištu kapitala, nije njegov neizostavni i sastavni deo, nego mu je kao pojava prirodno. Po svojim mogućim neželjenim efektima približava se pojavi refleksivnosti.



unless a certain order has been imposed that guarantees to the participants in the exchange, in relation to their partners in exchange, the legal acquisition of the exchangeable good..." (Weber, 1976, p. 531)⁶. This obviously points to the imposed guarantees of the out-of-market authority for the execution of the contract, so we will conclude the state, adding that this is done through regulatory bodies, in an atmosphere that Weber describes almost identically as a network of participants: "... insofar as both participants in the exchange of their offer orient themselves towards the potential action of an unspecified number of real or possible other competitors interested in the exchange ..."⁷ (Weber, 1922, p. 364).

The necessity of a kind of organisation with established norms for the maintenance of every social network structure remained a generally accepted statement, which, in our time, was confirmed by Francis Fukuyama (Fukuyama, 2000). In the study *The Great Disruption: Human Nature and the Reconstitution of Social Order*, he explained the reasons why every society can be easily dissolved, if its internal relations, the relations between its members, do not subject themselves to an order that can be established on the basis of the norms resulting from religion, morality, or legal order. Developing these claims, he concluded that only those societies that are based on a liberal social model and a market economy can provide for themselves not only sustainability, but also every kind of progress.

The capital market, of course, can exist only in the liberal, market model of the economy and society. This, however, does not mean that it is possible for it to function only on spontaneously established relationships between its participants. Economic history has shown us that traders' networks are mostly established spontaneously, as they expand their business and access other markets; such networks may also establish a kind of codified autonomous legal order, such as the rules consolidated in the Law Merchant (neo-lat.: *Lex*

Mercatoria) in the Middle Ages, or the groups of rules on what the traders should and should not do, in the Ragusan Benedetto Cotrugli's book on the late Renaissance. However, for the sustainability of the structure that the traders build among themselves, which is mainly the market, whether it is broad, or a meta-market like a stock market, it is necessary to have the support of the authorities outside the market, personified in the state and its institutions.

This regulation preserves the same liberal character of the capital market. The paradox is deepened by the fact that, when it is noted that the regulation is more developed and more diversified, the free movement of goods and money on the market is more protected. This is clearly demonstrated by Stephen Vogel in the book *Freer Markets, More Rules* (Vogel, 1996). The book discusses how the so-called deregulation is, in fact, only a new regulation, which has taken on different forms, in order to protect market participants and their business in an adequate way.

The change in the circumstances and the necessity of different and more detailed regulations, according to him, originated due to several factors, from globalisation to the development of various types of business on the markets, and the advancement of technology (ibid, pp. 10-11). And today technology is among the key catalysts of creating newer and newer rules. Thus, the world's leading regulatory agencies, such as the Commodity Futures Trading Commission (CFTC) in the United States, are trying to find the right set of standards that would prevent the so-called high-frequency trading (Investopedia) from making the financial market insubstantial as a place on which the supply and demand are generated by different assessments of participants, and not by accumulating buying and selling orders, more than ninety percent of which is not based on real business decisions, their only purpose being to be immediately withdrawn from the market after placement.

6 „...stellt der Markt ein Mit- und Nacheinander rationaler Vergesellschaftungen dar, deren jede insofern spezifisch ephemere ist, als sie mit der Uebergabe der Tauschgüter erlischt, sofern nicht etwa bereits eine Ordnung oktroyiert ist, welche den Tauschenden ihren Tauschgegnern gegenüber die Garantie des rechtmäßigen Erwerbs des Tauschgutes... auferlegt.“

7 „...insofern die beiden Tauschreflektanten ihre Angebote an dem potentiellen Handeln unbestimmt vieler realer oder vorgestellter mitkonkurrierender anderer Tauschinteressenten...“

Druge pojave, naprotiv, koje ugrožavaju samo tržište i razloge njegovog nastanka i održanja, urođene su i, kao takve, predstavljaju mnogo veći izazov za regulaciju. Izazov tim veći što je lakše uticati na prirodene pojave, nego na urođene - potonje ne mogu da se eliminišu u potpunosti, već će uvek pratiti osnovni fenomen, u našem slučaju tržište kapitala. Jedna od najopasnijih pojava po njegovu održivost jeste neravnomerna raspoređenost informacija. Informativna simetrija uvek se ističe kao *conditio sine qua non* njegove efikasnosti i, uopšte, funkcionalnosti, pa i same svrhe postojanja. Otuda je svaka njegova regulacija posebno posvećena eliminaciji takozvanog insajderskog trgovanja, odnosno trgovanja na osnovu povlašćenih informacija, koje nisu dostupne pod jednakim uslovima svim zainteresovanim učesnicima (Investopedia).

Tržištu kapitala, međutim, investitori pristupaju preko mreže posrednika. Svaki investitor način pristupanja portfolio ulaganju opredeljuje na osnovu dvojake informacije: prva se odnosi na samu njegovu poslovnu politiku, njegove poslovne procene i ambicije; druga se odnosi na izbor posrednika, pri čemu je najvažniji uslov njegova situiranost na tržištu, odnosno povezanost njega kao posrednika unutar mreže posrednika. Bolja povezanost posrednika vezaće za njega sve nove i nove investitore, što smo već objasnili pod efektom Sv. Mateja.

Bolja povezanost posrednika znači i, prvenstveno, raspolaganje boljim informacijama i njihovim većim obimom. To je osnovna uporedna prednost svakog posrednika, jer je tržište kapitala nadasve mreža za širenje informacija. U takvom okruženju bolje se snalazi onaj koji ima kvalitetnije informacije. Upravo zbog toga mu investitori i pristupaju, plaćajući kroz proviziju tu njegovu bolju poveznost, odnosno plaćajući ga zato što je njegov položaj u okviru te informativne mreže povlašćeniji u odnosu na druge. Investitori biraju i plaćaju posrednike na osnovu procene njihove povlašćenosti, drugim rečima motivišu ih i nagrađuju da stiču povlašćene informacije, na osnovu kojih će im obezbediti kvalitetnije investicije i, time, veću dobit.

I tu leži jedan od osnovnih zadataka regulative, ujedno i najveća protivrečnost

tržišta kapitala: kako u okruženju koje služi za protok informacija uspostaviti takav poredak koji sve dovodi u jednak položaj u tom protoku, a pri tome ostaviti dovoljno prostora za obezbeđivanje zarade sadržajnijom uslugom, kao osnovni pokretački motiv posredničke delatnosti? Ne postoji jednostavan odgovor na ovo pitanje, niti je na opšteprihvaćeni način opisan u teoriji.

Praksa regulatornih agencija, opet, od jedne do druge jurisdikcije, ovom se problemu obraća na drugačije načine. Postoje opšte preporuke, problem kao takav je uočen, promišljen i opisan, a konkretna rešenja ostavljena su pojedinačnim regulatorima. Zakoni koji se bave insajderskim trgovanjem precizno određuju koje vrste informacija moraju biti javne i, time, dostupne svim zainteresovanim učesnicima, a u kojim slučajevima i koje vrste informacije ne moraju. Međunarodna organizacija regulatora tržišta kapitala - *International Organization of Securities Commissions (IOSCO)*, dala je pregled različitih praksi regulacije na novo-uspostavljenim tržištima kapitala, od zemlje do zemlje, u studiji urađenoj marta 2003. godine (IOSCO, 2003.)

Evropska Unija obezbedila je pravni okvir za suočavanje sa problemom insajderskog trgovanja posebnom Direktivom o zloupotrebi tržišta. Pre četiri godine ova Direktiva je obogaćena novim odredbama (Directive 2014/57), a tom prilikom doneta je i posebna uredba (Regulation (EU) No 596/2014). U obrazloženju ovih pravnih dokumenata navedeno je da je usavršavanje legislative neophodno kako bi moglo da se odgovori na nove izazove tržišta kapitala koje donosi razvoj tehnologije, poput trgovinskih platformi, ili trgovanja visoke učestalosti.

Nijedno zakonodavstvo, međutim, ne upušta se u urođeni problem tržišta kapitala, jasno vidljiv kada se ono posmatra kao mrežna struktura, a koji se svodi na to da će svaki investitor, sledeći svoje legitimne interese, nagrađivati brokere koji imaju bolji pristup ključnim informacijama. Zakonska rešenja za ovako dubinski problem bilo bi teško razviti, a da se ne rizikuje pad u jednu od dve krajnosti: ili da norme budu deskriptivne, da ne bi prečile tržišne tokove, pa samim tim i nepotrebne jer ne bi ništa regulisale, već bi samo opisivale problem; ili, pak, da pokušaju da isprave samu

This kind of trading, or better yet trading simulation, is something that arrived at the market subsequently, since it was previously created outside of it. High frequency trading, therefore, is not inherent to the capital market, is not its inevitable and integral part, but is inherent to it as a phenomenon. According to its possible side effects, it approaches the phenomenon of reflexivity.

Other phenomena, on the other hand, which endanger only the market and the reasons for its creation and maintenance, are inherent and, as such, pose a much greater challenge to the regulation. The challenge is higher since it is easier to influence subsequent occurrences than the inherent ones - the latter cannot be eliminated completely, but will always follow the basic phenomenon, in our case, the capital market. One of the most dangerous occurrences for its sustainability is the uneven distribution of information. Information symmetry is always emphasised as the *conditio sine qua non* of its efficiency and, in general, its functionality, and the very purpose of its existence. Hence, each of its regulations is specifically dedicated to the elimination of the so-called insider trading, i.e. trading based on privileged information, which is not available under equal conditions to all interested participants (Investopedia).

The investors, however, approach the capital market through a network of intermediaries. Each investor chooses their way of approaching a portfolio investment based on twofold information: the first relates to their own business policy, their own assessment and ambitions; the other relates to the choice of intermediaries, the most important requirement being their position on the market, i.e. their connections within a network of intermediaries. A better connectedness of an intermediary will tie him to many new investors, as we have already explained under the Matthew Effect.

A better connectedness of an intermediary means, above all, the disposition of better information and their larger scope. This is the basic comparative advantage of each intermediary, because the capital market is above all a network for the dissemination of information. In such an environment, one who has better information is better off. It is precisely for this reason that investors approach

them, paying the commission for these better connections they possess, or paying them because their position within this information network is more favourable than the position of others. Investors choose and pay intermediaries on the basis of an estimate of their privilege, in other words, motivate them and reward them to acquire privileged information, based on which they will get better investments and, consequently, higher profits.

And here lies one of the basic tasks of regulation, and also the biggest contradiction of the capital market: how to establish such an order that would enable a level playing field in this flow of information, while leaving enough room for securing the profit by providing more substantial services, as the main drive of the intermediary activity? There is no simple answer to this question, nor has it been described in theory in a generally accepted manner.

The practice of regulatory agencies, again, depending on the jurisdiction, addresses this problem in different ways. There are general recommendations, the problem as such is noted, considered and described, and concrete solutions are left to individual regulators. Laws dealing with insider trading precisely determine which types of information must be public and, thus, available to all interested parties and in which cases and what kind of information does not need to be. *The International Organisation of Securities Commissions (IOSCO)* gave an overview of the various regulatory practices on newly established capital markets, from country to country, in a study done in March 2003 (IOSCO, 2003)

The European Union has provided a legal framework to deal with the problem of insider trading in the form of a separate Market Abuse Directive. Four years ago this directive was amended with new provisions (Directive 2014/57), and on that occasion a special regulation (Regulation (EU) No 596/2014) was adopted. The explanations of these legal documents state that the improvement of the legislation is necessary in order to respond to new challenges of the capital markets brought about by the development of technology, such as trading platforms, or high-frequency trading.

No legislation, however, is dealing with the innate problem of the capital market, clearly

prirodu tržišnog ponašanja koje se zasniva na zadovoljavanju interesa, i time napadnu samu suštinu tržišta.

Otuda se kao jedini mogući pristup nameće okvirno zakonsko rešenje, uz dodatne mere regulacije koje nezavisna regulatorna ustanova smešta unutar tog zakonskog okvira. Pri tome stalno valja imati u vidu još jednu pojavu, poznatu praksi i, opet, nedovoljno teorijski istraženu, a koja upućuje na meru regulative. Ona je poznata pod žargonskim nazivom „pesak na dlanu“ (eng: *sand-in-hand*), jer govori kroz alegoriju o tome da tržište ne valja opterećivati preteranom regulacijom, pošto to izaziva suprotne efekte, u krajnjem ishodu čak i zamiranje tržišta. Ako želite da zadržite što je moguće više peska na dlanu, šaka mora da vam bude otvorena; krenete li da je stežete, s namerom da ne dozvolite pesku da vam iscuri sa dlana, desiće se upravo suprotno - što više

stežete, više će se peska rasuti, i na kraju će sav iscuriti sa dlana.

Da bi regulator mogao da pronade pravu meru, neophodno je da bude nezavisan, od dnevne politike, od izvršne vlasti, od pritiska različitih lobija, onako kako je to propisano dokumentima IOSCO-a (*Objectives and Principles of Securities Regulation*, May 2003, p. 2), i kako je već postalo svetski standard. Nezavisnot omogućuje aktivni pristup problemima tržišta kapitala u svakom trenutku, i pravovremenu reakciju izmenom ili dopunom pravila igre. Samo se na taj način može sačuvati i fina mreža odnosa između pripadnika mreže - učesnika na tržištu kapitala, kao i sama njena funkcija. U takvoj postavci, sa punom nezavisnošću, i regulator tržišta kapitala postaje deo mreže, jedno od posebnih čvorišta, a ne sila izvan te strukture, čija svaka intervencija pretila da je naruši.

visible when observed as a network structure, and which means that each investor will, according to their legitimate interests, reward brokers with better access to key information. Legal solutions to such a deep problem would be difficult to develop without risking falling into one of the two extremes: either norms should be descriptive, so as not to limit market flows, therefore becoming unnecessary because they would not regulate anything, but only describe the problem; or one should, in turn, try and correct the very nature of market behaviour based on the satisfaction of interest, thereby attacking the very essence of the market.

Hence, the only possible approach is to impose a legal framework solution, with additional regulatory measures that an independent regulatory body will place within that legal framework. In doing this, one should always keep in mind another phenomenon, known in practice, and, again, insufficiently theoretically explored, which refers to the measure of regulation. It is colloquially called "sand-in-hand", because it conveys through allegory that the market should not be burdened by excessive regulation, as this causes the opposite effects, in the end even diminishing the market. If you want to keep as much sand

as possible on your palm, your hand must be open; if you begin to clench it, in order not to allow the sand to trickle out of your palm, the exact opposite will happen: the more you tighten, the more sand will scatter, and in the end, it will completely trickle out from the palm of your hand.

In order for the regulator to find the right measure, it is necessary to be independent from daily politics, from the executive power, from the pressure of various lobbies, as prescribed by the IOSCO documents (Objectives and Principles of Securities Regulation, May 2003, p. 2), and as it has already become a global standard. Independence provides an active approach to the problems of the capital market at any time, and a timely reaction by changing or supplementing the game rules. Only in this way can the fine network of relations between the members of the network - participants in the capital market, as well as the function of the market itself - be preserved. In such a setting, with full independence, the capital market regulator becomes part of the network, one of the special hubs, and not a force beyond that structure, whose intervention is threatening to disturb it.

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