An Economic Analysis of Securities Market Regulation and Supervision: Where to Go after the Lamfalussy Report?

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Abstract

Financial securities market regulation is subject to increasingly rapid reforms. Despite the political interest in different forms of reforms, economic analyses of the rationales for specific securities market regulation are primarily focused on specific issues such as insider trading. An overall analysis of securities markets regulation is rare. The purpose of this paper is to fill this gap. I identify three reasons – based on market failures – for specific securities market regulations, systemic risk, investor protection and efficiency problems. The systemic risks first emanate from the clearing and settlement systems and second stem from the financial intermediaries' substantial dependence on securities markets for funding and risk management. Regulation may also be warranted, for efficiency reasons, due to externalities in the markets. The investor protection arguments are more problematic. The most persuading argument is based on a combination of a) the principal agent problem, b) the free riding problems resulting in monitoring difficulties, c) the long-term aspect of many investment services, and d) an assumption that the public sector has a responsibility for some minimum living standards. I also analyze why securities markets should *not* be regulated based on a) an analysis of the motives of the regulator, b) the potential of creating negative side effects, c) moral hazard, d) enforceability, and e) the risk of consumer over-protection. The paper further discusses the pros and cons of self-regulation, as well as some trends affecting the regulatory process presently. Finally, the paper concludes with some policy recommendations. First, there is a risk that the new EU-wide securities regulation in practice will lead to a government re-regulation, at the expense of well-functioning self-regulations. Second, even though the EU regulatory harmonization has the objective of increasing competition by creating a single market for investment services, there is a clear risk that it will hamper a necessary regulatory competition. Third, there is a clear trend of motivating new regulations using consumer protection arguments, without a serious discussion of the market failures involved. A larger focus on such an analysis is necessary.

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Swedish Summary – Sammanfattning på svenska

Reglering och tillsyn av värdepappersmarknader är ett aktuellt ämne. Ett antal trender, bl.a. globaliseringen, den tekniska utvecklingen samt strävan efter en gemensam marknad för finansiella tjänster inom EU medför att behovet av översyn av reglering och tillsyn av värdepappersmarknaden har ökat. En följd av globaliseringen är att den traditionella indelningen i nationella marknader blir allt mindre tillämplig. Gränserna för nationell reglering och tillsyn sätts på sin spets t.ex. när börser accepterar fjärrmedlemmar och i takt med att internationella värdepapperstransaktioner ökar i omfattning. Den tekniska utvecklingen har t.ex. lett till en revolution i sättet att handla finansiella värdepapper, vilket påverkar behovet av reglering och tillsyn både i termer av omfattning och inriktning. Nya EU direktiv sätter fokus på två olika relationer, å en sidan mellan internationell och nationell reglering och å andra sidan mellan statlig reglering och självreglering.

I många sammanhang, framhävs behovet av att verka för att värdepappersmarknaderna ska vara rättvisa, effektiva och transparenta.[1] Från både politiskt och förvaltningshåll understryks också ofta behovet av ett förstärkt investerarskydd när de finansiella marknaderna blir allt mer internationella. Flera av de senaste årens EU-direktiv är tydliga exempel på detta. Även marknadsaktörerna kräver viss form av reglering och tillsyn. Samtidigt, utgår dessa krav på reglering sällan från en mer fundamental analys av vilka ekonomiska motiv som finns för speciell reglering och tillsyn av värdepappersmarknaderna. Generellt bör krav på regleringar vara baserade på någon form av marknadsmisslyckanden. Mot denna bakgrund är det viktigt att analysera vilka marknadsmisslyckanden som ligger till grund för kraven på värdepappersregleringar.

Akademiskt finns det en betydande litteratur som diskuterar olika former av värdepappersreglering. Det främsta exemplet är diskussionen om behovet och utformningen av insiderlagstiftningen.[2] Det är dock sällan som en mer övergripande analys görs. Denna artikel är ett försök att fylla detta tomrum.

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[1] IOSCO (1998).

[2] För en översikt, se Bainbridge (2000).

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Ofta brukar motiven för reglering och tillsyn av värdepappersmarknaderna vara a) att undvika systemrisker, b) att förbättra effektiviteten och c) att säkerställa ett gott konsumentskydd.

Systemriskerna emanerar dels från clearingen och avvecklingen, dels från bankernas stora beroende av likviditeten på värdepappersmarknaderna. I clearingen och avvecklingen är spridningsriskerna betydande. Om en säljare fallerar eller inte kan leverera värdepapperen i tid kommer även köparen att få problem, speciellt om hon omedelbart ska leverera vidare till en tredje aktör. Det är inte troligt att den enskilde aktören beaktar konsekvenserna på hela avvecklingen av ett leveransstopp, dvs det finns externa effekter. Vidare är avvecklingen en betydande del av betalningsflödena varför spridningseffekterna till betalningssystemet och därigenom till den reala ekonomin inte kan uteslutas. Dessutom finns det betydande stordrifts-fördelar i clearing och avveckling. Det kan därför finnas anledning att övervaka avvecklings-organisationer även från ett konkurrensperspektiv. Bankerna är också i stor och ökande om-fattning beroende av värdepappersmarknaderna för sin upplåning och riskhantering. Många av riskhanteringssystemen utgår från att bankerna kan förändra sin risk via dessa marknader. Problemet är dock att marknadslikviditeten har tydliga externa effekter. Därför kan likvidi-teten mycket väl försämras drastiskt vid en kris. Argumentet om systemrisk p.g.a. marknads-likviditet bygger helt och hållet på att bankerna behöver regleras. Detta bygger i sin tur på bankernas betydelse för betalningssystemet. Faller något av dessa led bort i argumentationen faller också argumentet för reglering och tillsyn utifrån marknadslikviditeten.

Effektivitetsmotivet för värdepappersreglering är svårt. Det grundar sig ofta på existensen av asymmetrisk information. Denna är dock inte ett marknadsmisslyckande i sig. I många fall finns det marknadslösningar. Insider handel är ett exempel där asymmetrisk information spelar en roll. En insider beaktar säkerligen inte effekterna på hela marknaden av sin handel så i den meningen finns det externa effekter. Ett värdepapper med hög sannolikhet för insider handel kommer förmodligen att ha en lägre likviditet och ett högre avkastningskrav. Det stora problemet är dock att insiderhandeln *kan* påverka hur många aktörer som deltar i handeln, genom att försämra förtroendet för marknaden. Det kan t.o.m. vara tillräckligt att investerare *tror*, även felaktigt, att insiderhandel är ett problem, för att förtroendet ska skadas. Förtroende är dock ett farligt begrepp, eftersom det felaktigt kan användas för att motivera mycket långtgående regleringar. Frågan är också om detta är speciellt för värdepappersmarknaderna.

Konsumentskyddsaspekten är också problematisk. Det mest hållbara ekonomiska

argumentet för speciell värdepappersreglering utifrån ett konsumentskyddsperspektiv bygger på kombinationen av ett ”free-riding”-problem, ett ”principal agent”-problem och långa kontraktstider. När småsparare investerar i värdepapper, låter man ofta någon professionell aktör ta hand om förvaltningen. Det gör att utfallet beror på förvaltaren. Då den enskilde spararen är liten kommer hon ofta att begränsa sin kontroll av förvaltaren. Eftersom detta gäller för nästan alla sparare kan kontrollen av förvaltarna överlag bli bristfällig. Detta sätter spararen i en utsatt position. Eftersom sparandet dessutom ofta är långsiktigt finns det risk att eventuella problem upptäcks på ett sent stadium. Givet att den offentliga sektorn har ett långsiktigt socialt ansvar, kan detta ge den offentliga sektorn ett motiv för tillsyn av dessa aktörer. Ett sätt att hantera detta problem är att uppnå en hög rörlighet i det långsiktiga sparandet och undvika inlåsningseffekter. Andra konsumentskyddsargument som har framförts i debatten baseras i stor utsträckning på att investerarna är oinformerade eller att skadan av felaktiga val är stor. Det torde dock gälla, i minst lika hög grad, också för andra produkter och tjänster och är därför inget specifikt för värdepappersmarknaderna.

Även om ett marknadsmisslyckande kan identifieras är det långt ifrån säkert att reglering eller tillsyn är den rätta medicinen. Nästan alla former av regleringar har negativa effekter och i en utvärdering gäller det att explicit jämföra både kostnader och fördelar av en situation med respektive utan reglering. Orsaker till att *inte* reglera är bl.a. a) att regleraren inte nödvändigtvis har både möjlighet och motiv att införa adekvat reglering, b) att regleringen kan förändra aktörernas motiv, dvs det finns ”moral hazard”, c) att det ibland kan vara så svårt att hålla strikt på regleringen att den blir tandlös, vilket i sin tur kan underminera tilltron till regleringar i allmänhet, samt att d) att ett högt konsumentskydd kan ge en falsk säkerhet, samtidigt som ett effektivt investerarskydd blir allt svårare att upprätthålla i den allt öppnare internationella miljön.

Den internationella utvecklingen medför också att gränsdragningen mellan å ena sidan offentlig reglering och tillsyn, samt å andra sidan självreglering sätts på nya prov. Jämfört med offentlig reglering är fördelarna med självreglering flera. Självregleraren har normallt bättre kunskap om det som ska regleras. Eftersom han själv får bära kostnaderna såväl av för stor, som för liten som felaktig reglering, är det stor sannolikhet att det blir en kostnadseffektiv lösning. Flexibiliteten i självregleringar är också ofta stor. Eventuella sanktioner är ofta effektiva då det påverkar intäkterna radikalt om motparterna förtroende förloras. Å andra sidan finns det tydliga nackdelar med självreglering. Det är tveksamt om självreglering kan ta

hand om externa effekter då endast medlemmar normalt regleras. Vidare finns risken att självregleringen fungerar som ett implicit inträdeshinder då den definieras av de existerande aktörerna. Vidare är påföljderna svåra eftersom de antingen är mycket drastiska i form av uteslutning ur kåren, eller obetydliga i form av böter. Det är också vanligt med intressekonflikter. Det finns också en risk att självregleringen fokuserar på ofta förekommande smärre problem medan man ignorerar sällan förekommande större problem, t.ex. systemrisker. När nya regleringar designas är det viktigt att beakta dessa aspekter.

Till sist diskuteras ett antal policyimplikationer. För det första finns det, mot bakgrund av utvecklingen internationellt, och speciellt inom EU, en risk att myndigheter övertar en stor del av rollen som reglerare från olika självreglerande organ. Risken är att vi här går mot en återreglering av värdepappersmarknaderna och att den kunskap som finns i de självreglerande organen går förlorad. För det andra medför den harmonisering av lagstiftning och reglering på värdepappersområdet som sker inom framför allt EU att den positiva regleringskonkurrensen kan komma i kläm. För det tredje, motiveras en stor del av de nya EU-regleringarna av behovet att stärka konsumentskyddet. Om den inre marknaden för finansiella produkter blir en verklig framgång kommer konkurrensen mellan olika investeringsalternativ att öka. Detta torde leda till att behovet av investerarskydd *minskar* snarare än ökar. Dessutom finns det som tidigare framkom endast begränsade ekonomiska motiv att inför investerarskydd. En utökad analys av vilka marknadsmisslyckanden som ligger bakom de nya förslagen till förstärkt investerarskydd är därför nödvändig.

1. Introduction

Traditionally, in most countries, the financial sector has been highly regulated. Many countries have, or at least have had, separate legislation on financial services. All developed countries also have separate government agencies with the direct purpose to supervise the financial markets and the producers of financial services. However, the views on financial regulation have varied over time.

In the period from the Second World War until the 1980's, most western countries imposed substantial regulation on the financial sector in general and on international financial transactions in particular. These regulations included restrictions on foreign exchange and regulations in the fixed income market. In many cases, the rationale for the regulations was a fear that financial institutions and transactions otherwise would threaten the macroeconomic stability and harm the small customers in ways similar to what happened before and during the great depression in the 1930's.

So, stability and consumer protection have been at the forefront of the arguments for financial regulation for a long time. By the same token, since regulation necessitates some form of checks and controls, this argument for financial regulation also extends to supervision.

As a result of the economic stagnation during the 1970's, slowly but surely the focus of attention in the public debate shifted from stability to efficiency. The major deregulation of the financial sectors in most western countries during the 1980's and 1990's can be seen as a consequence of this shift in focus. There was a growing awareness of, on the one hand, the important role of financial markets in the economy and of, on the other hand, the limitations that some of the regulations posed on the possibility of the financial sector to fulfill this role. Thus, a need for regulatory changes grew stronger in most western economies. Furthermore, the existing regulations were increasingly difficult to withhold. As more and more companies became multinationals, the potential to circumvent existing regulation was enhanced. Also, the technological possibilities to evade the regulations increased. This seriously reduced the effectiveness of existing regulation.

The increased focus on efficiency also revealed the crucial role played by financial markets in the economy. A well-functioning financial sector stimulates economic growth "by facilitating transactions, mobilizing savings and allocating capital [and risk] across time and space"[1]. As many independent investors search for financial investments with the highest expected return and lowest risk, capital is channeled to the most profitable companies and their projects. In this way the cost of capital for the most promising project is reduced and growth stimulated. Furthermore, financial markets make it possible for corporations and individuals to efficiently handle economic uncertainties by hedging, pooling, sharing and pricing risks. By the use of financial instruments, economic exposure can be sold and risks taken by those who can best bear them. Finally, securities markets perform an important task in evaluating, aggregating and disseminating new information through financial prices, thus enabling agents to improve their decisions. Apart from these important more general functions performed by the financial sector, it is also an important sector in itself. In the developed countries, the financial sector accounts for between 2 and 5 per cent of GNP.[2] At the same time, the proportion of the workforce is typically lower, indicating that the sector has a higher than average labor productivity.

The deregulations during the 1980's and 90's – such as the removal of interest rate ceiling, financial investment requirements and foreign investment restrictions – have enabled the financial sector to better perform its basic task of allocating capital and risk over time and space. To take one example, the possibilities to handle foreign exchange risks have increased dramatically and the corresponding costs have fallen considerably during the last 20 years. Furthermore, the deregulation has enabled investors to reach a much higher level of diversification, thereby lowering their risks without jeopardizing a high-expected return. The importance of securities markets in the macroeconomic environment has also increased substantially during the last 20 years.

In this sense the deregulation trend has spurred the globalization of financial markets. At the same time the globalization, with freer international trade and financial flows, has put the focus even more on the need to deregulate and has therefore stimulated further deregulation.

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[1] Herring and Santomero (2000), p D:168.

[2] See OECD National Accounts.

The change in financial regulation is therefore increasingly on the political agenda. When the EU Council of Economics and Finance Ministers in March this year endorsed[3] the Lamfalussy report[4], it opened the gateway for accelerating reforms of the financial regulation and supervision in Europe. In essence, the European governments now has a fast track to implement changes into the regulation of financial services within the EU, thus escaping the deadlock of the normal cumbersome and time-consuming legislative EU-process.

The EU's Financial Markets Action Plan[5] sets out a roadmap for these regulatory changes. It lists a number of measures with the aim to create an efficient internal single market for financial services in Europe. There is urgency in adopting these proposals, if the changes are to be implemented by the end of 2004, as envisioned in the action plan.

However, the efficiency-problems are not confined to the EU. The globalization introduces a need for more efficient regulation also beyond the EU. At first sight, increased harmonization of securities regulation would be beneficial. Then again, reaching theses goals is complicated since it entails supra-national agreements, instead of just national legislation. Furthermore, it is not clear that such a harmonization is even desirable, given that harmonization almost automatically precludes an effective competition between different regulatory regimes.

In this changing environment, there is a need to reconsider the general economic rationale for financial regulation and supervision.[6] Why should securities markets be regulated? What should be regulated? and How? The aim of this paper is to provide an economic analysis of these questions.

There exists a large body of academic literature discussing the economic foundations for financial regulation in general. In principal, many of these contributions review the entire financial sector but in practice focus primarily on the problems emanating from the banking sector.[7] Others *exclusively* treat the regulation and supervision of banks.[8] Only a few focus on

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[3] EU press release, (2001).

[4] Lamfalussy Group (2001).

[5] European Commission (1999).

[6] The discussion of optimal financial regulation is not new but has received increased interest lately; see for example the Economist (2001) and Lannoo (2001).

[7] E.g. Benston (1998), Di Giorgio and Di Noia, (2001), Herring and Santomero (2000) and Llewellyn (1999).

the regulation of securities markets.[9] There are good reasons for this focus on the banking sector. Banks are vital for the payment system. There are important asymmetric information problems in banking. There are considerable differences in liquidity and maturity of a banks assets and liabilities. Therefore, and in order to avoid systemic risks, financial regulation and supervision of banks are necessary.

In contrast to this literature on regulation and supervision of financial institutions, this paper focuses on the need for regulation from a *securities market* perspective. The existing literature on securities market regulation is primarily of two strands. The first strand discusses the importance and need for a more extensive regulatory competition and is primarily a US legal literature. The increased competition could be between different jurisdictions[10] or between different forms of self-regulation, through exchanges[11] or SROs[12], self-regulatory organizations. The basic idea is that by letting the agents choose, the best regimes for securities regulations will prevail. However, this strand of literature largely avoids the basic question of if and why securities regulation is needed in the first place.

Another strand of literature on securities regulation discusses specific issues. There is a substantial literature focusing on insider trading and whether or not that should be regulated,[13] and on the effects of insider trading.[14] Another issue is the regulation of market

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[8] E.g. the entire issue of Journal of Financial Services Research (1999), vol. 16, issue 2-3, Oatley, (2000), and Paris (2000).

[9] See e.g. Kitch (2000, 2001) and Lannoo (2001).

[10] Romano (1998) suggests that the US federal system of corporate law should be extended to the federal securities regulation, thus enabling the company to choose a regulation from different state securities regulations. In this way, competition between the different US states would be ensured. Similarly, Choi and Guzman (1998) argues for an international "portable reciprocity", where the company could choose a regulatory regime for its securities. Thus, a US company could choose to apply the French regulations to a securities offering, and that would affect all trading, also a transaction in Singapore. Palmiter (1999) on the other hand advocates making the securities regulation optional for the company. Another way to increase the regulatory competition is proposed by Choi (2000). He suggests a licensing scheme, where the investor could opt out completely from the securities regulation. Investors who pass a voluntary exam then have the opportunity to invest in assets with complete freedom from regulatory constraints. Other investors would be restricted to assets under normal securities regulation.

[11] See e.g. Mahoney (1997) and Choi and Guzman (1998).

[12] IOSCO (2000).

[13] For an overview of the literature, see Bainbridge (2000). See also Bainbridge (2001), and Krawiec (2001).

[14] One recent example is Lakonishok and Lee (2001).

manipulation.[15] However, this strand of literature is limited in scope and typically does not review the motives for – and against – securities regulation *in general*.

Thus, a comprehensive focus on the principles behind regulation and supervision of securities markets is rare. This paper intends to fill that gap. Therefore the paper focuses on an analysis of the economic foundations for securities market regulation and supervision. To this end, the aim of the paper is to analyze arguments for and against different forms of regulation and discussing some practical and principal problems involved. By construction, the paper does not focus on specific legal aspects or on specific securities regulations but more on the principles behind securities regulations.

Generally, government regulations should be founded on market failures[16]. The general assumption in economics is that regulation is only warranted if the market on its own is not able to cope with an economic problem. Thus, the market solution will have to entail a market failure for government regulations to be considered. Market failures have been identified in many areas. The most commonly cited are market power, externalities and public goods.

Therefore, all modern societies regulate economic activities in one way or the other. The question here is if and to what extent financial services are specific enough to merit *separate* legislation, regulation and supervision, in addition to the restrictions imposed by the general economic legislation and regulation, such as Company Laws, Consumer Protection Regulations and Antitrust Policies. To argue for separate regulation on *financial* services, either a) a market failure that is specific to these services has to be identified, or b) the identified economic problem has to be more severe in securities markets than in other economic activities.

Broadly speaking, the arguments for securities regulation can be divided into three separate but interrelated types. First and predominantly, there may be systemic risks. Secondly, regulation may be warranted in order to enhance an efficient allocation of funds and risks in

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[15] See e.g. John and Narayanan (1997).

[16] Using similar arguments as Coase (1960), where well-defined property rights eliminate market failures by reducing externality problems, Zerbe and McCurdy (2000) argue that *all* market failures would disappear if transaction costs would be eliminated. For efficiency reasons, the government should therefore primarily focus on a) defining property rights and b) minimizing transaction costs, barriers to entry etc.

the economy. Thirdly, it can be argued that consumers need protection. In IOSCO's wording there is a need to ensure "that markets are fair, efficient and transparent".[17]

The paper continues in section 2 with some definitions and a brief discussion of the main actors in the securities markets. Section 3 contains a discussion of the systemic risk argument for securities regulations, while section 4 focuses on the efficiency argument and section 5 on the consumer protection argument. In section 6 some other regulatory motives are listed. Section 7 outlines the problems of securities regulations, some of which can be seen as arguments why securities markets should *not* be regulated. There are different ways to achieve an efficient securities market regulation. One primary distinction is between regulation imposed by the government and by self-regulatory organizations (SROs). Section 8 discusses the pros and cons of different forms of regulation. Section 9 contains a discussion of a number of trends that are affecting the choice of securities market regulation. Section 10 makes some policy recommendations for the future securities regulation in Europe, and finally section 11 concludes.

2. Definitions and Market Agents

In a discussion of regulation and supervision of securities markets, a number of concepts have to be clarified. Securities markets, in this paper, refer to organized and unorganized markets for financial securities, such as stocks, bonds, bills as well as derivative securities with stocks, bond and bills as underlying securities. The focus is on secondary markets.

Given that specific securities regulations may be warranted, the structure is in principle clear; governments regulate, authorities supervise and agents have to act according to the rules and accept the supervision. In practice, the problem is more complicated. The regulatory solution to an identified problem can take *many* forms. In this paper, regulation primarily refers to government regulation. It can be in the form of direct national legislation. It can also take the form of regulation through government agencies such as financial supervisory agencies. In principle, regulation refers to the limitations on agents imposed by different government rules

[17] IOSCO (1998), p. 6.

and legislation, while the supervision only refers to the function of controlling compliance with the rules. In practice, however, the difference is less distinct. Any supervision would have to interpret the regulations and thereby create norms of conduct. Thus, most supervisory agencies also have, in the context of this paper, a regulatory function, such as creating, defining, and interpreting broker reporting standards and insider trading restriction.

In other cases, different forms of self-regulation, often under supervision of the government, can solve the economic problem more efficiently. This could entail industry organizations defining contracts and setting standards. Here, the objective is often to reduce the cost of information. One example would be setting accounting standards, beyond what is required by law. In yet other cases, the market agents may find the appropriate solution on their own or with the help of governments and self-regulatory agencies acting as catalysts. Developing internal risk management systems and setting ethical norms are examples. Furthermore, the rules set up by individual companies can sometimes become norms with features similar to regulations. A stock exchange imposing specific trading rules on the brokers and disclosure requirements of listed firms, de facto sets up rules and norms with aspects very similar to regulations. Among others, IOSCO calls for an open-minded analysis of different regulatory structures.[18]

In the last decade, the distinction between different financial companies has become less obvious. Financial services produced by very different companies are becoming increasingly similar. In many countries, there is an increasing need to change existing laws and regulations, since they have traditionally been focusing separately on banks, insurance companies and securities firms respectively. Instead a functional perspective on laws and regulations is becoming more popular. However, one problem is that finally there are institutions not functions that have to comply with the rules and regulations. In terms of securities markets regulation, it is therefore useful to briefly discuss the different institutions active in a securities transaction.[19]

Normally the transaction process starts when a trader receives information. The *trader* could potentially be an individual, a company or an institution. The information can be classified

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[18] See IOSCO (2000). For a further discussion of the different forms of regulation, see also section 8.

into three types. The first is general macro-economic information, i.e. statistics on unemployment, inflation etc as well as political decisions. Another type of information is asset specific information, i.e. changes in interest rates, company earnings announcements etc. In some cases, this asset specific information has clear implications for the valuation of other assets as well. This type of information can be either private or public. The third type concerns individual information, such as inheritance.

Given the information, an agent may decide to trade, and which assets to trade. If the decision is to trade, the agent then sends her order to the *broker*. The broker matches the order against his own inventory, i.e. acts as a *dealer*, or sends the order to the *marketplace*, i.e. let it be exposed to the orders from other broker. In most markets, only the brokers are allowed to trade directly. The reason is the need of assurance that all counterparts can fulfill their obligations. In such systems, the brokers only have to evaluate the credit worthiness of the their own customers and of the other brokers and but not of the other brokers' customers. In this sense, the brokers perform a fundamental service of reducing the informational costs of credit controls.

The way orders are submitted and actual trading performed varies greatly between different markets and assets. Many markets are organized formally as an *exchange*, e.g. many stock exchanges and derivative exchanges. Other markets can best be characterized as a loosely connected information system, such as the inter-bank market for fixed income securities in many countries. However, a common feature on all of these markets is that prices are formed and changed to reflect new information through the intricate aggregation of all agents trading decisions. One of the main functions of a market is to aggregate information.

After a trade has been executed in the trading system, the match has to be cleared. In the *clearing* process, the *clearing organization* as well as the back-offices of the two counterparts check:

a) that they agree who the counterparts are,
b) that they agree on the amount and price of the assets being traded,
c) that the seller owns the asset (or at least can deliver),

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[19] This is of course a very schematic picture of a securities transaction but serves only the purpose of identifying the agents and relationships, which could potentially be subject to regulations.

d) that the buyer has enough liquid funds to pay.

If there are problems, the agents will be exposed to a number of risks. The agent may have to compensate a failing transaction with a new, possibly at worse prices, i.e. a replacement costs risk. The seller may run a liquidity risk of having to find a new buyer quickly. In the settlement phase, the funds and assets are formally transferred. Here the *settlement organization* acts as facilitator. As the seller transfers ownership of the assets, he has a credit risk on the buyer until he gets paid. The opposite also hold true. In the period after transferring the funds but before getting the assets, the buyer has a credit risk on the seller. There is also a systemic risk, discussed in more detail in section 3. Finally, the *official registrar* registers the new owners. Only then is the transaction complete.

Assuming securities market regulation is warranted, there are therefore several agents who potentially could be subject to securities regulation. The traders constitute the first category. In principle, this could be anybody. The only criterion is that they buy and sell in the securities markets. More importantly, the brokers/dealers may be subject to regulations, in their relationship with their customers or in their relationship with other dealers or the market place. Furthermore, there may also potentially be a scope to regulate the market place itself, e.g. exchange, the clearing and settlement organizations as well as the registrar.

Having identified the agents susceptible to potential securities regulation, I now turn to the three classical motives for securities regulation, systemic risks, efficiency and consumer protection. In section 7, I discuss some problems with securities regulation and thereby reasons why not to regulate securities markets.

3. The Systemic Risk Motive

The prime objective of most existing financial regulation and supervision is to ensure that no systemic risks will threaten the financial system. In principle, there are two assumptions underlying the concept of systemic risk. The first assumption is the existence of a market failure, often in terms of an externality. The individual agents only take the private costs into account and any “potential social cost [or benefit] is not incorporated in the decision

making"[20] of the agents. For instance, if one trader encounters problems in delivering the securities after a trade, problems may easily spread to other agents through the settlement system. The existence of an externality is however not enough to create a systemic risk. The scope of the effect is also at hand. The second assumption is based on the notion that *if* problems occur, they "would damage the financial system to such an extent that economic activity in the wider economy would suffer."[21]

The traditional example of systemic risks is when financial problems in one bank lead to a bank run which in turn undermines the confidence in the whole banking system, makes the payment system collapse, the money supply contract and potentially results in a recession or even depression. In this case, the effects on other banks and economic agents, let alone the social costs of a general depression, are not taken into account in the risk analysis of the bank or the agent. In this paper, the focus is not on banking issues but on the problems related to the *securities markets*.

In terms of systemic risks resulting from activities in financial markets, there are two main concerns, a) the settlement systems and b) the liquidity of the markets. Even though the focus of the paper is *not* on banking issues, in practice the banks play such an important role in the payment and therefore in the settlement of financial securities that banks and other financial intermediaries cannot be completely ignored in a discussion of securities regulation.

3.1. Clearing and Settlement

The clearing and settlement of financial securities entails several problems. First, if a seller of a financial security is not able to deliver, it may cause delivery problems in other transactions, i.e. have domino effects on many other traders. If one trader is unable to fulfill her obligations, all her counterparts could run into problems, thus spreading the financial instability. The netting, used in most settlement systems, makes many transactions dependent on each other and therefore amplifies this problem.[22] As a consequence, the entire settlement may be jeopardized. In a netting system, all the transactions – i.e. both buys and sells – of an

[20] Llewellyn (1999), p 13.
[21] Herring and Santomero (2000) p. D:169.

agent are put together and only the net amount is settled. In this way, the actual amount passing through the settlement is reduced. This cuts the need for collateral in the settlement and thus the costs. However, as a consequence, the interdependence of several different transactions increases, and thus also the domino effects of a failing delivery. There is therefore, at least to certain extent, a trade-off between costs and systemic risks.

Second, a dominating and increasing part of the daily flows in the payment system emanates form the securities markets and the payment system is a vital part of the financial infrastructure. Most other activities rely on a well-functioning payment system. If the payment system would collapse all other economic activity would run into serious problems. It is difficult to imaging *any* economic activity, which does not involve payments. Therefore, a disruption in the settlement of financial securities may have far reaching consequences for the entire economy.

Furthermore, clearing and settlement organizations have features similar to natural monopolies. There are substantial economies of scale. As a consequence, most countries only have one settlement organization, at least for the same type of financial securities. If such an organization would default due to technical problems or fraud, settlement may be difficult and the risk of major macroeconomic disturbances is not negligible. There are however not only operational reasons for systemic risks. Such risks are also present if financial problems for one agent involved in the system spread to other agents.

If a broker suddenly becomes insolvent and unable to fulfill its obligations, problems could easily occur. The failure could seriously endanger many other securities transactions and thus result in severe problems in both the settlement system and the payment system. Furthermore, the individual agent or broker will not take the potential social costs of this risk into account in her decisions.[23] In this sense both requirements for a systemic risk problem are fulfilled. There is therefore a need for a transparent and efficient regulation and a continuous focus of

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[22] For a discussion of different settlement systems in Europe, see European Central Bank (1998).

[23] The main risk for the agent is the *credit risk*. It is the risk that the counterpart defaults and is not able to deliver, while at the same time the agent already has made the transfer. Since the full amount of the trade is at stake, this is a predominant source of risk. There are however also other risks. If the counterpart defaults but the agent has not made the transfer, market prices may have changed and a replacing transaction may have to be made at worse prices. This is the *replacement cost risk*. For an agent who is not paid (or does not receive the

the financial supervision and central bank oversight on how the clearing and settlement systems handle these risks.

There are several ways to reduce the settlement problems. One common solution is imposing prudential regulation on the agents allowed to participate in the settlement and payment systems. The risk of being contaminated by delivery and liquidity problems of other agents will thus be reduced. A second solution is to introduce facilities for temporary credits. For the delivery part, the clearing and settlement organization may arrange special securities loans. The idea is that agents, lacking specific securities to fulfill their obligations in the settlement, temporarily borrow securities from other agents. For the payment part, the problem is typically solved by the central bank, which in most countries extends unlimited short-term credit to participants in the payment system, subject to collateral.

A third solution is to reduce the liquidity and replacement cost risks in the netting systems by the use of guarantees, central counterparts and collateral. A fourth solution is to reduce the time lag when brokers have exposures on each other, i.e. to shorten the time of the exposure. This can be done in two ways. The first way is to reduce the time between the trade and the ultimate settlement.[24] The second way is to enforce that the delivery of the securities occurs simultaneous with the payment, i.e. that there is a temporal alignment of the delivery and cash leg of a transaction. This is normally termed Delivery versus Payment (DvP).[25]

Another possible solution is to settle each transaction immediately and separately. This is equivalent to a real time gross settlement system (RTGS-system).[26] Such a system would solve both the exposure problems induced by time delays and the interdependence problem of netting. Thus, if more transactions settle on an RTGS-system, most of these systemic risks would vanish or at least be alleviated. Therefore, moving towards RTGS for all financial transactions would imply a reduced need for financial regulation and supervision.

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securities) on time but at a later date, there is a *liquidity risk*. This type of failure induces a liquidity shortage, which can be costly for the agent.

[24] There is clearly an international trend to reduce the settlement cycle.

[25] Most clearing and settlement systems in the developed countries have more or less achieved DvP. A remaining problem is that in many countries only the large banks take part in the clearing through the central bank. As a consequence smaller brokers have to rely on these banks for the cash leg of the clearing leaving them with a short but substantial credit risk versus these banks.

[26] There is clearly an international trend facilitating the real time settlement. However, still only a minor fraction of all securities transactions are settled in real time.

There are however also several costs of using an RTGS-system rather than a netting system. First, the amount and number of transfers in the settlement systems will increase, and assuming that each transfer has a positive cost, the total cost will increase. Second, the amount of capital needed to handle temporary imbalances will increase, which will raise the cost of capital for the participants in the system and therefore eventually the costs for the customers.

Third, an agent with temporary financial problems will have no time to raise more capital to cover any deficiencies in the settlement process. For agents with economically sound financial position but with temporary liquidity constraints this could pose severe problems. Although the central banks facilitate the settlement by granting unlimited loans, subject to collateral, there is an opportunity cost for this collateral. Furthermore, this construction creates a fourth problem by limiting the number of participants in the settlement system. For a small firm, it may be impossible to supply sufficient collateral. Therefore, such rules are likely to be detrimental to the competition in that market, by giving the large incumbents advantages over new and small firms.

Fifth, the increasing costs could potentially limit the intra-day trading activities in several financial markets, resulting in lower market liquidity, and thereby higher liquidity premium.

A sixth possible consequence of moving to an RTGS-system is that, given the arguments above, payment problems may become more frequent. Put differently, although any individual disruption of the payments would be smaller and contain fewer systemic components, the *probability* that problems occur will increase. In anonymous markets this poses problems as it affects the agents' trust or confidence that a trade will actually result in an ultimate transfer of funds and securities. As the probability of settlement problems increases, people could hesitate to trade, with reduced liquidity and increased costs as a result. Thus, by reducing the systemic risks through RTGS, other problems may occur as a byproduct. One such problem is the increased frequency of settlement problems that could seriously harm the customer's market confidence. Therefore, even if all trades would be

settled according to an RTGS-system[27], there could still be a need for financial regulation and supervision.

The typical way to deal with this systemic problem is to set up different forms of prudential regulation, including stringent supervision standards. Normally the central bank assumes responsibility of the payment system, while the clearing and settlement organizations often fall under the jurisdiction of the general financial supervision. Given the special status and importance of the clearing and settlement organizations, it has even been argued that they should be governed more like public utilities than as privately held companies.[28] In any case, by imposing regulations on the clearing and settlement as well as the payment systems, there is clearly a risk of inducing moral hazard, by increasing the agents' propensity to take risks, and thus raising the probability of systemic problems.

It can also be argued that the systemic risk involved in clearing and settlement is increasing. With the escalating international flows of capital, any disruption in the payment system in one country could potentially pose severe problems for the payment system in other countries. The contagion risk is growing. The payment systems in smaller countries, as well as countries with a high concentration in the broker market, are especially vulnerable. The default by a major international player could be devastating for the payment system in these countries since the payments involved could be large compared to the normal flow of payments. The situation is further complicated by the fact that different countries use different models for clearing and settlement, with different settlement cycles. Therefore, the need for international cooperation in financial supervision is growing.

3.2. Market Liquidity

Another type of systemic risks emanates from the fact that liquidity in the securities markets has externality features. "Investors want three things from markets: liquidity, liquidity and liquidity."[29] As a consequence, most investors will prefer to trade when liquidity is as high as possible, i.e. when and where most other investors trade. Also, if one agent supplies more

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[27] In any case, today only a small fraction of all trades are settled in an RTGS-system.

[28] See e.g. the Economist (2001b).

liquidity, everybody gains, since the service provided by the liquidity supplier is available to everybody in the market. Thus, as more traders access a certain trading system, the benefits for everybody in the trading system will rise. Also, while trading in a market, or supplying liquidity, agents are not likely to take the aggregated benefit to all other agents of the increased liquidity into account, i.e. liquidity has a positive externality.

Thus, market liquidity feeds market liquidity. However, there is a backside of the coin as well. If liquidity falls it may also disappear fast. Thus, there is a substantial risk that liquidity will dry up if a crisis occurs, in ways similar to what happened at the stock market crash of 1987. In a crisis the cost of supplying liquidity is likely to increase. Thus, when liquidity is most needed, it may become increasingly scarce. In this sense the first requirement for a systemic risk is fulfilled, i.e. there is a potential market failure.

In order to establish the existence of a systemic risk, the scope also has to be considered. Financial services are becoming increasingly complicated. Through financial engineering, financial intermediaries, e.g. banks, create more advanced services to cater to the needs of their customers. Often the new contracts make it possible to more efficiently reduce different types of risks. Typically, the intermediaries use the securities markets to hedge the risks induced by the new contracts. Furthermore, as the contracts become more common, some of them may start trading at securities markets, i.e. securities markets successively trade more complicated assets or contracts. Thereby, the hedging possibilities in the securities markets increase and the intermediaries can invent even more complicated services to their customers. There is a clear dynamic interaction between financial intermediaries and securities markets.[30]

As a consequence, many agents, especially financial intermediaries, are increasingly dependent on the securities markets for funding and risk management. Liquidity problems in the securities markets could easily spread to the banking sector. Serious disturbances in the securities markets could severely affect the funding of a bank. Also, “sale of assets to cover funding needs may itself depress the value of other holdings, or be impossible due to the market-liquidity crisis”[31], with contagious effects for the entire banking sector. Thus, as banks

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[29] Handa and Schwartz (1996) p. 44.

[30] See Merton (1995).

[31] Davis (1995), p. 315.

increasingly use the securities markets for funding, the authorities may need to act as 'market-maker-of-last-resort' to prevent market collapse at times of stress. Also, if market liquidity dries up in a crisis, this would clearly limit the ability of financial intermediaries to handle their risks.

If these banks run into problems, it may jeopardize the payment system with severe effects on the entire economy. Thus, the funding of and the risk management systems in banks have become so dependent on the securities markets that systemic risks may follow if liquidity falls. As banks are becoming increasingly active in securities business, including issuing, trading, underwriting and providing back-up facilities the potential problems are increasing. One example of this is the trend of securitization, since a bank may increasingly rely on its ability to securitize assets in order to realize liquidity. Also, the risk of contagion between different securities markets is increasing, as the interdependence between the markets grows.[32]

Whether a collapse of the liquidity of securities markets is a cause of concern depends largely on the funding alternatives of the bank. If funding alternatives outside the securities markets are few, the instability problems are larger. Thus, commercial banks with substantial deposits from retail customers are likely to be less vulnerable than pure investment banks, which rely heavily on wholesale markets for credits. However, commercial banks with significant security market activities are also vulnerable.

Some form of government precautions may therefore be called for in order to ensure that the markets do not collapse. Since liquidity cannot be increased by force, direct legislation is obviously inappropriate. Instead other measures may be taken. The government may issue standardized benchmark securities and try to increase the predictability of monetary policies in order to enhance liquidity and reduce instability in the interest rate market. Adequate capital requirements will work as an airbag if problems occur. Prudential supervision of the clearing and settlement systems and of the risk management systems of banks could further reduce the contagion effects. Facilities for potential crisis management may also be important. Another question is how explicit this government crisis management should be. If everybody

[32] Since the volumes in the fixed income market is so much larger than in the stock market, these issues primarily concern the former type of market.

assumes that the government will intervene in – and solve – a crisis, it is likely to affect how agents act. This moral hazard problem may make agents less cautious and thereby increase the likelihood of a crisis.

In order to reduce the systemic risk, Davis (1995) even suggests limiting the competition between market makers or reducing the transparency in the market. The idea is to increase the cushions in the system, and he claims that "only if there are some economic rents associated with market-maker status will firms be willing to devote sufficient capital to prevent frequent liquidity collapses."[33] This is however a highly dubious suggestion since it could induce severe oligopolistic abuses. In this way, measures to deal with systemic risks may easily be counter-productive in an efficiency sense.

Clearly, the liquidity risk argument for securities market regulation is based on the assumption that the banks play an decisive role in the payment system and that prudential regulation of financial intermediaries, e.g. banks, is necessary. If that is not the case, the vulnerability of their funding and risk management systems would not be a systemic problem warranting any securities regulation.

To conclude, systemic risks emanate both from the clearing and settlement business and from the need to ensure sufficient liquidity in the securities market. In these cases government supervision may be needed in order to avoid severe repercussions of financial problems into the general economy. At the same time, care has to be taken to limit the negative effects of any regulation or supervision. I will return to some of the negative aspects of regulation in section 7.

4. The Efficiency Motive

Generally, economic theory implies that the most efficient market structure is when agents can compete freely, without government interference. There are however exceptions, where there are problems in the free markets. For securities markets, most of these potential

[33] Davis (1995), p. 318.

economic problems are based on the existence of a) asymmetric information b) public goods c) different forms of externalities or d) market power. In some cases, different forms of 7government interventions may be considered, as a way to improve an efficient allocation of funds and risks. In other cases, the market may self be able to cope with the problem.

4.1. Asymmetric Information

In his Nobel Prize winning article from 1970, Akerlof clearly demonstrates the economic problems asymmetric information can create. This has direct relevance for the securities markets. When trading in the securities markets, there is a possibility that your counterpart will be better informed. In all such trades, you will make a loss, since the informed traders will only buy when the asset is undervalued and sell when the asset is overvalued.[34] If the chances are high of trading with somebody with superior information, some agents may refrain from trading. There is adverse selection. This will lower the welfare of all traders, in a way similar to a transaction cost. If the asymmetric information is large enough, the market may collapse completely.

However, the market does not need to break down entirely for the asymmetric information to create problems. In "these markets social and private benefits differ, and therefore, in some cases, government intervention may increase the welfare of all parties. Or private institutions may arise to take advantage of the potential increases in welfare which can accrue to all parties".[35] In this sense, the asymmetric information is not a classical market failure. Often there are market solutions to the asymmetric information problem. Such solutions include signaling, guarantees, the reputation of an intermediary, standardized contracts etc. A signaling example is when uninformed traders prefer to disclose their trades in advance. In this way, they send a signal to potential counterparts that they are uninformed. However, sometimes the situation resembles a market failure in that the free market does not resolve the asymmetric information problem on its own. Then, the government or outside agencies may be able to act as catalyst to reduce the problem and increase social welfare. These cases are typically also based on the existence of externalities, public goods or market power.

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[34] For a formal model of this, see Glosten and Milgrom (1985).

[35] Akerlof (1970), p. 488.

An illustrative example of a market solution is the case of an initial public offering of a company. Here, the asymmetric information is clearly substantial. The seller of the shares has considerably better opportunities to value the company correctly, than the buyer who lacks any previous market valuation. Furthermore, the seller has incentives to set the price as high as possible to maximize revenues. Potential buyers are therefore likely to distrust any valuation made by the company. In this case, an investment bank acts as an intermediary and produces an external valuation. The trustworthiness of the investment bank is much higher since it has its reputation to consider. For the company, the IPO is a one-time event, but for the investment bank it is a repetitive game. Thus, the reputation of the investment bank alleviates the asymmetric information problem. In a similar fashion, reputation may often resolve or at least reduce asymmetric information problems. In other cases, reputation may be less effective, and the arguments for outside interventions may be more substantial.

Insider trading

Prohibiting insiders from trading when they have superior knowledge, and forcing them to disclose all their trades are measures aimed at reducing the asymmetric information and restoring market confidence among market participants and the general public. Here, it is not obvious that any market solution, such as signaling or reputation, would solve the problem. Therefore, potentially rules and regulations to reduce the asymmetric information *may* be welfare increasing, given that a well-functioning market can be seen as a public good.

The literature on insider trading regulation is extensive. In an overview article, Bainbridge (2000) claim that the traditional arguments *for* regulation "fall into three main categories: (1) insider trading harms investors and thus undermines investor confidence in the securities markets; (2) insider trading harms the issuer of the affected securities; and (3) insider trading amounts to theft of property belonging to the corporation and therefore should be prohibited even in the absence of harm to investors or the firm."[36]

However, Bainbridge finds no credible story for investor injury. First, if insiders were allowed to trade, prices would be more informative and agents could make more valuable decisions. Outlawing insider trading means that market prices will not adjust to information as quickly

as they otherwise would. As a consequence, investors will trade at prices, which do not reflect the fundamental value of the securities, and thereby make sub-optimal decisions. Second, other buyers in the market also capture the gains made by insiders with positive information. Third, companies cannot be required to disclose all information. Thus asymmetric information is a fact of life, and the reason why some trades are less profitable is this asymmetric information rather than the insider trading.

Furthermore, Bainbridge identifies four means through which insider trading could potentially harm the company. First, insider trading may reduce the efficiency of corporate decisions by delaying the transmission of information within the company. However, if a manager wants to trade on price sensitive information before transmitting it to her superior – a phone call to her broker would suffice and this would not take more than a few minutes. Thus, the delay story is not convincing. Second, insider trading may increase the individual manager's incentives to choose high-risk projects, where the benefits from insider trading are larger. However, this may attenuate the conflict that managers are more risk averse than shareholders. Third, managers may manipulate share prices, by disclosure policies etc, in order to maximize their insider trading profits and at considerable social costs. However, prohibiting insider trading is also costly. Fourth, insider trading may harm the company's reputation. However, this is based on shareholder injury, which Bainbridge already dismissed. Thus according to Bainbridge, the main problem is that the insider information is the property of the corporation. Therefore the insider trading is primarily a contractual dilemma and could be resolved through contracts between the corporation and the user of any insider information.

However, there are problems with Bainbridge analysis. If insider trading is common, for the individual investor there is clearly an increased risk of making 'bad trades', i.e. trade with an insider. There are two consequences. First, the required risk premium may rise. All else equal, most investors are likely to prefer investing in securities with a low probability of insider trading, i.e. the required return will be higher, and the liquidity lower, in securities with a high level of insider trading. Second, the confidence in the market may fall.

Furthermore, asymmetric information can be seen as a problem of large transaction costs. In a situation with asymmetric information, traders with substantial gains-from-trade may still be

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[36] Bainbridge (2000), p. 784.

willing to trade since the gains-from-trade outweigh the costs associated with the risk of trading with somebody with superior information. However, for other trades, with only marginal gains-from-trade the asymmetric information costs may be too large. Thus, the existence of asymmetric information is likely to limit the number of participant in the market. Whether asymmetric information is a significant or a minor problem is an empirical question. According to this line of reasoning, and given that a well functioning securities market can be seen as a public good, measures to reduce the asymmetric information could enhance efficiency.

In practice, insider trading rules and regulations could entail establishing and verifying standards of information, supervising disclosure requirements and enforcing obligations to include audit reports in the annual statements of companies, etc.

Confidence

It is often argued that investor confidence is extremely important for securities markets and firms. Customers are not likely to invest if they are not confident that they will get their money back. It is also frequently argued that if insiders were allowed to trade freely, the asymmetric information problem would grow, and the confidence of the market would deteriorate. Furthermore, it may suffice that most investors *believe* that insider trading is unfair and therefore refrain from trading, i.e. reduce the participation rate. However, the critical issue here is not primarily the participation rate but rather whether this reduced trading has clear externality costs on other traders. Then, there may be a classical market failure.

Confidence and credibility can be obtained in different ways. Legislation and effective law enforcement may be one way to achieve this goal. At a basic level, there is a clear need for enforcement of legal contracts. Without that, the necessary trust upon which most contracts rely will be undermined. This is highly important in securities trading where the contracts often are rather complicated. However, although important, this is not specific to securities contracts. Enforcement of legal contracts is necessary far beyond the securities markets. Also, asymmetric information problems exist in most markets and it is not evident that the problem is larger in securities markets than in other markets. Furthermore, the concept of confidence is problematic since it is highly elusive and can be used as argument for government regulation in a wide range of situations, even when other solutions would be more efficient.

Another way to increase the confidence of market participants is through different forms of self-regulation. Normally, the professional market agents, dealers, analysts etc. are the agents who stand most to loose from a reduced market confidence. They also have the best knowledge to apply appropriate rules.[37]

In a regulatory context, it is important to make a distinction between the investors' confidence for the market and their confidence for a specific financial intermediary, i.e. a broker. For regulation, the primary interest is that the final investors have faith in the infrastructure of the market, i.e. that a trade is actually performed in the way the customer has indicated, that transfers occur as agreed etc. A well-functioning securities market infrastructure can readily be seen as a public good. Everybody is dependent on it, but it is not obvious that the individual firms would consider the effects of their actions on it. Some regulation and supervision may therefore be needed.

The investor confidence for an individual securities firm is a different matter. An individual company may use different measures to credibly signal this confidence. This is not an economic problem as long as a firm's action only affects its own confidence. However, this is not necessarily the case. For example, if one broker violates the insider trading rules, it is most likely going to affect the reputation of most other brokers as well, and reduce the public's confidence in the broker community at large. Most likely, the individual agent will not take the impact of reduced reputation of all its competitors into account in making the decision whether to break the rules or not. There are therefore externalities in investor confidence and securities firm reputation. If this externality did not exist, individual securities firm reputation would not be a regulatory issue.

4.2. Externalities

There are also other externality problems. As discussed in section 3.2, liquidity creates an externality. As more traders access a certain trading system, the benefits for everybody in the trading system will rise. Thus, there are clearly externalities involved in market liquidity.

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[37] For a further discussion of self-regulation, se section 8.

One problem with this externality is that it results in a consolidation of trading to a limited number of trading venues. These concentration tendencies are likely to limit competition. Thus, financial markets have a certain number of features in common with natural monopolies. From economic theory, we know that monopolies charge prices that are higher than the socially optimal. This results in a too low production of the services supplied by the monopolist and an economic loss to society and investors.

Economic theory indicates that the ideal situation is perfect competition on *all* markets. The concentration tendencies described above may be seen as a market failure. Put differently, if we let the market forces work, the competition between the providers of the financial markets may be limited and the level of financial services production sub-optimal.

The obvious regulatory response is to lower the barriers to entry, in order to stimulate competition. The question here is if the concentration tendencies are higher in the securities business than in other areas. There are surely also other industries with significant concentration tendencies. However there may be two reasons why securities markets are more exposed to this problem than other markets. Firstly, financial securities have very low transaction costs, such as transportation and legal costs. In many other markets, these costs make market integration prohibitively expensive. Therefore, concentrations tendencies in securities market may be large compared to other markets. Secondly, securities regulation – imposed for other reasons – may raise the barriers-to-entry and reduce competition. The traditional test of "fit and proper" is one example of a regulation, which in this sense *could* be counterproductive in terms of efficiency, see further section 7.6. In defining securities regulations, – motivated for other reasons– it is therefore important to take the concentrations tendencies into account. Still, the main question is whether these concentrations tendencies necessitate regulation specific to the securities industry or whether the general anti-trust laws and competition regulations are sufficient.

There are also other externalities. For example, all market participants would be better off if everybody followed high ethical standards, but market participants often have strong incentives to break these standards as long as everybody else acts ethically. The result without rules and regulation may be that many participants break the ethical rules and everybody is worse off. There is a market failure if the incentives of the market participants (be it exchanges, brokers, major investors, corporations etc) are not aligned. The problem is that

they cannot coordinate their actions. This is a classical prisoner's dilemma problem and can be generalized to many situations.[38]

Another example of a coordination dilemma is the monitoring problem, common to securities markets. The basic problem is the combination of three features. First, there is a principal agent problem. Investors – the principals – supply capital into corporations but delegate the decisions to the management – the agents. Small investors – the principals – buy investment services from professional investors – the agents. Second, contracts cannot specify all contingencies, and thus leave the agents with some freedom to deviate from what is optimal for the principals. Third in securities markets, the principals are typically small. Given these features, the competitive situation is likely to result in low levels of monitoring, due to free riding. Contracts that align the incentives of the agents and the principals could potentially be difficult to obtain. An aggregated low level of monitoring could therefore harm efficiency and appropriate regulation inducing coordination of the monitoring efforts could enhance efficiency.

5. The Consumer Protection Motive

One frequently used argument for securities regulation and supervision is that the consumers need protection. Generally speaking, an efficient way to protect consumers in the securities markets is to ensure, a) that the price formation process is as efficient as possible, and b) that there is sufficient competition between the traders, brokers and other market participants. Thus, if a large number of professional traders compete in assembling and interpreting new information, securities market prices will reflect that information and unsophisticated traders do not need any additional information and analysis. In this case, the observed prices are sufficient. Given that rules and regulations are needed for some other reason, effective ways to protect uniformed traders are therefore to enact measures to reduce transaction costs, to guarantee efficient trading mechanisms, to introduce antitrust policies, to lower barriers to entry and to improve competition. If the markets are efficient, all trades will be performed at correct prices and the need to protect consumers will in principle vanish.

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[38] Discussions of the prisoner's dilemma problem can be found in most game theoretical economics textbooks,

Thus, one basic conclusion is that consumers are better protected in an efficient market than in a less efficient market. Thus, an effective way of protecting the consumers is to ensure an efficient market.

However, securities markets cannot always be perfectly efficient in an informational sense. One of the reasons is that there is asymmetric information. The consumer protection argument for regulation is typically based on the existence of asymmetric information. Price sensitive information is not immediately spread to all traders. Some investors, especially small investors, normally have less access to information than other traders. As a consequence, securities regulations are often aimed at either reducing the asymmetric information between different agents, or limiting the perceived damage of asymmetric information. However, reducing the asymmetric information may also have significant adverse effects. If the regulation prohibits agents from taking advantage of superior information, this information will not be incorporated into the securities prices. It is exactly the search for information, not yet reflected in the prices, which makes prices informationally efficient.[39] This search, which is costly, has to be profitable otherwise prices will not be as informative. Therefore, accepting a certain limited level of asymmetric information may be the price we have to pay to get informative prices on a well-functioning market.

There are also other problems. The main reason for investor protection is based on a free-riding problem, combined with a principal agent conflict and incomplete contracts. Principal agent relationships are common in securities markets. Retail investors typically invest in different funds and other financial services firms. Here the former are principals and the latter agents. These investment funds, trusts and financial services firms invest in stocks, bond etc and then act as principals towards the management of the issuing companies (agents). Given that complete contracts are not feasible or enforceable, that all contingencies cannot be foreseen, and that it is not obvious that contracts that align the incentives are always available, there is a potential economic problem. Under these circumstances, the free market *may* yield a

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e.g. Kreps (1990).

[39] This argument follows from Grossman and Stiglitz (1980). They argue that if financial prices always reflect all available information, nobody would earn anything from searching for information. Since this search is costly, nobody would search for information. But, then the prices cannot reflect all information at all times. Perfectly informative prices are impossible.

socially sub-optimal solution, and thus there *may* be scope for regulations based on the consumer protection motive.

However, in many cases there will be market solutions the problems. With a few major shareholders in a company, the free riding problem will clearly fall. They will have enough incentives to monitor the managers of the issuing companies. The major shareholders are also able to negotiate incentive compatible contracts with these managers. In principle, there are two ways to show your dissatisfaction with an agent, by voice and by exit. The assumption in the free riding case is that the 'voice'-alternative is too expensive for the individual principal. In order for the 'exit'-alternative to be viable, the free movement of capital and the efficient competition between different assets and assets classes become important. Thus, once again policies to increase competition and to free locked-in capital are important consumer protection measures.

In other cases, the market forces to solve the free riding problem may be less effective. One important distinction is this respect is between private individual investors – the retail market, and professional investors – the wholesale market. Basically, professionals have as their business to act in the securities markets.[40] Typically retail investors are smaller in relation to the fund managers and financial services firms than the fund managers are in the market for specific securities. Thus, the free riding problem is probably larger for retail investors than for professional investors.

Furthermore, one of the problems for retail investors is that their transactions are infrequent. As professionals make repetitive deals, they are in a better position to learn from experience. Also, the asymmetric information and asymmetric knowledge are greater in the retail segment than in the wholesale market. As a consequence, the consumer protection argument for regulation is a retail issue. I will therefore limit the discussion of consumer protection to the problems facing retail consumers/investors.

Even though consumer protection is a commonly cited principle for regulation, it is rarely discussed what the consumers need to be protected against. Since risk is central to all

[40] In some markets, there may also be a number of non-financial companies large enough to be as important as the professionals.

financial securities, retail investors cannot and should not be protected against making losses, taking risks or making mistakes. Imposing regulations with the purpose "to remove all risk from the consumer would be a policy of regulating away the very function of finance and financial contracts."[41] Therefore, securities regulation should not be paternalistic, but designed to correct for market imperfections and failures, which hinder the retail investor from making efficient choices.

In most markets, individuals primarily trade through professional institutions. For instance, although a substantial proportion of the population in many countries owns stocks, the direct ownership is a limited proportion of aggregates market capitalization and turnover of listed companies. Most of the ownership and trading is performed via professional intermediaries. The fixed income market is even more centered on institutions. In aggregate, most ownership, at least on the European markets, is indirect. Therefore, the relation between retail customer and professional institution is the most important problem in achieving an efficient consumer protection.

When the retail investor acts directly on the markets, only using the broker as a middleman, consumer protection is more problematic. There is a risk that granting the consumers excessive protection when acting directly in the securities markets would harm the professional securities market. The needs of professional institutions may at some point be in conflict with the needs of retail investors. One example is transparency. Higher transparency is most likely beneficial to almost all retail investors, but may, in its excessive form be detrimental to professional institutions, which do not always want to disclose trades or positions. Given the importance of professional institutions on these markets, excessive consumer protection may be directly harmful. Thus, in protecting the retail investors through different forms of regulation, the effect on efficiency has to be carefully monitored. Furthermore, for investor protection, the relationship between the retail consumers and the financial services providers is the primary focus.

Thus, there is an important principal-agent problem in the relationship between the retail investor and the securities firm. Typically the retail investor buys both services and advice and the value of the investment is often directly dependent on the behavior of the supplier, i.e.

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[41] Llewellyn (1995), p. 16.

the securities firm. Also, the benefits to the *individual* investor of effective monitoring of the service provider are low compared to the costs. Thus, due to this free-riding problem, the retail investors under-invest in information gathering. Furthermore, it is difficult for the retail investor to ex post evaluate the advice given and discriminate between a bad (good) outcome due to bad (good) luck and a bad (good) outcome due to bad (good) advice. Given this difficulty, the level of adequate monitoring of the securities firm by the retail investor is likely to be low. This may give the securities firm ample opportunities to perform sub-optimally.

The combination of these arguments creates a potential problem. The fact that the performance of the service/investment often is dependent on the agent and that this agent cannot effectively be monitored, puts the principal – the retail investor – clearly in a vulnerable position. Some form of protection may therefore be warranted. Still, it is not clear that the problem is confined to securities markets or even that it is larger for a consumers acting as investors than for other consumer goods.

Consumer protection has been an important argument for securities regulation. Kitch (2001) formulates it in this way: "The consensus understanding of securities regulation has been that the laws protect investors and would-be investors against their own folly. Investors are inadequately informed, unwise, and subject to manipulation by issuers and their hired henchmen – the investment banking and brokerage industries. The regulation corrects this imbalance by imposing mandatory requirements on the sale and trading of securities, requirements which at least proximate the terms on which an adequately informed, wise and unmanipulated investor should transact."[42] Choi (2000) claims that "Some investors lack the necessary information and expertise to make value-maximizing decisions; the imposition of regulatory oversight may increase confidence of such investors and, thereby their willingness to invest in the markets".[43]

Llewellyn (1995) makes a summary of the arguments:

a) Retail investors have inadequate information.
b) Retail investors have difficulty in evaluating financial contracts due to their complexity.

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[42] Kitch (2001), p. 4.

c) There is a problem of asymmetric knowledge, i.e. professional investors have better possibilities to interpret information than retail investors.
d) The definitions in financial contracts are imprecise.

However, none of these arguments is specific to securities markets. They exist also for non-financial products, and could arguably be as problematic for certain non-financial services. Although they may be arguments for consumer protection, it is hard to argue that these reasons are sufficient to impose *separate* securities regulation. At the same time, if the arguments are considered enough to merit consumer protection, different forms of general – not securities specific – regulation may be considered.

A common argument for securities regulation[44] is that the asymmetric information problem facing retail investors is amplified by the fact that these services are inherently different from many other consumer products and services. A number of differences have been identified:

- Many retail investments occur infrequently, e.g. the consumers decide only irregularly on their monthly savings. Therefore, the retail investors have a difficulty in learning from past performances.
- Some investments involve a substantial part of the net wealth of the individual consumer, i.e. these decisions are important for the consumer and bad advice may have severe social implications.
- Most *non-financial* products decline in value over time, resulting in falling replacement costs, while the whole purpose of a typical *investment* service is that its value should increase over time.
- In many cases the investments involve customer payments now in exchange for benefits far into the future. An illustrative example is the savings for pensions, where by the time that the benefits are due, it surely is too late to change the original strategy. Without regulation, these benefits may be lost if an investment firm defaults.[45] In contrast, if a non-financial firm defaults, the consumer still has the product that was bought.

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[43] Choi (2000), p. 283.

[44] See e.g. Llewellyn (1999).

[45] This is one of the reasons why most countries have enacted investor protection rules, such as government investment guarantees and deposit guarantees etc.

As a consequence, the consumers' transaction costs (broadly defined) are high. These characteristics have been used as arguments to impose financial regulation in order to reduce the transaction costs to the consumers. A problem with this line of reasoning is that the three first characteristics are not limited to financial investments. They are also valid for non-financial products. Most of us buy products, e.g. cars, computers and houses, without separate regulation even if the investments occur infrequently, involve a substantial part of net wealth, and increase in value over time. Furthermore, we do it despite problems such as inadequate information, complex and imprecise contracts, asymmetric knowledge and free riding. For these products, extensive additional consumer protection measures are normally not deemed necessary.

The last characteristic is more complicated. The long time frame for some types of investments may make them irrevocable and possible problems may become apparent only at a date far into the future. Given that the public sector has a responsibility for some minimum living standards, the retail investors' monitoring difficulties together with this long-term aspect may warrant some prudential regulation. Measures such as government deposit guarantees and the requirement to separate investor funds from company funds etc. can be seen as examples of investor protection regulations to reduce this problem.

Traditionally, these long-term investments have primarily been done in insurance companies. However, there is clearly an increasing trend of pension savings through unit trusts and investment funds. Therefore there may be a need to extend this prudential regulation.

The overall conclusion is therefore that the main consumer protection argument for the regulation of investment services is based a) on the principal agent problem between the retail investor and the investment service provider, b) on the difficulty of the retail investor to monitor the performance of the service provider, even ex post, c) on the long term aspect of many investment services, and d) all under the assumption that the public sector has a responsibility for some minimum living standards. Another question is then how these problems can be solved.

One way to handle the problems is to reduce the asymmetric information in the market. In many markets where the supplier and customer are engaged in repetitive deals, reputation may (at least partially) solve the asymmetric information problem. Another solution may be prudential regulation and supervision of the investment service providers. Furthermore,

increasing competition, removing barriers to entry and reducing barriers to capital mobility are ways to increase consumer protection.

Traditionally, the regulators have handled the asymmetric information problem in financial services in several ways. First, in ex ante terms, entry of new financial firms has been restricted. The regulators have imposed constraints such as tests for "fit and proper" before a financial firm is allowed to conduct business. By signaling standards of quality, this may enhance consumer confidence. Second, in ex post terms, the supervisors have had the duty to check that the conduct of business rules have met up to certain standards, i.e. the monitoring has been coordinated. Third, disclosure requirements, accounting standards, outlawing insider trading and the like all serve the purpose of reducing the asymmetric information.

However fit-and-proper regulations may be problematic. On the one hand, they may reduce the asymmetric information, and thereby protect consumers. As such, "fit and proper-tests" may serve as a signaling device for new financial services providers, thus making entry easier. They may also induce standardized solutions i.e. lower transactions costs. It this sense they may reduce the problem of infrequent contracts. On the other hand, if inadequately defined, they may reduce a healthy competition by increasing the barriers to entry for new firms. Thereby, these tests could hurt the market efficiency and thereby ultimately the consumers in the long run.[46]

In a sense, all standards have similar effects. If defined and applied correctly, they may help in reducing the informational costs for the customers. Taking an example from accounting, if everybody agrees on the definition of earnings per share, (i.e. which earnings to use and which shares to use) it may be easier for investors to evaluate different companies. In this way appropriately applied standards may enhance efficiency by reducing search costs. Imposing standards, such as disclosure requirements, accounting standards etc, is probably beneficial in a static sense but may be less so in a dynamic world. It is likely to increase the costs of the firms involved, it may reduce competition, conserve existing market structures and reduce the

[46] "Fit and proper-tests" typically include provisions on the intermediaries' capital base. If these standards are set too low, defaulting intermediaries may be common. Given that deposit insurance exists, this may be costly for the insurer, i.e. in most cases the government. Therefore, provisions of minimum capital in "fit and proper-tests" can also be seen as a screening device.

flexibility in view of new technological developments. The only beneficiaries from an excessive use of standards would be the incumbent financial institutions.

6. Other Motives

Occasionally other motives for separate securities regulations are presented, such as competitiveness and money laundering. Historically, a number of other politically motivated arguments have been made, including the need to channel funds to politically favored sectors of the economy, or to help financing public deficits. However after the deregulation of securities markets, the latter argument have more or less disappeared. They are therefore disregarded in this paper.

6.1. Competitiveness

Given the important role of the financial sector in an economy, it is sometimes argued that it is in the national interest to have a competitive financial sector. However, the competitiveness of an industry is completely dependent on its possibilities to generate income and on its cost level. In this respect the financial securities industry is no different from other industries. The best way to ensure a competitive securities industry is to ensure that it is efficient. Therefore, this argument does not add anything compared to the discussion of efficiency arguments for securities regulation.

6.2. Money Laundering

With the exploding volume of international financial transactions and the lifted regulation on these transactions, it has become easier also for drug traders and organized crime to use the financial system to hide criminal revenue and transform them into legitimate financial positions. Therefore a number of countries have imposed reporting requirements for major currency transactions. As long as it is only a question of requirements to report, the costs are

likely to be small and not to influence legitimate transactions in any major way.[47] However, if additional restrictions are imposed, even for 'good' causes such as in the combat against terrorism, It may severely affect the efficiency of international securities markets.

7. Problems with Securities Regulations

In any case when arguing for imposing a specific regulation, or any change of regulation, the changes should be justified with a careful assessment of the costs and benefits of the different alternatives. Often, discussions on financial regulations only focus on the cost of imposing the regulation. In a cost benefit analysis of financial regulation it is necessary to make the correct comparisons, i.e. not compare the cost of regulation to a situation with zero costs but one with the alternative costs implied by a non-regulated situation. Furthermore, it is far from clear that even if a market failure has been identified, it is reasonable to correct it by some form of government regulation. An elimination of *all* security market problems is likely to impose excessive costs, in the same way, as it is overly costly for a shop owner to get rid of *all* shoplifting.

Another aspect is that if regulations are imposed they have to be accepted. This acceptance is especially important among the agents being regulated but in many cases also extends to the general public. If regulations are not accepted, they are not going to be effective. If accounting standards are perceived as inadequate, companies are going to create their own. If insider-trading rules are not accepted, enforcement is going to be difficult. Therefore it is in the interest of any regulator or supervisor to achieve this acceptance of the regulations.

A more delicate question is *how* to obtain acceptance. To a certain degree it may be possible to change agents perception of what is acceptable through regulation. One illustrative example is insider trading, which during the last 100 years has been at times more and at times less accepted, and where the regulation probably has had an impact on the level of acceptance. The question of optimality of regulation is in this respect almost a philosophical

[47] For a further discussion, see the Economist (2001c).

issue. Is there reason to believe that the regulator has superior knowledge of what is optimal in terms of regulation? For a further discussion of normative regulation, see section 8.

So even if not all motives for specific securities market regulation and supervision have a sound economic foundation, there are some economically motivated arguments to impose some forms of securities regulations. However, there are also a number of reasons to refrain from imposing such separate regulation, i.e. there are regulatory costs. In general, it is not a sufficient motive for regulation to identify an economic problem in terms of a market failure. In a cost benefit analysis, it is possible that even if a sound motive for securities regulation has been identified the regulatory costs may exceed the benefits. The proposed regulation must also solve the problem without creating a new even worse economic problem. There are several regulatory costs. The regulator's ability and motive to impose proper regulation is important. Sometimes the regulation may produce new moral hazard problems. The regulation may also harm efficiency, as discussed in sections 4 and 5. The regulation may not be enforceable. Consumers may be over-protected. Over time, the need for regulation may fall.

7.1. The Ability and Motive of the Regulator

The regulator has to have the ability *and* the motive to impose adequate regulation. It is not obvious that a given regulatory body fulfills both of these requirements. Ability here refers to both the information available to the regulator and the enforceability of the regulation. For all rules and regulations, especially non-government regulation, it is important to scrutinize the motives of the regulator. Weak and diffuse groups, such as consumers and retail investors, often have difficulties in influencing regulatory solutions. Furthermore, strong interest groups are more likely to affect the regulatory solution for specific regulations, like securities regulation, than for more general forms of legislation and regulation. Conflicts of interest may therefore be important in securities regulation. In some cases, these conflicts may result in inappropriate regulation and therefore a non-regulated situation may be superior.

To a certain degree, this may be solved by choosing the appropriate form of regulation, i.e. legislation, government supervision, self-regulation etc. Typically, in choosing the appropriate form, the level of knowledge and detailed information available as well as the absence of conflicts of interest are important factors. In some cases, self-regulating

organizations and market participants may be in a better position, i.e. have better knowledge and more detailed information, in order to achieve an efficient and flexible regulation. In other cases, conflicts of interest between market participants may make the government the more appropriate regulator.[48] Making the choice is a delicate matter.

Furthermore, the optimality of the solutions may vary over time and there are drawbacks of every solution. The regulator may be risk-averse and prefer excessive regulation to a more competitive situation, not necessarily because it is socially optimal but because it reduces the exposure of the regulator. As an example, the central bank may prefer costly – possibly excessively costly – procedures in the clearing and settlement in order to minimize the risk of having to intervene to solve a payment crisis. Also, using a public choice argument, most regulators find it difficult to reduce their influence. Typically, it is more in their interest to increase their power by imposing new or more sophisticated regulations. Historians have also noted this. In the words of John Coffee "The movement towards stronger regulatory authority has had a decidedly one-way character".[49] Therefore, an unregulated situation may be preferred.

In section 3.1, it was argued that the government may need to impose measures to reduce the systemic risks involved in the clearing and settlement systems. One solution is that the government sets standards for the risk management systems in the settlement organizations. However, even if such measures are successful in reducing the systemic risk, they are likely to have several side effects, such as new moral hazard problems and reduced efficiency.

7.2. Moral Hazard

As securities market regulations are imposed, the incentives of different market agents are often shifted. This may create moral hazard problems, in that the regulation may make individual agents less careful. One example is when the government set standards for the risk management systems in the settlement organizations. There is then a moral hazard problem in that the settlement organization may take on excessive risks. Taking on risk is likely to be

[48] The different levels of regulation are further discussed in section 8.

[49] Coffee (2001) p. 67.

profitable and if the problems do not arise, the organization can cash in. On the other hand if there are problems the government will bail it out. In coping with this moral hazard problem, the government may have to ensure not only that there are appropriate risk management systems in place in the settlement organizations but there is also a need to regulate and supervise the actual level of risk taken. So, there is first a need to regulate. Then the regulatory solution to the first problem introduces a second set of problems, which have to be solved with additional regulation, which in turn creates even more problems. There is a clear risk of increasing the distance to a market solution, with resulting possible problems of efficiency. The original cost in the unregulated situation may well be lower.

This also creates a problem of transparency. When the regulations have been applied for some time, it may be difficult discern the original objectives. Once the regulations have been enacted, they may be difficult to eliminate or adjust. This may reduce the flexibility of existing regulation and as a consequence, inappropriate regulation may linger on.

7.3. Enforceability

Another argument against securities market regulation is that it will not have the desired effect. Sometimes the difficulty in enforcing the regulation may make it useless. As an example, in an international environment, there are ample opportunities for insiders to trade through foreign brokers and thereby escape any disclosure requirement on the domestic market. In this case the main real effects of the regulation are a) to increase public confidence by creating the appearance that the regulation is dealing with the problem and b) to increase the transaction cost for the insiders. However, this increase in transaction costs is not likely to be prohibitive in cases where the insider information is really valuable. Furthermore the increasingly integrated international financial community makes it successively less expensive to escape these reporting requirements.

The difficulty of keeping the extensive foreign exchange regulations during the 1970's and 1980's is another example of the problem of enforceability. During this period the multinationals grew increasingly eager and proficient in circumventing the regulations. As a consequence, the really large firms got an advantage over smaller firms, thus affecting the competitive situation far beyond the financial sector. Another example is the short sale restrictions imposed on many stock markets around the globe. As derivatives became more

common in the 1970's and 1980's, this new technology made the short sale restrictions impossible to withhold.

7.4. Consumer Over-Protection

There is a debate whether financial services are that different, and whether the risks to the consumers are larger in financial services than in other services and products. Most of us are willing to buy and drive a second-hand car without excessive separate regulation of the car dealer or the contract involved. Still, the probability of fatal problems is surely higher in driving the car than in most financial services. Following the argument, the normal consumer protection regulation may be sufficient.

Still, as argued in section 5, a combination of problems could motivate some kind of specific regulation and supervision of securities market based on a consumer protection motive. The basis for this argument is a) the existence of a principal-agent problem, b) the monitoring difficulties due to free riding problems, c) the long-term aspect of many investment services, and d) all under the assumption that the public sector has a responsibility for some minimum living standards.

However, on a more philosophical level, there is a question of the extent to which individuals should and can be protected. As the world gets smaller, also retail customers are likely to be increasingly exposed to services provided by firms located outside the control of their home country regulation. Comparing the regulatory regimes of these financial firms is likely to be a highly demanding task for any retail customer. Imposing regulation and setting standards on a domestic basis may reduce a retail customer's healthy skepticism towards services provided and thereby make her more vulnerable in the long run as the world shrinks even further. One solution is to try to limit the possibilities for domestic retail consumers to buy products and services from international providers, who do not officially comply with the domestic regulation. As the world shrinks, this is going to be increasingly difficult and surely not desirable, since it would severely limit the choice of individual investors. Furthermore, this is limiting the scope of international competition between not only financial services providers but also between different regulatory regimes. An alternative and more desirable solution would be to raise the awareness among retail customers, by information campaigns and education, thereby making them more critical consumers of financial services.

7.5. Time May Solve All Problems

A final argument against securities regulation is that financial markets and services are becoming increasingly similar to other markets and services, i.e. less special. The more people use these markets the better they will know how to tackle different problems. Furthermore, as the markets develop, they will be more complete, which would reduce the need for regulation due to market failures. As an implication, financial regulation and supervision would be less needed.

7.6. Conflicts

In molding regulations, there are a number of potential conflicts. Typically a balance has to be struck between the flexibility and predictability of a regulation, between the harmonization and competition of regulatory systems, between consumer protection and efficiency, and between different levels of regulation.

Flexibility vs. predictability

Regulations need to be understandable and predictable. Agents in the market (including individual investors) should know what is allowed and what is outlawed. Continuously changing the rules and regulations would increase the agents' uncertainty. There is clearly a cost involved. Furthermore, there are learning costs for every new regulation enacted, costs which have to be weighted against the benefits of the new regulation. The larger the body of agents affected by the regulation the higher these costs. The increasing number of retail investors in the last few years only strengthens this argument. The professional investors, most certainly, have better opportunities to keep track of regulatory changes and their consequences than retail investors do.

On the other hand, the pace of change in the securities markets is increasing. New technological developments change both the available types of contracts and the trading systems. This necessitates changes in regulation. Old and stale regulation would render the markets less efficient and could potentially hamper the development of new technical and contractual solutions.

There is no simple solution to this dilemma of keeping the existing regulation to ensure predictability and to ensure a regulation, which is flexible enough to meet the changing need of a fast technologically changing industry. One possible and pragmatic solution is to focus the regulation, at least in terms of laws, on the basic principles and leave the details to the market participants to sort out. Hopefully the principles will be applicable for a longer time frame than any detailed regulation would.

Harmonization vs. competition between different regulatory regimes

The internationalization creates a force to harmonize the securities market regulation across different countries and jurisdictions. A clear example of this is trading through Internet. With the customer in country A, the broker in country B and the stock exchange in country C, the legal basis for any contracts and legal disputes may be ambiguous. The differences in legal background and regulation tradition only complicate matters even further. Harmonizing the securities market regulation would greatly simplify the problems. Furthermore, with highly differing regulations across countries, international securities firms have to incur substantial compliance costs. The investors will eventually be charged with these costs. Harmonization will therefore reduce costs to the investors.

Another area where harmonization would be desirable is in accounting standards.[50] For the securities market, the primary objective of accounting is to help investors estimate the value of a company. The present situation with different accounting standards across countries is likely to hamper international investments by increasing the information costs of investing abroad. This may at least partly explain the home bias in securities investments, i.e. that investors do not take full advantage of the possible international diversification. Making financial statements more comparable across jurisdictions would therefore probably stimulate cross-country investments, reduce the home bias and increase the international diversification.

Furthermore, harmonization would generally increase the market efficiency, reduce barriers-to-entry and induce a better allocation of capital and risk in the economy. In this sense, the present situation with substantial differences in securities regulation between countries can

[50] The enactment, as proposed, of the International Accounting Standards (IAS) would greatly improve accounting comparability.

effectively imply reduced competition and higher cost for the customers, i.e. investors. Some even argue that the need to create a level playing field among different securities intermediaries is more important than finding the optimal set of regulations.

Thus, harmonization may very well improve the competition between different markets and agents. However, given the differences in legal system and regulatory tradition, harmonization is difficult. Furthermore, it may not even be desirable. First, individuals are likely to demand certain proximity in the regulation and supervision of securities markets. If this proximity is reduced, their confidence in the appropriateness and impartiality of the regulation and supervision may be hurt.

Second, a far-reaching harmonization would reduce a healthy competition between different regulatory regimes. If the harmonized regulations are not open enough, they could easily curtail the development of new services and techniques. In the present non-harmonized regulatory situation, there are possibilities to compare how different regulatory structures handle different problems. There are therefore also possibilities to learn and over time improve the regulatory framework. In a fully harmonized world, this will be more difficult. As the pace of change in the markets increase, the need for regulatory change also increases. There is a clear risk that a fully harmonized regulatory system would be less flexible. Thus, regulatory harmonization would increase competition between markets and agents in a static sense, while it threatens to reduce the more long-term and dynamic competition between different regulatory structures.

To summarize, there are clearly conflicting goals, with short-term advantages of harmonization to balance against the long-term advantages of regulatory competition. Advocates against a far-reaching harmonization claim that this regulatory competition is more important than any short-term gains from increased harmonization.

8. Types of Regulation

Regulations may take many different forms. In principle, regulations can either codify already existing notion of what is acceptable behavior, or they can have a normative purpose of trying to change the public notion of what should be outlawed. Sometimes questions arise whether

the first form of regulation really is necessary if everybody agrees upon the principles. However as discussed in section 4.2, there are sometimes coordination problems. Everybody may agree about the best conduct given that everybody else follows the rule, but each individual may have incentives to deviate in their behavior, resulting in a sub-optimal solution. Here, it is important to codify the regulation to try to achieve a better outcome. Outlawing price manipulations may be one example of this sort of regulation.

Normative regulations may be more problematic. Firstly, in a public choice perspective, it is not evident that the goal of the regulator is a socially optimal regulation. Instead, in practice many regulations are the result of elaborate compromises. Secondly, in trying to change individual behavior by a regulation, the regulator must have higher goals, better information, or better possibilities to identify and correct a market failure than the individuals. Forcing market participants to apply stringent risk management system in order to avoid systemic risks may be one example of this type of regulation.

Furthermore, it is clear that imposing regulation may actually change the public perception of what should be regulated. This raises an important question of whether it is possible or even desirable for a regulator to change the public conception of what is relevant regulation or whether the imposed regulation should be confined to the already accepted principles. In any case, before imposing any normative regulation, the regulator should ask itself why the regulation is not already widely accepted among the individual agents, i.e. if there is a genuine market failure.

In any case, once enacted a regulation needs a general acceptance by the agents being regulated. If the agents do not accept the basic principles behind the rules and regulation, the authority of the regulator will fall, agents may spend considerable time and effort to circumvent the regulation and the cost of forcing compliance will be substantial. Therefore in discussing different forms of regulations, it is important to estimate the degree of acceptance by the agents.

Another interesting observation is that the forms of securities regulation have varied between different countries and across time[51]. There may be several reasons for these differences. The

[51] For a discussion of variations of regulation across time, see further section 9.7.

variation across countries may, at least partly, be explained by differences in legal tradition. There are four legal traditions discussed in the academic literature[52], the common law in Anglo-Saxon countries, and the civil laws in its three distinct forms emanating from France, Germany and Scandinavia respectively.

In the Anglo-Saxon common law tradition, regulation is created by the rulings of judges solving specific legal disputes. Here, one key feature in forming the law is to use precedents from judicial decisions, rather than contributions by scholars. At the other extreme, the French civil law uses an elaborate and comprehensive set of laws. Here, the actual wording of the law is of utmost importance and judges are supposed to apply but not interpret the law. This tradition originates from the Roman law. It was modified and imposed in many European countries during the Napoleon era. The German and Scandinavian civil laws lie somewhere in between.

Thus, legal differences are likely to influence the regulatory environment, and therefore the specific regulatory solutions in different countries. Furthermore, securities law implementation and enforcement, investor protection and the accounting standards all differ significantly across these legal traditions.[53] However, the legal tradition cannot explain all differences. Forms of regulations vary considerably also across countries with the same legal background. The extensive codes in the US with detailed rules and regulations are clearly distinct from the tradition of gentlemen's agreements in Great Britain.

All of these differences make international cooperation and harmonization between securities regulation and supervision a demanding task. EU-regulations are interesting in this respect since they typically are compromises between all of these different legal traditions. Furthermore, interpretations often vary across countries and over time.

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[52] See e.g. La Porta, Lopez-de-Silanes, Schleifer and Vishny (1998) and (1999).

[53] See La Porta, Lopez-de-Silanes, Schleifer and Vishny (1998).

8.1. Regulation and Self-Regulation

Market failures can be dealt with in several ways. An important distinction is between government regulation and self-regulation. Within government regulation, three distinct levels can be identified.

On the first level of governmental regulation, there are supranational agreements, like those adopted in the World Trade Organization or the European Union. These agreements are typically the result of lengthy negotiations and complicated compromises. The process from proposal to final agreement can easily take more than a decade.[54] Furthermore, these agreements are only valid if ratified, enacted and implemented by the national legislative bodies (parliaments etc), which means that they are often not effective until 18-24 months after the agreement has been reached.[55] As a consequence, these agreements are difficult to change once enacted. They are also typically, but not always, quite general in their setup.

The second level typically refers to national laws. These are strictly binding and it is normally the only level where breaking the regulation can result in effective enforceable penalties. Therefore, this type is typically used when breaking the regulation is considered an especially severe offense. Examples include laws forcing a broker to ensure client privacy, and laws prohibiting insider trading.

As a third level, the national legislative bodies often delegate the specifications of the laws to government agencies. These government agencies issue rules and rulings, or secondary regulation. In many countries, the financial supervisory agency issues secondary regulation where the national (and international) laws are being specified and interpreted into more exact formulated demands on the agents. Examples include when these agencies issue specific rules on how markets must monitor trading, and specific rules on how brokers should treat their customers. All of the above-mentioned forms are typically described as different forms of government regulation.

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[54] E.g. the EU take over directive has been negotiated for more than 12 years.

[55] In some cases, the EU may issue regulations, which are effective directly, without passing through the national legislative procedures of the different EU-countries. One such example is the regulation imposing international accounting standards (IAS).

There are however also other contracts, rules and regulations affecting securities markets. The overall term used for these non-government rules is self-regulation. A self-regulatory body can be defined as a "non-government organization which has statutory responsibility to regulate its own members through the adoption and enforcement of rules of conduct for fair, ethical and efficient practices."[56] Self-regulation can be classified in three types.

In the first type, the rules are set up by organizations, Self Regulatory Organizations SROs.[57] In some countries, like the USA, these can be private organizations, such as the National Futures Association[58]. In most markets, the law or the authorities require certain agents to impose regulation. One example would be exchanges, which in most countries are required to supervise trading in order to spot insider trading, price manipulation and other market misconduct. Some securities markets[59] outsource this activity to special regulatory organizations. The basic economic rationale is twofold, to enable a division of labor and to increase the impartiality of the regulation and supervision. In many cases these SROs are non-profit organizations although it is conceivable to have for profit firms run this business. Also, the SRO's are frequently subject to supervision from the government supervisory agency.

A second type of self-regulation is when industry organizations set up rules for accepted practices within that industry. Examples include specific clauses in standardized contracts defined by the SRO, and rules of conduct for the brokers set up by broker organizations.[60] Often, the rules are included in contracts between the parties. Thus, the rules are not part of criminal law and thus outside the direct sanction of the government. However, even if not contractual, they can still constitute an effective level of regulation, if they reach a sufficient acceptance, simply by introducing peer pressure etc. Breaking such rules may, in the most serious cases, lead to expulsion from the broker community, since no one else will want to trade with them. As deterrent, that is likely to be a highly effective sanction. Another example is when these organizations establish standard contract to be used by its members. This way transaction costs (in terms of legal, time and other costs) will be lowered.

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[56] See www.investorwords.com.

[57] Swedish examples are Näringslivets Börskommitté (NBK), Akitemarknadsnämnden and Redovisningsrådet.

[58] See http://www.nfa.futures.org/.

[59] Such as many Electronic Communications Network (ECNs) and Alternative Trading Systems (ATSs).

[60] A Swedish example would be the Swedish Securities Dealers Association which issues a "drivers license" to certified analysts.

A third type would be when a single company (possibly with significant market power) adopts certain rules. This could be a wide variety of regulatory forms, such as standardized contracts. For example, an exchange has to adopt trading rules, which will implicitly regulate what the brokers may and can do. Most trading systems will impose restrictions on how brokers and dealers can act. As trading becomes increasingly computerized, these rules will become more important and the need to ensure that they do not hamper competition becomes an increasingly important task for the financial supervisors, see further section 9.2.

Regulation vs. self-regulation

In evaluating these different forms of securities market regulation, it is important to consider their efficiency. There are a number of criteria a good regulation should fulfill. It should

- reach its objective without creating undesirable side effects,
- be accepted by market participants,
- ensure a price formation process, as efficient as possible, implying that securities should trade at prices, which take as much information as possible into account.
- be predictable enough for everybody to be able to anticipate the result of her actions, i.e. implying a certain degree of conservatism in the regulation; and
- be flexible enough to be easily adjusted in view of changing market circumstances.

For the exposition here, the interesting distinction is between self-regulation on the one hand and on the other hand, government laws and regulations.[61] Self-regulation has a number of advantages.

First, a SRO typically has better proximity to the market. Therefore, the "regulator" is likely to have better knowledge of how the market works and thereby better opportunity to achieve appropriate regulation. Such a superior knowledge of market conditions results in regulations, taking the specific characteristics of the market better into account. Also, since industry representatives typically participate in the SRO, "self-regulation may result in better compliance with rules because it may be more easily accepted by the regulated parties."[62]

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[61] For a discussion of self-regulation and government regulation, see IOSCO (2000).

[62] IOSCO (2000) p. 5.

Thus, the important acceptance may be easier achieved through self-regulation than through government regulation.

Second, self-regulation is flexible, both in term of possibilities for modification in view of changed market conditions, and in terms of how it is applied. A consequence of the flexibility is that self-regulation may apply higher ethical norms, compared to the legal minimum standard. Without this higher flexibility, it would be difficult to impose these higher norms. Thus, self-regulation may be more suitable when there is a need for detailed regulations and high norms, and also where flexibility and market knowledge is important.

Third, self-regulation is often effective in that it focuses on "developing best practices and monitoring their markets out of economic, reputational and regulatory self-interest."[63] Imposing sanctions is effective, since they imply the loss of reputation in the market, which is likely to be costly. Being excluded from the community may result in unwillingness from others to trade, and without counterparts, no revenues. Furthermore, self-regulation is effective in dealing with global issues since it is defined by contracts, rather than by national laws.

Fourth, this form of regulation is typically also cost efficient as the costs are largely shifted to the regulated industry. In this sense, the regulatory (direct) costs are internalized in the tradeoff between regulatory costs and benefits. This facilitates an optimal level of regulation. Furthermore, the overhead may be smaller. The members of a SRO have higher incentives and better possibilities to limit the costs of a SRO, than in the case of government regulation. Often, government regulation may be more efficient in forcing agents to accept new rules. On the other hand, when the objective of the regulation is to codify existing best practices, the costs involved may be minimized if it is preceded by self-regulation.[64] Furthermore, legal costs can be reduced since the use of courts will be limited.

On the other hand self-regulation also has a number of drawbacks. First, the regulations only apply to members since the system often is based on voluntary compliance or contracts. It is doubtful if self-regulation efficiently would tackle problems of externalities. These

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[63] IOSCO (2000) p. 12.

[64] Miller and Upton (1989).

externalities are often negative, i.e. a third party suffers from an agreement of which he is not part. When a trader breaks generally accepted ethical rules, that may harm the public's confidence in the entire market place, i.e. hurt also other agents than the ones directly involved in the agreement. In this case, the effects on the other trader are not internalized in the first trader's decision. No trader will internalize the systemic risk involved in the clearing and settlement business. By the same token, rules by a SRO are not likely to internalize the consequences on all traders – also non-members – in the market. There are also potentially problems of positive externalities when a third agent benefits from the agreement by others. In these cases the socially optimal level of production is likely to be too small. Therefore, government regulation may be needed to handle problems resulting from both of these types of externalities.

Second, under self-regulations, formally only the members of the SRO have to comply with the regulations. However, often these rules become the norm in the industry. Then, the rules will have bearing also on non-members. Furthermore, since the members run the SRO, they are the ones defining the rules. Therefore, there is a risk that the self-regulation may be constructed as implicit barriers to entry. In principle, this risk also exists for government regulation but is likely to be larger when industry organizations set up the self-regulations, since then the incentives and possibilities to act as a cartel are larger. This may hinder competition and innovation spurred by outsiders, i.e. non-members. On the other hand, the risk of political protection of existing government regulation must not be underestimated.

Third, enforceability of self-regulation may be a problem. It is doubtful if self-regulatory organizations can afford the overhead needed for investigations of non-compliance with the regulation. Also, the possible sanctions involved are likely to be either highly drastic, i.e. in practice expulsion from the association, or inadequate as a deterrent, i.e. fines. Government sanction can be more varied, and therefore possibly more effective. There is a risk of duplication of regulation and supervision with additional costs. A SRO may not internalize all effects of the regulation. Therefore, "government oversight is an essential element in the self-regulatory structure."[65] Furthermore, many SROs may have obligations in similar fields resulting in duplication of regulatory and supervisory efforts. Or even worse, it may result in

[65] IOSCO (2000) p. 8.

overlapping and potentially conflicting rules. This imposes higher costs, which eventually have to be covered by the customers.

Fourth, there may be conflicts of interest, either between the self-regulatory organization and a member, or between on one hand the SRO and the member and on the other hand external parties. This may hamper competition or necessitate government action. The result may be too harsh or too lenient sanctions.

Fifth, self-regulation may have a 'fair-weather'-character. It may focus on smaller problems that are likely to occur, rather than large problems with low probability, such as systemic risks. A substantial part of self-regulation is in the form of established best practices. This is typically developed as a reaction to problems previously experienced, rather than as an analytical solution to possible future problems.

A consequence of the analysis above is that government regulation is most appropriate when there is a need for stable, unambiguous and predictable rules. One main reason is the considerable time and cost involved in changing government regulation, especially laws and international agreements. To keep some level of flexibility, these laws and regulations may be formulated as principles stating the objectives of the regulation and the means to fulfill them, rather than detailed rules. These principles can then be followed by more detailed regulation by government supervision and/or different forms of SROs.

Still, in areas where systemic risks exist and due to the externality problem, detailed government regulation may be warranted. This could be in some especially complicated technical cases, such as risk management in clearing and settlement systems. In formulating these rules, it is important to ensure that the regulations do not hamper new developments and competition from new technical solutions. In the increasingly changing environment the flexibility is a vital aspect in the competition between different regulatory systems.

However, there are also problems in stating the general principals in the law and delegating the details to the Financial Supervisory Agency or to SROs. First, it may be questionable to have the same entity both set the rules and enforce them. This problem can be partly solved if there is a possibility to appeal the decision by the SRO to a formal court. Second, one problem of delegating the detailed regulation is enforcement. On the one hand, detecting violations to the regulations may be easier. However, on the other hand enforcement may be

become more difficult. The SROs (and supervisors) typically have fewer sanctions available than formal courts of law. Introducing the principal framework in the law may require giving the supervisors and the SROs better possibilities to impose a varying set of sanctions, i.e. between the drastic measure of revoking permissions to trade and the ineffective measure of pecuniary fines. On the other hand, this enforces the first problem, of the appropriateness of having the same agency both create and enforce the rules.

Given the advantages and disadvantages of SROs, there is clearly room for both government regulations and SROs. Furthermore, a high level of interaction between these forms of regulation is necessary. Government laws and regulations are not suitable for all the detailed regulations needed in a securities market. On the other hand, SROs need the backing of government regulation and supervision to function properly. "Always and everywhere regulation of financial services is a mix of legislative, and elements of practitioner-based regulation."[66] Thus, regulations through the government and through SROs are often complements, rather than substitutes. In IOSCO's words, "Cooperation by national regulators and SROs in an increasingly global financial environment is not an option---it is a necessity."[67]

8.2. The International Dimension

As markets become increasingly international, the role of government regulation and self-regulation will have to change. The need for a truly international financial regulation and supervision will increase. As more professionals as well as retail investors trade directly on international securities markets, the need for standardization of contracts, settlement systems etc. will grow. However, a complete harmonization of securities regulation is not likely and probably not even desirable, since it would reduce healthy regulatory competition, se further section 7.6.

This internationalization poses a formidable challenge for securities regulators around the globe. Given the difficulty of reaching international agreements and the differences in legal

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[66] Llewellyn (1995), p. 15.
[67] IOSCO (2000) p. 7-8.

and regulatory tradition, it will be very difficult and take a substantial amount of time to reach any international standardization. Not even full recognition of securities regulation and supervision in different countries is easy. Overall harmonization is unlikely, although the development within the EU has showed that mutual recognition and partial harmonization is feasible. On a truly global level, it will be almost impossible.

One possible scenario is that specific organizations – brokers, market etc. – for international securities trading will emerge, either by forming new ventures or by merging or linking existing business, and that these will follow the laws and regulations of one specific country, e.g. the UK, the USA or Japan. Another alternative is successive cooperation between different brokers and exchanges and their regulatory environments. In any case, the development is changing the scope of government regulation and supervision as well as different SROs.

The existing national SROs may also have difficulties in reaching international agreement on their regulations. On one hand, the contractual character of self-regulation makes it suitable for international agreements. On the other hand, the differences in legal tradition and securities culture will probably make it difficult to reach any consensus on any type of existing self-regulation. Furthermore, for an efficient enforcement of the regulation, existing SRO often rely on a homogeneous society of members, with similar norms and ethics. Without this, sanctions as well as the regulation itself will be less effective. If such social norms were lacking, regulation and contracts would have to be extremely detailed, imposing additional costs on the ultimate investors. On the other hand, if everybody has similar social norms, they will fill the gap in the incomplete contracts and regulation. In an international community this moral glue is going to be increasingly difficult to sustain.

One possible solution is an increase in national government regulation of all transactions in markets under its jurisdiction and a reduction in self-regulation. Another solution is the establishment of new genuinely international SROs, which can set up minimum standards for truly international securities trading and regulation.[68] However, each SRO would have to be based on a legal framework in one country. Therefore, the ultimate question is if investors and

brokers in one country will accept to be regulated by the laws and regulations of another country for their international trades. Given the strength and capital base of US investors, they are likely to set the agenda. In practice, the question is therefore whether agents in other countries are willing to accept US regulations. For a further discussion, see section 9.1.

8.3. Conflicts between Different Levels of Regulation

In formulating securities regulation, a number of interesting conflicts of interest may arise. One example involves the regulatory functions performed by exchanges, in first instance stock exchanges. These perform a number of regulatory functions. In most countries, the stock exchange scrutinizes and approves prospectuses for firms wishing to issue stocks for public trading, i.e. become listed companies. Furthermore, listed companies have contracts with the stock exchange defining their obligations, among other things in terms of release of company information. The brokers have contracts with the exchange defining their obligations. The exchange also monitors trading to spot abnormal prices that could be an indication of insider trading or market misconduct. In all of these cases, the exchange performs a regulatory or supervisory function.

In an increasingly international environment, where most exchanges face increased competition from other exchanges, foreign as well as domestic, the public authority functions of an exchange are likely to be put under pressure. There are a number of problems.

If a company, wanting to have its shares listed in many countries, has to pass through the regulatory process of prospectus approval at every exchange, the review process will be slow and inefficient. Therefore, the EU has proposed that an approved prospectus in one country, within the EU-area, will entitle the company to be traded in all other EU-countries.[69] However, there is a potential conflict if one exchange is dependent on the approval by its competitor of the prospectus. Examining and approving prospectuses may therefore be better performed by an independent and impartial organization.

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[68] IOSCO may play a role here in setting up a comparable international organization for SROs. An example of an existing international SRO is ISDA, International Swap Dealers Association, an organization that promotes and defines standard contracts for internationally and privately negotiated derivatives.

[69] See European Commission (2001b).

Furthermore, today many securities are traded on several exchanges, while the bulk of the monitoring occurs at the exchange of the primary listing. Here, the primary exchange clearly produces a public good and, given that the monitoring is costly, the other exchanges are benefiting from this. The problem is further enlarged by the emergence of Electronic Communications Network (ECNs) and Alternative Trading Systems (ATSs), where the securities are not listed but only admitted to trading.[70]

However, it is in the interest of the exchange to scrutinize prospectuses, monitor trading and supervise the distribution of information by listed companies, in order to ensure public confidence in the market and maintain an orderly market. The problem is that these activities are costly and that they also are, at least partly, public goods. Furthermore, in an increasingly competitive market, there may be conflicts of interest between different exchanges. There is also a risk that the competition between exchanges will drive the level of supervision down under the socially optimal level.

9. Trends

So far the discussion has primarily been focused on the *present* problems of securities regulation and supervision. However, the financial environment is constantly changing. The purpose of this section is to discuss the regulatory consequences of some of these trends.

9.1. Increasingly International

One of the major trends affecting the securities markets is internationalization. Increasingly investors see the benefits of international diversification. The trend to diversify across industries rather than across countries reduces the perception of individual national securities markets. Although most people still think about the German, British and US markets, these distinctions are becoming progressively more outdated. For all practical purposes, we are moving towards one global market for the major financial securities, at least for professional

[70] When a company is admitted to a list, it is subject to a substantial review, where the company has to comply with a number of requirements, while a securities may be admitted to trading even without the knowledge of the

traders.[71] This poses significant challenges for the securities regulation and supervision. In principle, since these are global problems they require global solutions.[72]

The internationalization affects all three basic economic motives for regulation. As cross-border trades rise, the systemic risks increase, as the probability and size of potential settlement problems are enhanced. This may have severe consequences, especially for smaller countries, unless proper measures are taken to handle these risks. At the same time, if traders and brokers really use the increased opportunities to diversify internationally, the probability of settlement problems may be reduced, since securities from the other markets may provide the liquidity needed. However, as cross-border holding increase, so will most likely also cross-border trading. Therefore, the settlement systems will become more dependent on each other and the cushion effect will diminish.

In an international environment, it is also more difficult to ensure proper consumer protection. Following the IOSCO principles [IOSCO (1998)], a substantial responsibility rests on the securities firms, including:

a) to act honestly, fairly, with due skill, care and diligence and in the best interest of its customers and the integrity of the market,
b) to seek sufficient knowledge about its customers' preferences and financial situation to be able give appropriate advice on an individual level,
c) to avoid conflicts of interest and when they cannot be avoided, ensure that the customers are treated properly.

As markets become increasingly international, all of these aspects will be more difficult to supervise. If consumer protection is warranted due a) to a principal agent problem between the retail investor and the investment service provider, b) to the monitoring problems of the retail investor, c) to the long term aspect of many investment services, and under the assumption that the public sector has a responsibility for some minimum living standards, ensuring a true international consumer protection will clearly be difficult.

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company. Therefore, in the latter case, no requirements on the company are posed.

[71] For retail investors, the level of direct international trading is still limited.

[72] A discussion of the effect of internationalization on the distinctions between government regulation and rules by SROs was discussed in section 8.2.

Often it is also argued that investors should be ensured a) to have equal access to markets, b) to get best execution, and c) are treated with fairness. This will surely be more difficult as the markets get increasingly international. However, competition will solve most of these problems. Furthermore, as was argued in section 5, the main consumer protection issue is the relationship between the securities firm and the retail customer and not between the retail customer and the markets.

Still, one basic concern in terms of international investor protection is whether an investor would feel as free in filing a complaint with a foreign supervisor. There may also be doubts whether a supervisor, regulator and eventually a legal court would take the complaints by a foreign investor as seriously as if it came from a domestic investor. Doubts may also be raised whether a supervisor would spend enough time and effort in ensuring that there are no violations against the rights of foreign investors. To keep the investors' confidence in the market, they would have to be confident that none of the problems could occur.

Efficiency questions are also affected by the internationalization. Market fragmentation may become one such problem. Insider trading and price manipulation are likely to be facilitated when trading occurs on several markets. This not only necessitates close cooperation between financial supervisors but also requires more resources. If for instance insider trading is easier to perform in an international setting, the chances are great that insider trading becomes more frequent. However, trading at multiple venues will not only fragment the order flow and the prices but also the supervision. It is important to ensure that a shared responsibility by the supervisors and regulators in different countries will not result in everybody avoiding taking responsibility.

Another effect of the internationalization is that the flow of information is improved. The information is quickly distributed to the professional investors. The more information they get the more they demand. So, companies issue more investor related information now than ever before. That is improving market efficiency. However from a consumer protection point of view, there is a risk that the information gets more asymmetric, in that the difference in information level between professional investors and non-professionals increases. This has been used as an argument for increased regulation to protect the small investors. However, if professionals, by getting more and better information, can make the prices more accurate and the markets more efficient, the small investors will also benefit.

9.2. Increasingly Electronic

Another trend is the increasing use of different form of electronic media in the securities markets. This introduces potential problems with access, i.e. defining who should be able to trade, precluding discrimination and ensuring that the appropriate individuals have access. Since most securities markets have public good features, access to the market is important.

Electronic trading and communication systems also introduce different capacity problems. Building and maintaining capacity is expensive and when the level of trading is highly variable a substantial excess capacity (and thereby excess cost) is needed, to preclude a market breakdown, with possible systemic risks, efficiency losses, and investor protection problems. Given that well-functioning markets is a public good and that there are systemic risks if market liquidity cannot be sustained, it is not evident that a market would build in sufficient capacity without some form of government supervision and control.

Another problem is how to regulate and supervise electronic services. Electronic information can be changed instantly, and there are often limited means to recreate past information. Securing evidence and efficiently enforcing rules against market misconduct may therefore become more difficult.

Furthermore, Internet and other electronic services put the finger on a key issue, namely who should be regulated and supervised. Is the electronic service provider responsible for the content of the service or only for the technical functionality? What are the differences between an electronic communication network (ECN) and an ordinary file routing system?

Furthermore the distinction is blurred between on the one hand official investor advice, which in most countries is regulated and supervised for consumer protection reasons, and on the other hand information service providers, who are only supplying access to Internet. An example would be Internet chat sites, many of which include, for all practical purposes, investment advice. When the homepage of an official investment advisor has links to external chat groups, the surfer may not even know that she is leaving the homepage of the investment advisor.[73] The advice from the chat group may therefore appear to be from the investment

[73] This is specifically a problem when using frames.

advisor. Defining the responsibility is therefore difficult. The fundamental question is whether it is possible to hold anyone responsible for the information on Internet. Given the open nature of Internet, protection of retail investors will become increasingly difficult. Therefore, information and education of retail investors, i.e. help to self-help, are likely to be more efficient investor protection measures than setting up strict rules. Increasingly, the individual retail investors will have to be responsible for their own actions.

Another problem is how to secure investor securities, privacy and protection in the Internet age. Securing the electronic services from fraud becomes a major issue in keeping customer confidence in the services and in the market overall. In many cases the service providers have sufficient incentives to ensure a secure electronic communication, but since there is a potential macro effect through public confidence and systemic risks, there may also be a role for regulation and supervision. Furthermore, the information on individual investors' trading habits may be useful information for other companies targeting Internet customers. Selling this type of information could pose a substantial problem of privacy.

9.3. Increasing Number of Market Participants

A third relevant trend is the booming number of participants in most of the western world[74]. In the last few years, many individual investors who had never considered investing in financial securities before bought stocks, bonds and other securities, both directly and through different investment vehicles, such as mutual funds. The latecomers are likely to have less knowledge and information than earlier investors. As a result the asymmetry of information is increasing. There may therefore be a consumer protection motive to reduce this asymmetry.

If sufficient consumer protection is not granted, these new investors are likely to make substantial losses, which will negatively affect their trust in the securities markets. Given the large proportion of the population now involved in securities markets, this may have severe repercussions on the entire financial sector.

[74] With the notable exception of Japan, where the stock market has fallen during the 1990s rather than risen as in most other western countries.

The increasing amount of day-trading could also pose a problem. Some argue that day-traders should be forced to supply minimum deposits to be allowed to trade. In this way the risks taken by these day-traders could be limited. This argument however is problematic. First of all it could potentially be used to restrict the number of agents in the market, making it less efficient. Secondly, and on a more principal level, the argument assumes that people are not able to make correct investment decisions. Imposing restriction on day-trading effectively tries to protect the day-traders from *themselves*. The underlying assumption is that they act sub-optimally and that "big brother" knows better. That is a fundamental difference compared to normal consumer protection arguments, where the objective primarily is to protect the small investors from *other* agents, those with better information.

9.4. Increasingly Complicated and Large Firms

A fourth trend is the growing size of securities firms. There is a growing mismatch between the limited authority of national regulators and the global reach of financial institutions.

For the customers, it is often desirable to use larger financial firms, which can diversify risks and offer cross-border trading at lower costs. For the regulators and supervisors, it is more problematic. As the international trading links become more established and more extensively used, the chances of systemic risks in one country spilling over to other countries grow. This is especially worrying for smaller countries. As the securities firms grow larger, there is a risk that they ignore the regulation in smaller countries and establish services outside the country but still target customers in that country.

Another problem is that the securities firms may become too large to fail. The problems with Long Term Capital Management in 1998 point in that direction. It has at least been argued that LCTM was too big, and that if the US Federal Reserve had let it default, that would have had severe repercussions among the creditors, sparking a run on many institutions of similar, or smaller, size. It is therefore not the default itself which is a problem but the effects it may have on the credit system. There is a clear connection to the systemic risks in banking. It is conceivable that this problem will become worse as securities firms and other major market players become larger. Furthermore, creditors have difficulty in monitoring these large investment houses and hedge funds effectively, since their exposure can change quickly, by the use of advanced derivative securities. The need for systemic risk regulation to monitor the

credits of these large financial firms may therefore increase. In the too-big-to-fail discussions, the regulators and supervisors really have to be prepared to analyze and decide whether a given firm has reached that level or not. To take a hypothetical example[75]: Would the US Federal Reserve allow Morgan Stanley Dean Witter to go bankrupt?

9.5. Increasing Indirect Ownership through Mutual Funds

The mutual funds have played an increasingly important role in the securities markets in the last decades. Individuals have realized that investing in mutual funds is an efficient way to achieve diversification. However, the increase in passively managed indirect ownership has introduced a number of problems. The equity mutual funds have become major owners of certain firms, and thereby got a strategic role in restructuring, takeovers and the like. From a regulatory viewpoint, a more important issue is the indirect ownership. The fund managers, making the specific investment decisions, manage somebody else's capital. As a consequence, there is a problem of aligning the incentives of the fund managers with those of their customers. The problem is inflated when the customers have rather long investment horizons such as several years. Normally, they want to evaluate the fund manager on a much higher frequency, perhaps quarterly. With this mismatch in investment horizons, the fund managers are not likely to choose the investment strategy, which is optimal for the customers. It may easily lead to an excessive short-termism.

It should be noted that this does not entail any systemic risks, since a mutual fund only invests in marketable securities. However, it is a clear example of an agency conflict. It is not obvious that this problem requires regulation, but if such regulation is imposed it is important to foster competition between different fund managers, and not destroy the incentives of customers to monitor the agents, i.e. the fund managers.

[75] I want to stress that this is a purely hypothetical example, which does not in any way suggest that Morgan Stanley Dean Witter would have any financial problems, whatsoever.

9.6. Asset Variability

The variability of asset prices has increased in the last few years. This will have several consequences for securities regulations.

First, as an increasing part of the population becomes dependent on financial markets for their income and wealth, price fluctuations on these asset markets may have significant macroeconomic consequences. A substantial rise in asset prices will most likely lead to increasing consumer spending and conversely a significant fall in asset prices may result in a reduction in retail sales. Therefore, asset prices may amplify macroeconomic swings. Although this is a monetary problem, the demand for regulation may increase.

Second, the stability and financial position of different financial intermediaries is increasingly dependent on asset prices. To put it differently, the *variability* of asset prices is highly correlated with systemic risks. As the fluctuation of financial market prices increases, there is an rising need to ensure adequate risk management systems of all types of financial intermediaries: banks, insurance companies as well as clearing and settlement organizations, securities exchanges, dealers and brokers. It is therefore sometimes argued that the need for supervision and enforcement of the prudential regulation increases with the increasing swings in asset prices, seen in the last few years.

9.7. Regulatory Trends

There are also clearly trends in financial regulation. First, the financial deregulations of the 1980s and 1990s paved the way for a more functional perspective on regulation. Instead of having separate regulation for banks, insurance companies and securities firms, there was an increasing focus on the three functions performed by the financial sector; payment services, the allocation of capital and the allocation of risk. As a consequence, the regulations have continued to be reformed also after the deregulatory phase.

Second, the EU launched the project of an internal market for financial services. This has had several consequences for financial regulation in general and securities market regulation in

particular. A number of EU directives and regulations in this area have been enacted or are presently in the process of being enacted.[76]

These regulatory reforms have had several directions. In terms of securities market regulations, there has been an increasing attention on the purpose of the regulations, with questions like: What are the systemic risks involved? In what way do the consumers need protection?

Another general tendency, especially within Europe, is to create stronger and more centralized government agencies for securities regulation and supervision. In several of the new proposed directives, there is a call for a " single competent authority" for regulation in each country. In most cases, this is likely to be the government financial supervisory agency. The purpose is to harmonize securities regulations and supervision across different EU-countries in order to stimulate competition under a level playing field. This may potentially reduce the influence of different SROs. One example of this development is the consolidation of all financial supervision in Great Britain, under the new Financial Services Authority (FSA). In this process, most of the authority of the different SROs in Britain was removed.[77]

There are also recurrent and increasing demands to re-regulate the securities markets. One example of this demand to re-regulate is the idea is to impose a Tobin tax on international financial transactions. It has been proposed as a remedy to solve a vast range of "problems", from extreme capital flows and excessive volatility in securities prices, to the underdevelopment of developing countries. It is however a highly questionable remedy for any of these problems. Here, I will focus on the arguments on capital flows and volatility. A Tobin tax would increase transaction costs. In that sense, such a tax would have several negative consequences.

Firstly, all agents, both individuals and corporations, would have fewer opportunities to realize gains from trades, i.e. they would not be able to reach their optimal portfolios.

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[76] Examples include the Regulation of Accounting standards – European Commission (2001a), the Prospectus Directive – European Commission (2001b), the Market Abuse Directive – European Commission (2001c) and the new proposed Investment Services Directive.

[77] With the notable exception of the Takeover Panel (TOP).

Secondly, as the tax would increase transaction costs, financial risk management would become more expensive, leaving more agents with unwanted risks. Thus, significant risks will neither be optimally reduced nor distributed to the ones willing to assume the risks. A Tobin tax may therefore increase the need for financial supervision. In more general and normative sense, the aim of public policy should be to remove or reduce rather than to create or increase market failures. As Zerbe and McCurdy (2000) argue, any market failure could be interpreted as a problem of too high transaction costs. Thus, all market failures would disappear if transaction costs would be eliminated. Put differently, it is precisely the transaction costs that make contracts prohibitively expensive and thereby render markets incomplete. If the markets would be complete, there would not be any market failures and regulation would not be needed. The conclusion is that government measures should be concentrated at minimizing transaction costs. Therefore, raising the transaction costs, by levying a Tobin tax, introduces new market failures or makes existing market failures more severe.

Thirdly, a Tobin tax would undermine the ability of the financial sector to efficiently perform its fundamental tasks. Since the price formation process would be hurt, prices would be less informative resulting in higher uncertainty and less informed decisions, both in the real economy and in financial transactions. This could have severe macroeconomic consequences, thus lowering economic growth but also increasing the need for financial supervision.

Thus, a Tobin tax would only reduce financial efficiency and increase the need for regulation and supervision, rather than reduce the volatility of securities markets.

10. The Lamfalussy Report, and Then?

The regulatory reforms continue. The Lamfalussy report[78] creates institutional opportunities for radical and quick, at least in a EU-perspective, reforms of regulation and supervision of securities markets within the EU. The proposed institutional setting enables fast implementation of these changes. However, the report says little of what should be changed and how.

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[78] Lamfalussy group (2001).

The basic underlying assumption is that the earlier proposed Financial Services Action Plan (FSAP)[79] contains the regulatory changes needed to obtain an effective single internal market for financial services. Now that reforms are more imminent, there is clearly a need to focus on the objective and appropriateness of the suggested regulatory changes, and the consequences they may have on competition and on the efficient provision of financial services to the individuals and companies in the EU-area. Are the objectives still valid? Are there other more urgent needs and better solutions? With a changing environment, there is a constant need to review the objectives of existing regulation and of the proposed regulatory reforms. However, a full-fledged analysis of the different proposals in the FSAP is clearly beyond the scope of this paper.

In this context, I will only raise a number of concerns. Firstly, recent proposed EU-directives seem to indicate a preference for a more centralized and enlarged government regulation in each country. One example is the wide range of authorities to be given to the "single competent authority". To be efficient, this body will have to reach a high degree of impartiality. If this is to be interpreted as a government agency, it will definitely have consequences for the balance between the existing self-regulatory agencies and government regulations. There is a danger that the benefits of SROs will be underestimated and that the proposed changes in practice lead to a re-regulated situation. A possible solution is to let the competent authority (i.e. government agency) delegate some of the regulatory issues to different forms of SRO's.

Secondly, if a larger fraction of securities regulation and supervision is streamlined and centered round government agencies in each country, there is the question whether a satisfactory regulatory competition can be sustained. Will these agencies be sufficiently open and flexible to adapt to changing demands, given the complicated process of setting up the regulatory structure in accordance with the EU-directives and regulations?

Thirdly, there is a trend within the EU of increasing the protection of retail investors. The underlying assumption seems to be that retail investors need *more* protection, since they will be exposed to a wider range of more competitive foreign service providers, when the single internal market develops. In that context, it is necessary to analyze and discuss the basis for

[79] European Commission (1999).

the market failure. Will the foreign competition increase the public goods problem? Will retail investors have larger difficulties in monitoring the securities firms? Will the long-term aspect of investment services be altered? On the other hand, the position of the retail investor in the market may very well be strengthened as competition between the securities firms increase. In that case, the need for retail investor protection may actually fall. Also, is a EU-wide unified framework for consumer protection really needed, or even wanted?

In general, a further analysis of foundations for securities market regulation is urgent in view of the imminent reforms facing the markets in the EU-area. Will the development of the single securities market within the EU change the basic economic rationales for securities market regulation? How will the enlarged market affect the systemic risks, the need for consumer protection and the efficiency of the markets? These issues have to be addressed in the regulatory process of enacting new regulations based on the FSAP.

11. Conclusions

The analysis in this paper reveals that the economic reasons to regulate securities markets are similar to the reasons to regulate financial institutions, such as banks. There are three main economic rationales for specific securities market regulations, systemic risks, consumer protection and efficiency aspects. In proposing a specific regulation, care has to be taken to identify the relevant market failure. This market failure must also be specific to securities markets or at least be worse for investment services than for other products and services, to merit separate regulation, in addition to the general laws and regulation on consumer protection and competition.

Furthermore, in formulating specific regulations, great care has to be taken not to create major negative side effects. Most regulation will have these negative features and the task facing regulators and supervisors is to strike a balance in maximizing the positive benefits of regulation while at the same time minimizing the negative effects. In some cases the negative effects may dominate, in which case the regulation should not be enacted, even if there also are positive effects.

There are two basic systemic risks involved in securities markets. First, the bulk of value in the payment system typically emanates from the securities markets. Thus, if there is a social value in protecting the payment system, ensuring an efficient clearing and settlement with low risk is one way to protect the payment system. Thus, the clearing and settlement is a critical factor for the regulator. Second, vital financial institutions are dependent on the liquidity of the securities markets. One example is that banks play a crucial role in the payment system and that they are dependent on the liquidity of the securities markets for their funding and risk management.

The efficiency reasons for a separate regulation of securities markets are primarily based on different types of externalities. The most persuasive consumer protection arguments for securities market regulation is based on a combination of four features; a) the existence of a principal agent problem between the retail investor and the investment service provider, b) the difficulty of the retail investor to monitor the performance of the service provider, even ex post, c) the long-term aspect of many investment services, and d) the assumption that the public sector has a responsibility for some minimum living standards.

With the internationalization of the securities markets, the need for a genuine international regulation and supervision is increasing. This can take the form of more harmonizing regulation or of enlarged cooperation between regulatory and supervisory agencies. If international securities regulation were harmonized, it would foster cross-border competition between different financial services providers, to the benefit of the customers, i.e. investors. However, harmonization may also lead to a reduced regulatory competition. That would be directly harmful in the long run. The goal must therefore be to strike a balance also between the short-term benefits of harmonization and the long-term benefits of sustained regulatory competition.

Given the differences in legal tradition, reaching any agreement on international harmonization of regulation is anyway going to be difficult. One possibility is to introduce a truly international self-regulatory organization (SRO), with powers to regulate the markets in many countries. There are however a number of problems also with such a set-up. One such problem is that SROs typically have fewer available sanctions, thus possibly reducing the regulatory efficiency. Other problems include that there may be conflicts of interest, and that a SRO may limit the competition from outsiders, in effect creating a cartel. The ultimate

question however, is if investors and brokers in one country will fully accept to be completely regulated by the laws and regulations of another country for their international trades.

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