

The Virtualisation of an Equity Exchange
Explaining the Decline of the Amsterdam Financial Centre

First Draft

Version December 2007

Ewald Engelen / Michaël H. Grote
University of Amsterdam / J. W. Goethe-University Frankfurt
AMIDSt / Finance Department
Nieuwe Prinsengracht 130, 1018 VZ Amsterdam / D – 60054 Frankfurt am Main
The Netherlands / Germany
e.r.engelen@uva.nl / grote@finance.uni-frankfurt.de

**Paper written for the Workshop 'Financial Centres as Competing Clusters',
Paris School of Economics, 30 January 2008**

The Virtualisation of an Equity Exchange

Explaining the Decline of the Amsterdam Financial Centre

Abstract:

Traditionally, financial centres were held together by the need to be located in the proximity of physical exchanges. However, given the rise of information and communication technologies these 'anchors' have increasingly been lifted, with telling consequences for second-tier financial centres like Amsterdam. This paper traces the current decline of the Amsterdam financial centre to the virtualisation of its stock and derivative markets. As such, the empirical aim of the paper is to add a case of IFC decline to the existing collection of IFC case descriptions. The paper ends with an attempt to assess the explanatory powers of two competing theoretical perspectives, i.e. New Economic Geography and Comparative Political Economy, by determining to what extent the two approaches fit the empirical evidence. This is the theoretical aim of the paper.

Keywords:

International financial centres ; Amsterdam ; virtualisation ; New economic geography ; Comparative Political Economy

1. Introduction

A classic, albeit minor research topic in economic geography is the rise, reproduction and decline of international financial centres (IFCs). The theoretical explanation for the clustering of financial firms and activities in specific urban locations comes in roughly two guises. The first takes the causal variables of the Marshallian district — dedicated infrastructure, specialized labour market and knowledge spillovers —, purges them of their industrial connotations, and transfers them to the financial services. In other words, financial firms cluster in particular cities, turning them into national or international financial centres, because of the availability of a dedicated infrastructure (data providers, exchanges, clearing & settlement organizations, postal networks), a steady supply of schooled labour, and the ability to perceive trading opportunities because of a ready informal exchange of information ('buzz') (Storper & Venables 2004). However, this line of argument merely deals with the proximate causes; it is able to explain why a financial centre reproduces itself over time and grows, not why it came about in the first place. Although there have been some attempts to fill this explanatory 'gap' by stressing the contingencies of language and geography (Kindleberger 1975), these attempts generally failed to convince and were seen as conjunctural hypothesis rather than as systematic explanations.

In response, a second line of reasoning was developed that stressed the political, institutional nature of financial centre establishment. While compatible with the classic economic geographical agglomeration theory of Marshall, it explicitly used a political explanation for the development of dedicated infrastructure which served as an 'anchor' for financial services, resulting in a backbone of firms and institutions, which grew and reproduced themselves largely according to the Marshallian logic of agglomeration. The 1990s work of Nigel Thrift is a case in point (Thrift 1994). The location of central banks, national financial markets and public data providers such as newspapers, telegraph and post offices that tied its users to a circumscribed urban landscape, is very much bound up with political decisions to turn a specific city into the seat of government or the capital of the nation state. Thrift, for instance, mentions the requirement to be located within walking distance of the London Stock Exchange, in order to be able to process the day's trade, as an example of a political location decision with far reaching consequences for the

distribution of financial firms over space and the reproduction of the spatial concentration of these firms over time.

The political, institutional nature of the linkage of a financial cluster with a urban environment city is still an standard 'topos' in economic geography. A case in point is Cassis' recent historiography of the world's financial cities, which presents a grand narrative of the fates of different financial centres throughout modernity, starting in the late 18th century and moving up to the early 21st century (Cassis 2006). What is striking about Cassis' tale is not so much the dynamism of the financial landscape — even though there is a lot of that too —, but rather its continuity. Cassis very much stresses that the groundwork for the current configuration of financial centres was laid in the 19th century. In terms of techniques, practices, products, firms as well as networks there is huge continuity. What did change, though, were the drivers of the activities undertaken by these actors. While in the 19th century up to half of all trade was commercial in nature and hence facilitated real trade flows in the form of letters of credit and other forms of commercial paper, in the 21st century financial activities appear to have shed their allocating, facilitating or intermediating role and have instead become self standing growth and employment generating economic activities in their own right. The structured products that are the bread and butter of contemporary finance have only a superficial relation to real income streams and have instead become the source of endless trading opportunities and endless possibilities for bricolage by new financial agents such as private equity funds, hedge funds, Exchange traded funds (ETF's), Real Estate Investment Trusts (REIT's) and sovereign wealth funds, that are making the categories of yesterday rapidly obsolete. Nevertheless, the cities figuring in this 'financialized' universe are very much the same as those of the 'commercialized' universe of the 19th century, suggesting that we should combine both strands of thought and use the first to explain the reproduction of financial centres over time and the second to explain the political decisions that did bring urban financial concentrations about in the first place.

However, from the mid 1990s onward there have been some attempts to unsettle this familiar theoretical compromise. Under the heading of sweeping titles, prophesizing 'the end of geography' (O'Brien 1992) and the 'death of distance' (Cairncross 1998), some pundits have stressed that as a result of the introduction of

ICT in the financial services the classical moorings of IFCs, especially formal exchanges, will gradually lose their anchoring powers, resulting in a redistribution of financial firms over space, that would largely follow the appetite for low location and transaction costs. In fact, this would sound the alarm bell for IFCs as we know them. Of course, these predictions have gloriously been falsified by the shining and much envied success of London as an IFC in the 21st century. Indeed, London's stunning growth clearly indicates the continuing explanatory power of Marshallian Cluster Theory and suggests that the causal forces of dedicated institutions, a specialized labour pool and knowledge spillovers are stronger than the relocation possibilities opened up by the lifting of the physical moorings of IFCs as a result of the virtualization of trade and the digitization of financial information.

However, this paper is not about London or the disconfirming nature of its current success. Instead we zoom in on a second-tier IFC on the European continent that does seem to corroborate the 'end of geography' thesis and hence to falsify Cassis' familiar and comfortable compromise. For Amsterdam has started the 21st century with a structural decline in terms of employment, number of firms, number of foreign banks and scope of available products. While obviously a multicausal phenomenon, we nevertheless venture that the virtualization of trade and the digitization of data do play an important role in the narrative of decline of Amsterdam. After presenting the empirical material, the paper closes with an attempt to explain the Amsterdam case on the basis of a discussion of two theoretical approaches currently dominating financial geographical questions, i.e. New Economic Geography (NEG) and Comparative Political Economy (CPE).¹

As such, the aim of this paper is twofold. First, with the description of IFC decline it hopes to provide a useful addition to the existing literature on IFCs, which is mainly about the rise of IFCs and the reproduction of IFCs over time (see Grote 2007 for an exception). The second aim of the paper is to determine the extent to which they fit the available evidence. This should not be misunderstood as an exercise in theory testing though, but rather as an attempt to combine insights from different theoretical approaches to do justice to the multidimensionality of the research topic

¹ Note that these are perspectives dominating financial geographical questions and not questions of financial geography as such. In other words, they refer to empirical issues not to issues debated within the discipline of economic geography.

in question. Hence, the paper is better seen as a (tentative) exercise in theory construction.

2. The Case of Amsterdam

The heritage of a large internationally oriented financial centre, namely Amsterdam, built upon an early-modern global colonial trading network, situated in a small national economy with a large and prosperous 'hinterland', easily reached by one of the largest European rivers, the Rhine — in other words: historical and geographical 'accidents' — go a long way to explain the continuing presence within the Dutch economy of financial markets that have always been too big for its size as well as the strong foreign orientation of Dutch financial institutions (Barbour 1976; Neal 1990; Jonker 2003). Moreover, given the presence of a large, sophisticated and reliable equity market, Dutch firms in search of funds have always been able to access alternative sources of capital that came with fewer strings attached than bank loans, implying a much looser relationship between Dutch corporations and domestic credit providers and a more shareholder oriented corporate governance regime than is characteristic of bank-based financial systems. Finally, the depth and liquidity of the Dutch equity market, which is higher even than in the UK and almost twice as large relative to GDP as the German equity market (see Figure 1.), has facilitated the post war establishment of a universal supplementary pension system that is highly similar to Anglo-American pre-funded systems and strikingly different from the universal Pay-As-You-Go systems that are the norm on the European continent (Clark & Bennett 2001; Clark 2003). However, in all other respects — schooling system, employment relations, product market regulation and even corporate governance — the Netherlands fully fits the corporatist picture of a highly coordinated and highly regulated social market economy. Indeed, seen from a CPE-perspective the Dutch economy appears as a hybrid, combining elements of what is generally known as a Liberal Market Economy (LME) — which is notable for its high factor mobility and is exemplified by the Anglo-American economies — with elements of a Coordinated Market Economy (CME), which is characterised by a low degree of factor mobility and is exemplified by Germany (Hall & Soskice 2001; see Engelen et al. 2007).

[Figure 1. about here]

However, the high extent to which Dutch financial markets have become linked to foreign financial markets, spawned financial innovation and grown in number and size (in other words: their financialization) has much more recent origins and has everything to do with the global rise of finance since the early 1960s. Since the story of the rise of finance is a well-known one (Underhill & Zhang 2003; Helleiner 1994; 2003; Sassen 2001; Cohen 1998), I confine myself here to its outlines. The story goes something like this — because of (i) the elimination of restrictions on cross border financial transactions, (ii) the increasing dependence of households on invested savings and insurances, (iii) the rise of liquidity as a result of trade asymmetries, increased debts, saturated markets, rising oil-prices and the demographic shift, (iv) the virtualization of financial markets and the digitization of financial transactions, and (v) the rise of new econometric pricing and risk assessment techniques, financial criteria (shareholder value, investment return maximization, capital market gains) have become leading institutional, organizational and behavioural norms (Froud et al. 2000: 103-4; Langley 2006; De Goede 2005), while the financial sector as such, because of sheer scale, has started to dominate some local and even national economies in terms of employment, number of firms, turnover and profit. As will be shown below, until the early 2000s the Amsterdam financial centre has benefited handsomely from the global rise of financial markets that marks the second wave of globalization.

2.1 Amsterdam and the second wave of globalization

During the 1980s, the Amsterdam financial community was well positioned to jump the bandwagon of the financial boom that started with the demise of 'embedded liberalism' in the mid-1970s and the start of the second globalization wave (Ruggie 1982; Helleiner 1994; Hirst & Thompson 1999). Between the 1960s and 1980s the level of trade in equities and bonds increased tenfold to EUR 90 billion (CBS 2006a). Given this increase in liquidity and hence volatility of the most transparent products traded in the Amsterdam IFC, it became increasingly attractive to set up a formal trading floor for the trade in derivatives, which until then had largely been traded 'over the counter'. The European Option Exchange (EOE), established in 1978 in Amsterdam, is a clear example of the adroitness of the Amsterdam elite in initiating

a number of organizational, technological and financial innovations that radically changed the face of international finance by building upon an already existing epistemic community of commodity traders in order to create a new equity option market. The EOE was the first of its kind in Europe and attracted a large number of foreign financial firms, especially of US and Canadian origin where derivative markets were well established (interviewee 1.). Whilst the uniqueness and hence attractiveness of the Amsterdam IFC gradually wore off as the number of formal derivative exchanges on the continent increased, the early establishment of such a formal derivative exchange and its facilitation by suitable regulation generated pools of liquidity and attracted a community of traders, which during the 1980s and early 1990s were the backbone of Amsterdam's success.

Another innovation that saw Amsterdam at the forefront was the use of ICT to virtualize the trading process, enhancing the accessibility of the Amsterdam exchanges by means of remote access. The Amsterdam stock exchange, which introduced the AIDA automated interdealer market in 1994, was one of the first exchanges worldwide to go 'virtual', as was the Amsterdam Options Exchange, which followed in 2002 (Schram 2004). These decisions were taken against the background of worldwide attempts to liberalise cross-border financial transactions, which opened up national financial markets to competition from more liquid foreign ones such as the financial markets domiciled in Paris, Frankfurt and, especially, London. As Figure 2. demonstrates, the share of total trade of equities listed in Amsterdam that was in fact bought and sold in London and New York and was hence cleared and settled outside of the Amsterdam trading platform had reached well over half of total turnover volume in the early 1990s. In order to counter a further leakage of trade, the Amsterdam exchange decided to enhance its accessibility and change its cost structure. The underlying rationale was that virtualization would bring higher trading efficiency, foster market concentration and improve liquidity, and would thus enhance the attractiveness of the Amsterdam trading platform both for investors and for share issuing firms.

Concerning investor interest, the two Amsterdam exchanges indeed witnessed a rapidly increasing growth in turnover during the 1990s. Turnover at the Amsterdam option exchange rose from a little over 10 million contracts traded per day in 1990 to a daily trade of well over 60 million contracts in 1999. The biggest boost to trading volume, however, came after the virtualization of the exchange when the

number of contracts traded daily rapidly reached the one billion mark (Euronext.Liffe 2005). Turnover at the Amsterdam stock exchange too got a huge boost from virtualization. While the beginning of the 1990s saw average daily turnover reaching a level of EUR 66 billion, in 1994 it had increased to EUR 143 billion, before reaching an all time high of EUR 707 billion in 1997 (CBS 2006b). Moreover, the introduction of the AIDA trading book in 1994 brought the share of Amsterdam processed trade up to 60, where it would during the 1990s, before rising to a little less than 80 percent in 2003 (see Figure 2.). Finally, also in terms of share issues, the 1990s saw a huge increase. Starting from a low of EUR 326 million in 1988, the totale value of share issuance reached EUR 2,7 billion in 1994, and since has gradually increased to EUR 18,9 billion in 1999 (DNB 2006), clearly demonstrating the liquidity boosting effects of virtualization.

[Figure 2. about here]

A third, primarily organizational, innovation within the world of stock exchanges was undertaken in 1996 when the Amsterdam equity exchange dissolved its legal status as a mutuality and became a publicly quoted limited liability corporation, followed a year later by the merger between the Amsterdam equity exchange and the option exchange, resulting in 2000 in the announcement that the Amsterdam exchanges would integrate their (virtual) order books with those of the Paris Bourse and the Brussels exchange under the name of Euronext and would adopt the Parisian 'Nouveau Système Cotation' (NSC) in 2001 to pool their respective liquidities (Schram 2004). These innovations too were largely motivated by the fear that the respective exchanges would be too small to withstand the increasing pull of the London Stock Exchange. Euronext has since (in 2006) merged with the NYSE and is at the moment of writing the only truly transnational stock and derivative exchange. While the value of average daily trading of the combined exchanges of Euronext in 1990 added up to only \$ 170 billion, turning them into the 8th largest exchange worldwide, in 2006, a fortnight before the merger with the NYSE, Euronext had become the 5th largest exchange in terms of average daily turnover (after, respectively, the NYSE, Nasdaq, the LSE and the Tokyo exchanges), the 6th largest exchange in terms of market capitalization (after, respectively, the NYSE, Tokyo, Nasdaq, the LSE and the Osaka exchanges), and the 8th largest in terms of number of listed firms (after, respectively, the Bombay, Toronto, Nasdaq, LSE, NYSE, Tokyo

and Korean exchanges) (WFE 2006). This clearly demonstrates the importance of pooled liquidity for the operational success of an exchange organization in a context of increasing financial market integration.

During the 1990s, the anticipatory strategy of the Amsterdam financial community (since 1992 officially represented by the Amsterdam Financial Centre Foundation) appeared to pay off in terms of number of firms, share of financial services in Amsterdam GDP and annual turnover. The number of foreign banks in the Netherlands rose from 54 in 1990 to 79 in 1997, more than three quarters of which were located in the Amsterdam city centre (NIBE-SVV, several years). A similar level of increase occurred in the field of stock and option trading. While the total number of officially registered Dutch stock traders declined gradually from 19 in 1990 to 12 in 2000, this was more than offset by the rise of foreign traders, whose number rose from 8 in 1993 to 27 in 2002 (DNB 2002). This growth was reflected in the increasing share of the financial services in the Amsterdam economy. While the Amsterdam economy increased between 1996 and 2002 by 25.7 per cent, financial services grew by a stunning 46 percent, the largest single annual share of which was booked in 1999 (22.6 per cent). Overall, total annual turnover of Amsterdam's financial service industry increased by a factor 16 between the early 1970s and the turn of the twenty-first century, most of which occurred during the 1990s. Meanwhile Amsterdam's economy overall merely grew by a factor five. At the turn of the millennium financial services generated approximately one fourth of the total economic product of Amsterdam compared with only one-fifth in the early 1970s (CBS 2006c).

Less clear-cut were the developments in terms of employment. Since Amsterdam is also the controlling centre of Dutch financial retail activities, domiciling two of the three large Dutch retail banks (ING and ABN Amro), the employment gains caused by growth in wholesale activities were partly offset by labour reductions in retail banking because of the introduction of ICT during the 1980s and 1990s, the disappearance of many retail offices as a result of market consolidation, and the rapidly increasing replacement of full scale retail bank facilities by ATM's, all of which have had a downward effect on employment (G10 2003). Nevertheless, during the 1990s the employment in the Amsterdam financial industry increased with more than 15,000 jobs between 1993 and 2001, which represents an increase

of well over 30 per cent. Or to put it otherwise, in 2001 one in every eight workers in Amsterdam was directly employed in the financial services against one in ten in the early 1990s.

2.2 Post-millennial blues

Despite virtualization, consolidation and continuing internationalization, Amsterdam's financial centre seemed to be able to withstand the growth of London and other financial centers. However, after the turn of the millennium things began to change. Banks and security traders shed workers, losing, on average, one fifth of employees between 2001 and 2003. Combined with the employment effects of continuing downsizing and outsourcing in Dutch retail banking, this has resulted in a steady decline from a high of slightly over 50,000 workers in 2001 to 47,000 workers in 2003 and, according to the latest figures, 40,000 on January 1, 2007 (see Figure 3.).

[Figure 3. about here]

This is reflected in the steady decline of financial firms located in Amsterdam. Since 1998 their number has steadily declined to 34 in 2007. Even more telling are the developments in the number of brokers located in Amsterdam. Of the 26 officially recognized brokers that were located in Amsterdam in 1975 only 7 have survived. The rest has disappeared through mergers, takeovers, closures or relocations. Of the current 231 members of the Euronext cash equity market only 68 are located in the Netherlands, 55 of which are domiciled in Amsterdam. These encompass traditional Amsterdam brokers like Van Der Moolen, Optiver and IMC (all former 'market makers', an exclusive liquidity providing function that was abolished with the introduction of the Parisian NSC trading system in 2001), a few remaining foreign banks such as Deutsche Bank and Citicorp as well as Dutch universal banks such as Rabobank, ING and ABN Amro (NIBE-SVV 2007). Moreover, an increasing number of foreign financial firms are licensed by the Dutch Financial Market Authority to conduct business in the Netherlands without actually being located within the Dutch jurisdiction. While their number reached 49 in 1993, it had increased to 371 in 2005 (DNB 2006).

In other words, what was a virtuous growth cycle in the 1990s turned into a vicious one of decreasing liquidity, a declining number of financial firms located in Amsterdam and a decreasing number of share trades and issuances from 2001 onward. While part of the explanation is of course cyclical and has to do with the worldwide slump in stock prices after the bursting of the ICT bubble, in contrast to the London Stock Exchange, the New York Stock Exchange as well as Euronext at large activity on the Amsterdam order book has remained lacklustre. Total monthly turnover on the Amsterdam exchange has decreased gradually from a high of EUR 153 billion in January 2001 to a low of EUR 33 billion in February 2003, a steep decline even when taking into account that as per October 2001 the Dutch Central Bureau of Statistics (CBS) shifted from a double counting measure of equity turnover to a single counting one.

Although turnover has since returned (without surpassing them, however) to the levels of the late 1990s (see Figure 4.), there are good reasons to question whether this could still be described as truly Amsterdam-based trade. Due to the virtualization of equity and derivative trade and the integration of the Euronext order books in the NSC trading system, which was completed in 2004, equity trade has become a truly transnational activity, suggesting that national stock exchanges have gradually lost their original spatial footprint. Nevertheless, the extent to which this is the case differs between exchanges. The (sparsely) available evidence suggests that the loss of spatial specificity is particularly strong in the Amsterdam case. As Figure 4. reflects, the share of foreign ownership of the stocks of the AEX 25 index, which reached 70 percent in 2003, is the highest of all reporting exchanges, indicating the striking extent to which the Amsterdam exchange is penetrated by foreign investors.

[Figure 4. about here]

Moreover, as Figure 2. has demonstrated, throughout the 1990s a little over 40 percent of Dutch equity trade originated in London and New York, before declining to a little over 20 percent. While the data do not tell directly about the location of origin of the trade, there are good reasons to presume that the actual share of non-domestically originating trade is much larger than the shares of London and New York suggest. That is, first, because most of the off order book trade concerns in-

house matching of buy and sell orders by large banks, many of which are foreign, and, second, because an increasing share of trade reaches the Amsterdam order book through remote access and hence originates, by definition, outside the Netherlands.

However, the evidence presented in Figure 2. does go against the grain of the argument presented here and hence, lacking more recent data, warrants further discussion. Two qualifications are in order here to put this putative rise in perspective. First, due to regulatory changes in 2001 the category of off order book trades does no longer encompass those foreign trades that do not have to be reported to Euronext. While these trades do need to be reported to the AFM, The Dutch financial market regulator, these reports are not public. Hence there is no way to determine the extent of underreporting of equity trades kept outside of the purview of Euronext (Schram 2004). Second, while the relative decline of London and New York based trade vis-à-vis Amsterdam since 2001 does seem to suggest increasing market concentration, we have to take into account that this takes place in a context of rapidly declining share values and trade activity as a result of the bursting of the ICT bubble in 2001. As Figure 5. demonstrates, annual turnover at the Amsterdam stock exchange fell by more than two third between 2001 and 2003. The huge drop in turnover could well be the result of the withdrawal of foreign investment on the basis of a reverse home bias, i.e. home bias is diminishing in bullish markets and is rising in bearish markets. However, lacking more detailed data it is hard to verify this hypothesis. Clearly more research is required, especially in the light of the rise in turnover figures since 2004, the rising number of remote access members of Euronext and the high level of foreign ownership of the AEX 25, suggesting more openness and foreign penetration rather than less.

[Figure 5. about here]

A similar development is visible on the supply side of the Amsterdam stock exchange. Both in terms of the issuance of shares and in terms of new listings the Amsterdam exchange has clearly lost clout in the 21st century (see Figure 6.). Due to takeovers and leveraged-buy outs the composition of the AEX 25 has radically changed (an index based on turnover rather than capitalization in order to account for degree of free float). A large number of big Dutch firms (Fokker, Daf, VNU,

Vendex, Hoogovens, KLM, ABN Amro, Hagemeyer) have disappeared since the mid 1990s because of bankruptcy, mergers, takeovers or LBO's, while hardly any large IPO's have taken place, implying that the share of small and mid cap firms in the AEX is gradually growing. This is reflected by the diminishing value of its capitalization vis-à-vis the total capitalization of the Amsterdam order book, from a little over 9 percent in 2003 to 8 percent in 2006, demonstrating both the relative decline of the value of the AEX and the growth of total capitalization of the Amsterdam order book since 2003 (Euronext factbook, several years). In fact, between 2001 and 2006 the Amsterdam exchange has lost between 4 to 8 per cent of its listings per annum (VEB 2006). Attempts to counter these losses by means of the introduction of the low threshold Alternext have so far failed to attract newcomers.

[Figure 6. about here]

What is notable about the recent upturn in both share issuance and IPO's is the increasing share of foreign firms. As Figure 7. demonstrates, the haemorrhaging of the Amsterdam exchange seems to have stopped from 2006 onward. The number of delistings has decreased from 29 in 2005 to merely 10 so far in 2007, while the number of listings has gradually increased to reach 11 so far in 2007. Most of these listings are of foreign firms. Especially striking about these listings is that all of them were listings of so-called Exchange Traded Funds (ETF), or publicly quoted investment funds whose share emissions were allowed the wider public to buy into the value generating capacities of the owners, which are well known Anglo-American private equity and hedge funds, such as Conversus Capital, Carlyle Capital, Leo Capital Growth, Lehman Brothers, KKR, Yatra Capital and MW Tops. The rationale for these firms to launch ETF's is mainly related to the need for a more patient pool of capital that is not subject to sudden withdrawals to finance longer-term investments. While the number of ETF's has also increased hugely in Paris (currently a total number of 32 ETF's is listed in Euronext Paris), Amsterdam seems to be specialising in attracting Anglo-American ETF's, which are domiciled in typical off shore centres such as Guernsey, Jersey and the Cayman Islands, and are denominated in US Dollars. According to the Euronext website, there are a number of similar IPO's in the pipeline for 2007.

[Figure 7. about here]

The evidence presented here suggests that the Amsterdam exchange is no longer a national stock exchange, whose catchment area largely coincides with the boundaries of a national economy. Instead it has become a truly virtual marketplace that is a well established node in the transnational flows of capital that are continuously being redistributed over space, sectors and asset classes. Currently, 58 of the 202 funds listed at Euronext Amsterdam have foreign ISIN codes, 20 of which are domiciled in the European Union (EU) and 38 of which come from outside the EU, most of them from the UK, the US and Guernsey. While hard to reconcile with the observation that 41 of the 81 delistings that have taken place since 2004 concerned foreign corporations too, what we seem to be witnessing here is the effect of functional specialization within a wider network of exchanges combined with the declining need of multinational corporations to tap into foreign capital pools. Leaving the Amsterdam order book are firms like Bayer, AT&T, Gillette, Hitachi, Matsushita, Daimler Chrysler and other household manufacturing brands, which are increasingly wrapping up their double or triple listings abroad to save money and to concentrate liquidity since there is no longer a functional need to be 'physically' present through ADRs (American Depositary Receipts) or their functional equivalents in foreign capital markets because investors can now buy and sell shares through remote access wherever they are located.

But also in the primary market do we see that exchanges do no longer serve a 'captive' national area but are forced to find niches in an imminent worldwide division of financial labour. Telling in this regard is the success of the attempt by the board of Euronext Amsterdam to market its electronic platform and the regulatory environment in which it is embedded as especially suited for the trade of shares of Exchange Traded Funds. The fact that the Dutch regulator acknowledges the regulators of a number of off shore financial centres such as those of the Channel Islands goes a long way to explain the preference of Anglo-American hedge funds and private equity funds to launch ETF's at the Amsterdam trading platform. Vice versa, the fact that in 2007 two Dutch IPO's have bypassed Amsterdam and have instead opted for the London-based and LSE-managed Alternative Investment Market (AIM) further strengthens the idea that exchanges are no longer national

and have become part of a virtual, transnational universe that is currently undergoing a process of concentration, consolidation and specialization.

3. Discussing the Decline of Amsterdam

How to account for this case of IFC decline? In this section we briefly discuss two explanatory theories to assess to what extent they can account for the Amsterdam case. These are: New Economic Geography (NEG) and Comparative Political Economy (CPE). We do not deal with (neo) Marshallian Cluster Theory separately for its main causal mechanisms — dedicated institutions, a specialized labour market and technological spillovers — as well as its ontological presuppositions are largely shared by NEG (see Boschma & Kloosterman 2005 for an overview). To do so, we start with a sketchy outline of the main relevant hypotheses that can be derived from these respective bodies of literature before relating these to the empirical material presented above.

3.1 NEG and the inverted 'U'-curve

NEG, initiated and developed by authors like Paul Krugman, Masahisa Fujita and Tony Venables, claims to offer parsimonious explanations for the development of economic agglomerations over time. So far, it has not been applied empirically to financial centre development. Within NEG, financial centres, like other agglomerations, are considered to be the sum of centripetal and centrifugal forces. Generally, NEG conceptualizes these centripetal forces in a classic Marshallian way as external economies of scale, which is to say that agglomerations are seen to be caused by a liquid labour market, external firm linkages and pure technological spillovers. In that sense, NEG clearly builds forth on Marshallian Cluster Theory (MCT), despite its relative lack of attention for 'soft' technologies and tacit skills that are increasingly emphasized by the neo-Marshallians (see Bathelt et al. 2003). Centrifugal forces on the other hand are mostly conceptualized by NEG as transportation costs, increasing rents and negative technological effects. As such, NEG clearly is a mixture of MCT and Transaction Cost Economics (TCE) (Coase 1990[1937]; Williamson 1975), and is build around a conception of rational agents

who pursue satisficing strategies in an economic universe that is not free from friction and hence does experience processes of increasing returns.

NEG has not much to say about the genesis of economic agglomerations. Basically, these are caused by contingent events, i.e. historical and geographical 'accidents' such as the ones that 'produced' the IFC of Amsterdam. What matters is the fact that these 'accidents' result in small differentials between places in terms of economic resources, which set in motion processes of increasing return and hence result in a spatial division of labour based on agglomerations of similar or complementary economic activities (see Krugman 1991). However, these processes are offset by centrifugal forces, which have to do with increasing transactions costs, transportation costs as well as the negative externalities from clustering — increasing rents, rising real estate prices, traffic jams, parking problems — that are caused by increasing population pressures on circumscribed geographical spaces. Coase famously argued that the increasing costs of market transactions turn the intraorganizational division of labour that is the firm in a more efficient alternative, while vice versa, increasing organizational costs as a function of the growing scale of the firm put a stop to the further rise of the firm as organizational costs start to surpass the costs of market transactions (Coase 1990 [1937]). Similarly, NEG uses the offsetting tendencies of overcrowding to explain the limits to spatial agglomeration; not every economic activity gets pulled to the biggest centres because the cost differentials between centre and periphery will ensure that over time satisficing agents will divert their activities from the costly centre to the cheaper periphery.

Of foremost interest to the empirical case at hand is one major outcome predicted by most NEG models, the so called 'U-curve' or 'inverted U-curve' (Neary 2001). The reasoning behind it goes like this: There are two identical locations, each with two sectors, usually termed manufacturing and agriculture. Transporting goods from firms to clients or between firms is costly. These 'transportation costs' are interpreted in the broad sense of 'transaction costs' that include any cost of communication (see Fujita & Thisse 1996; Fujita et al. 1998). In the case of high transportation costs, production of manufactured goods is divided equally between the two regions (see Figure 8.). Due to high transportation costs — the figure is to be read from the right to the left — production has to stay close to the customers;

no industrial concentration occurs. The gradual reduction of transportation costs leads to agglomeration; increasing returns at the level of the firm make it worthwhile to concentrate production at only one location. And since manufacturing firms use their output as each other's input, it now pays off to be close to each other and export the final products to the other region.² Which region gets the lion's share of the industry is determined by the historical events mentioned above. With declining transaction costs the centripetal forces become weaker over time as, i.e. wages rise in the region where the industry is located while co-location costs, because of increasing agglomeration, also increase. With transport costs declining further staying close to other firms is not necessary any longer, i.e. the centrifugal effect becomes relatively more important than the centripetal ones and industry again starts to disperse (Fujita et al. 1999: 256-259).

[Figure 8. about here]

This 'U'-shaped respectively inverted 'U'-shaped relationship between the level of agglomeration and transport costs is a fairly general spatial pattern according to most NEG theorists and generates the following theoretical expectation: The concentration of financial actors exhibits an inverted 'U'-shaped pattern over time, i.e. first an increasing concentration and then a dispersion of actors in space.

To what extent does the Amsterdam case described above fit this expectation? We first of all have to acknowledge that the genesis of Amsterdam as an IFC very much accords with the 'accidents' emphasized by NEG. However, to assess in more detail whether the rise of Amsterdam has actually been accidental and what kind of 'accidents' caused its rise would require a more detailed historical counterfactual case study which is both outside the scope of our expertise and the scope of the paper, which is primarily on IFC decline instead of the rise of IFCs.

The reproduction of the Amsterdam IFC over time clearly seems to fit into the MCT part of NEG. Dedicated institutions like physical exchanges, street patterns, available real estate, information technologies and networks and legal and fiscal arrangements go far to explain the growth over time of the Amsterdam IFC in a

² See Venables 1996 for a model of 'vertically linked industries' explained in this way.

universe of increasing economic and financial linkages. A similar story seems to hold for the other causal mechanisms behind spatial concentration. Given the presence of two large universities, with strong traditions in law and economics, as well as a number of polytechnics specializing in lower economic professions and cultural activities, the Amsterdam educational system attracts a steady flow of ambitious students from the rest of the Netherlands while the Amsterdam labour market is a breeding ground for legal and financial talent (interviewee 2.; interviewee 3.). However, while this talent used to find its way in the Dutch financial services, increasingly they are being poached by foreign financial firms and lured to London. Dutch banks claim that increasingly they have to settle for second best, while mathematical talents increasingly have to be press ganged from Eastern Europe or India (interviewee 3.).

Finally, the knowledge spillovers or the 'buzz' of informal social exchange that is so much emphasized by the 'cognitive turn' of the neo-Marshallian theories on new economic clusters (see Storper & Venables 2002; Grabher 2002; 2004; Scott 2004), should lead one to expect a close spatial overlap within historical IFCs between the locations of financial firms on the hand and public amenities such as bars, restaurants and clubs on the other. Indeed, as Map 1. demonstrates, the Amsterdam city centre does provide a setting where a strong spatial proximity between the two can be observed. Moreover, the periphery, while increasingly attracting financial services from the overcrowded centre, largely lacks such an 'infrastructure' for informal knowledge exchange, suggesting that the knowledge required to be an adequate trader has lost its traditional spatial footprint and has truly become global, diminishing the need for proximity and informal exchange.³

[Map 1. about here]

At first sight NEG can account for the decline of Amsterdam. What the empirical data suggest is that Amsterdam-based firms, as satisficing agents, have responded to the virtualization of the financial universe by moving their activities out of the crowded centre of Amsterdam to the periphery and to other locations in Europe and beyond. Apparently, in a context of declining transportation costs broadly

³ A similar argument is made by Kloosterman (2007) with regard to 'strong idea' Architecture.

understood the gains from dedicated institutions, specialized labour market and knowledge spillovers are no longer exceeding the costs of overcrowding.

Nevertheless, there are three reasons why this explanation is unsatisfactory. First, it fails to state the actual causal mechanisms that are causing this 'inverted U-turn'. As is true for most micro-economic approaches, reasons for action are theoretically postulated rather than empirically discovered. Lacking sufficient qualitative data on the relocation decisions of formerly Amsterdam based firms, we cannot yet tell whether the type of cost-benefit analyses postulated by NEG are actually behind the observed territorial redistribution. Here simply more research is needed.

More serious is the second source of dissatisfaction. A world that tends toward zero transaction costs, as NEG suggests, would be a world without friction and would hence be a world that is very similar to the costless market universe of neoclassical economics. In other words, declining transportation costs broadly understood would truly result in the 'death of distance' and hence in the 'end of geography'. In a frictionless world the dispersion of economic activities would no longer be determined by cost variables but would instead reflect non-economic preferences. However, that is not what is actually the case.

The evidence presented above suggests instead that most of the Amsterdam losses in terms of employment, established firms, turnover and value added have actually been gained by London. London based investment banks, traders and hedge funds appear to be the biggest suppliers of liquidity on the Amsterdam equity and derivative exchanges. A similar picture is being presented by the investment funds that have started to use the Amsterdam order book to launch their ETFs. While most of these funds are formally domiciled in off shore financial centres such as Guernsey, Jersey and the Cayman Islands they are actually managed from London. Third, the most sophisticated and innovative units in the field of traditional investment banking (IPOs, M&As) and in 'structured finance' as well as the largest trading floors of the largest Dutch universal banks such as ING, Rabobank and ABN Amro are located in London. A case in point is the ABN Amro asset management division, which is located at 62 Bishopsgate, London, and houses a sophisticated 600+ trader dealing room. As is the dominance of its London office in the ABN Amro Global Markets Business Unit, which is global market leader in the construction of

structured products for the retail market, offering well over 21,000 products (see www.abnamromarkets.com).

Finally, as Figure 9. demonstrates, Dutch pension savings, by far the largest liquidity pool originating in the Netherlands, are increasingly being managed by Anglo-American asset manager, most of which do their actual management from their London offices. The largest UK fund manager is London based Barclays Global Investors, with a share of 10.7 percent of all externally managed Dutch pension assets. Second is State Street Global Advisors, with a share of 8,4 percent. While State Street does have an office in Amsterdam, the differences in size between their London and Amsterdam offices — 2100 employees versus 140 — suggest that the Amsterdam office is mainly a marketing unit, while the actual management is being undertaken from out of the London office. A strong runner up is Goldman Sachs Asset Management, which has recently become the fourth largest foreign asset manager, just behind Merrill Lynch, with euro 18 billion under management. Goldman Sachs merely has a rep office in Amsterdam, being manned by a former Head of Institutional Asset Management of the Dutch Mutual Fund Robeco and a small staff. Actual asset management is being undertaken by the London office of Goldman Sachs. NEG is unable to account for this particular trajectory of spatial redistribution. In other words, while the Amsterdam account corroborates the theoretical expectations of NEG, the increasing concentration of financial activities in expensive London instead seems to disqualify these expectations. This suggests that the explanatory narrative provided by NEG is only partially adequate.

[Figure 9. about here]

Third, NEG models of the type presented above are largely based on the idea of exogenous shocks and are monocausal in nature. For what is doing most of the explanatory work is the development of new technologies which reduce the friction that caused agents to cluster in the first place. As such, NEG runs the danger of conceptualization its main causal mechanism of change as an exogenous, quasi-deterministic variable. While sociological exchanges with strong forms of technological determinism are wide and many (see Rosenberg 1982; 1994), it is obvious that the spatial redistribution of financial activities that is at stake here is a

multicausal phenomenon in which the extent, timing and direction of change is strongly influenced by institutional arrangements and regulatory initiatives.

There are at least two specific moments in the narrative presented in this case study where institutions and regulations play a vital role. The first crucial moment is the decision of Dutch political agents to open up the Dutch financial markets to foreign investors and, vice versa, to allow Dutch institutional investors to invest outside of the Netherlands. In general, this is a decision about joining the project of financial internationalization that was initiated in the mid-1970s instead of trying to stem it. A more concrete example of institutional facilitation had to do with the growth of ETFs on the Amsterdam order book. Amsterdam's comparative advantage over other trading platforms had to do with the mutual recognition of off shore regulators by the Dutch financial market authority. Numerous additional examples of the facilitative function of institutional and regulatory changes could be given. The point is, however, that NEG fails to take seriously the institutional variable and hence lacks a means to conceptualize the different socially mediated manifestations of technological change. To address these failings, we discuss below the kind of conceptual amendments that CPE promises.

3.2 CPE and the Effects of Hybridity

CPE starts from a completely different set of ontological presumptions as NEG. Instead of assuming satisficing agents with clear and well articulated preferences, pursuing actions that are calibrated to changing environmental variables, CPE starts from differences in stable institutional constellations in order to investigate their behavioural effects. In terms of James Coleman's famous 'bucket': while NEG pursues a micro-macro narrative, explaining spatial redistributions from individual actions, CPE largely follows a macro-micro narrative in which institutions are the independent variable and differences in human action the dependent variable (Coleman 1986).

According to mainstream CPE in the guise of Peter Hall and David Soskice's 'Varieties of Capitalism'-approach (2001), the changes in location behaviour of financial firms in the Amsterdam IFC that we have described above should be attributable to regulatory changes, which in and of themselves reflect the underlying

institutional configuration of the Dutch political economy. At first sight, the institutional configurations of the Dutch and German political economies appear to be highly similar. Both exhibit highly regulated labour and production markets, strong bank-firm linkages and a high level of producer and consumer market regulation by the state (see Engelen et al. 2007). The Dutch state possesses considerable substantive and procedural powers (Van Waarden 2001), Dutch product and labour markets are well-regulated, and societal *corpora* — labour unions, employer organizations — are highly effective co-producers of governance in a large number of substantive policy fields (Visser & Hemerijck 1997). Unions are organized sectorally, as is the system of collective bargaining, while interest representation within the firm is legally established in a Works Council Act, ensuring a high degree of employer-employee interdependence and limiting managerial unilateralism (Visser & Ebbinghaus 1996). Finally, the Dutch educational system, like the German one, contains a theoretical and a practical trajectory, both of which are publicly funded and deliver portable qualifications that are recognized throughout the economy (Lieshout 1996).

On the basis of these characteristics, Hall and Soskice classified the Dutch political economy as a true CME (2001: 19-20). However, doing so they overlook important differences that are crucial for our narrative. For one, Dutch corporatism has followed a much more centralized development path than German corporatism. This is the historical legacy of the early 19th century French occupation and the resulting influences on the design of the state bureaucracy and the legal code (Hemerijck 1993). As a result, societal *corpora* have largely copied the centralized organization of the Dutch state, focusing their financial, economic, political and intellectual resources mainly at the national center of government and the macro-economic issues that are decided there, leaving them rather impotent at the local level. This has not only affected the industrial relations system — *macro*-corporatism in the Netherlands versus *meso*-corporatism in Germany (Visser & Hemerijck 1997) — but has been copied more generally across policy fields, implying that local interests have been unable to counter centralizing tendencies.

This is clearly visible in the Dutch financial system. Because of the centralized structure of the Dutch polity, local interests have been unable to resist the centripetal forces of a strong national financial centre. The historical heritage of a

large internationally oriented financial centre in the midst of the Dutch political economy explains the strong foreign orientation of Dutch financial institutes, and, as its flipside, the absence of a powerful locally rooted bank sector (Verdier 2002). Moreover, given the presence of a large equity market, Dutch firms looking for capital could always access sources of capital that came with less strings attached than bank lending, implying a much looser relationship between Dutch corporations and domestic credit providers and a more shareholder oriented corporate governance regime. Furthermore, as we saw above, the depth and liquidity of Dutch financial markets is clearly out of proportion to its economy and is more in line with Anglo-American political economies (see Figure 1.). Finally, the presence of deep and liquid financial markets facilitated the construction of a pre-funded supplementary pension system much like those of the UK, the US and other LMEs.

3.2.1 Regulatory Changes

Especially in the domain of financial market governance, a number of crucial regulatory changes have occurred, which collectively have radically changed the Dutch financial landscape. These are listed below.

- *From Self-Regulation to Professional Oversight*

The first clearly fits into the centralized nature of the Dutch political economy. Like many other developed political economies, the Netherlands too has witnessed a shift from a system of governance based on self-regulation by voluntary associations to a more obliging form of governance by professional market regulators with a public law status (Lütz 2002). Since the early 1990s, a large number of changes have transformed the Dutch regulatory landscape. Partly, this was induced by the growing scale and complexity of financial transactions — mainly as a result of internationalisation, disintermediation, securitisation (Sinclair 2005), and desegmentation (Verdier 2002) — partly by more strict risk requirements of the international financial overseer, the Bank for International Settlements (BIS), in reaction to growing fears that local crises could affect systemic upheaval.

The most important one was the abolishment of the legal barriers upholding 'financial segmentation' in the Netherlands in 1990 (Prast & Van Lelyveld 2004). Recognizing the imminent approach of a wave of international consolidation in the global banking industry as a result of worldwide deregulation and liberalization in

the aftermath of the repeal of the Bretton Woods system (Helleiner 1994), the Dutch Central Bank gradually lifted the existing legal prohibitions on cross sectional mergers, initiating a wave of consolidation in the Dutch financial service sector that led to the construction of a small number of world class financial conglomerates such as ABN Amro, Fortis, Rabobank and ING. As a result the Netherlands has one of the most concentrated banking markets worldwide. According to a recent G10 study, concentration in the Netherlands, expressed as market share of the five largest banks, was up from 73 in 1990 to 82 in 2000 (G10 2001). While initially launching Dutch banks well into the top 50 of the world's largest banks, the small size of their home market combined with increasing consolidation of other banking markets has increasingly weakened the initial first mover advantages of the Dutch financial institutes, as the recent takeover of ABN Amro by RBS/Santander/Fortis has testified.

Consolidation in turn required a regulatory response. Historically financial market regulation in the Netherlands followed sectoral lines. Equity traders, banks, insurers and pension funds each had their own private and/or public overseers. In reaction to the desegmentation of the Dutch financial landscape, this mode of regulation was replaced in 2002 by a so-called 'Twin Peaks' model based on regulatory objectives. In this model 'prudential and systemic regulation' falls to the jurisdiction of the Dutch Central Bank (DNB) (which has recently merged with the pension and insurance regulator, the Pension and Insurance Chamber), while 'conduct-of-business regulation' is undertaken by the legal inheritor of the former stock exchange overseer, the Financial Market Authority (AFM), both of which are located in the historical centre of Amsterdam (Mooij & Prast 2002; Prast & Van Lelyveld 2004).

The institutional overhaul of the Dutch regulatory system caused a number of organizational changes. First a further professionalisation of the regulatory apparatus, both in terms of the extent of the regulatory jurisdiction, the level of expertise on the side of the regulators, as well as in terms of the scope of the organisations and the number of employees. A further change had to do with the mode of financing. Financial regulation used to be paid by out of general taxation, in exchange for which banks were obliged to take over some public administrative tasks for the Dutch fiscal authority. Insurers, pension funds and securities firms, on

the other hand, did have to pay for their own supervision costs. However, since regulatory costs have risen because of increasing financial complexity, while a differential treatment of banks and other financial institutes became less legitimate because of financial desegmentation, it was only fair that financial institutes would be required to bear a larger share. Currently a little over 80 per cent of the operational costs is borne by the sector itself, the rest being shouldered by the taxpayer on the basis of public good arguments (Prast & Van Lelyveld 2004). Although the distributive key does take size differences into account, an increasing number of smaller financial institutes is complaining about rising costs.

- *From Sovereign Bond Buyers to International Institutional Investors*

The second relevant piece of regulatory change is the 1996 decision to privatise the three largest public pension funds in the Netherlands — PGGM, ABP and the National railway pension fund (Clark & Bennett 2001). In the context of a high level of sovereign debt and high and rising budget deficits in the 1980s, the Dutch government had a hard time abstaining from siphoning off the enormous amount of pension savings amassed by these funds. Although in 1992 a separate fund (for economic reconstruction) was established as a receptacle for voluntary contributions from the state pension funds, the flipside of the bargain was the decision to privatise all civil servant pension funds and turn them into separate legal entities to reduce future temptations of this kind. Part of the package was a radical extension of their investment options. The obligation to absorb Dutch government bonds was lifted, as were other constraints on investments, notably the prohibition to buy foreign equity. While the total number of pension funds in the Netherlands amounts to over 700, the three civil servant funds alone manage more than half of total Dutch pension savings and hence largely set the tune for the other sectoral pension funds. Since the mid-1990s, ABP and PGGM have increasingly internationalised their investment strategy and as a result have become some of the most important players on the world's financial markets.

As Figure 10. demonstrates, the share of foreign investment of total portfolio, and especially of foreign equity investment, has increased faster than total assets. As a result approximately 80 percent of all Dutch pension assets is invested outside of the Netherlands, indicating the large extent to which the average Dutch worker has

become dependent on foreign returns on investment and hence on financial internationalization.⁴ As we saw above (Figure 9.), this development has resulted in a gradual replacement of Dutch intermediaries by foreign asset managers.

[Figure 10. about here]

Since mature pension funds have an increasing need for liquidity and bespoke investment products (Clark 2000; Engelen 2003), a growing share of their capital is by necessity finding its way to the largest, deepest and most liquid financial markets and is increasingly being processed by foreign intermediaries. Privatisation and liberalisation have thus resulted in a loss of 'captive' trade of the Amsterdam exchanges and a loss of captive market share of Dutch financial intermediaries to the benefit of London based managers such as Goldman Sachs, Barclays and State Street as well as a host of smaller players such as GAM, Inside Investment Management, Threatneedle Asset Management, Lehman Brothers, Barings, Putnam Investments and ten more London-based asset managers.

- *From 'Dutch Discount' to Dutch Disappearance*

The last piece of relevant regulatory change deals with the Dutch corporate governance system. Well known for its strong worker and limited minority shareholder protection as well as its substantial cross holdings and hence its relatively small free float, large public Dutch corporations traditionally suffered from a so-called 'Dutch discount'. Since the attractiveness of Dutch equity to foreign investors was quite low, Dutch shares were discounted relative to their peers in other political economies. In a context of increasing market integration in which Dutch firms were forced to expand abroad this was increasingly perceived as a disadvantage, for Dutch firms had to pay more for takeovers than their European competitors. Over time, this resulted in the gradual build up of political pressure to adapt the Dutch corporate governance system to what was increasingly becoming the international standard, namely a more investor friendly system roughly

⁴ Telling is the fact that since 2003 the aggregate annual growth of the assets of Dutch institutional investors (pension funds and insurance companies) has surpassed the growth of Dutch GDP. As a result the total amount of assets under management of Dutch institutional investors has increased from 168 percent of GDP in 2002 to 215 percent of GDP in 2006 (CBS 2007).

modelled on the Anglo-American one tier board system and the enhanced voice rights that minority shareholders have in the US and the UK.

From the late 1990s onward this has resulted in a number of changes in the Dutch corporate regime. The dual board structure that is characteristic of Dutch and German corporate governance has ceased to be mandatory, while the prerogatives of shareholders vis-à-vis those of workers and other stakeholders have gradually been strengthened. Moreover, the legal protections for minority shareholders have been strengthened, while the possibilities for protecting publicly quoted firms against (hostile) takeovers have largely been eradicated. The upshot is that the Netherlands, according to recent data from Deminor, has substantially moved in the direction of Anglo-American corporate governance practices on most of the important corporate governance indicator. In fact, between 2000 and 2004, Dutch corporate governance underwent the largest degree of change in the direction of the ideal-typical US model of all European economies, even on the dimension of takeover defences where the least movement is observable (Wojcik 2006).

The upshot is that the Dutch discount has largely disappeared, as is demonstrated by the steep rise of the CBS index, which represents aggregate value changes of the Amsterdam exchange and hence can be taken as a proxy for interest in Dutch equity (see Figure 11. below). Initially this translated in a wave of foreign takeovers by Dutch firms, largely motivated by the aim to survive the international battle for consolidation by buying into a second home market. However, since 2006 the flow of fund seems to have reversed, resulting in a number of highly salient takeovers such as the merger of Euronext with the NYSE, the takeover of Real Estate Investment Trust Rodamco by its French competitor Unibail and of ABN Amro by the RBS/Santander/Fortis-consortium, which is not yet processed in the half year figure of 2007 presented below (see Figure 12.). Moreover, next year will see the takeover of two other large Dutch corporations: Stork by UK private equity fund Candover and Icelandic investor Marel, and Hagemeyer by its French counterparts Rexel and Sonepar.

[Figure 11. about here]

[Figure 12. about here]

In the Netherlands this has resulted in a public backlash against the earlier changes made to the Dutch corporate governance regime. A mixture of public pundits, union representatives as well as members of the older Dutch economic elite have pressed the centre-right government to redress some of the shareholder protection measures in order to decrease the vulnerability of Dutch corporations to foreign takeovers. In a response, the government has asked its main socio-economic advisory council to investigate the need for legal restrictions on shareholder rights. The advice that was presented in November 2007 was however fiercely contested by Dutch small and institutional investors, among which the largest Dutch pension funds. Up till now, the Dutch Ministry of Finance has declined to take over the councils recommendations.

What these descriptions of recent regulatory and institutional changes in the Dutch political economy demonstrate is that the NEG tale clearly needs to be complemented with a more traditional (sociologically speaking) CPE tale. The relatively large scale of the Dutch financial markets and its sophisticated banking industry have resulted in strong linkages between the Dutch financial services and London, allowing a silent takeover by London of Dutch asset management in the wake of the 2001 bubble and the successive rise of transnational finance. Moreover, the willingness of the Dutch regulator to recognize their off shore counterparts in order to help Euronext Amsterdam carve out a transnational niche in the international division of labour between exchanges clearly demonstrates the crucial role of regulation in enhancing or hindering the development of financial markets.

In our view, the key to understand the post-millennium decline of Amsterdam is the privatization and increasing internationalization of Dutch pension savings, which has turned Dutch citizens and their representatives into stakeholders in further financial internationalization. A case in point, as one of us has argued elsewhere (see Engelen et al. 2007), is the largely rhetorical nature of the current backlash against the increasing penetration of the Dutch economy by Anglo-American hedge funds and private equity funds. While a substantial number of Dutch firms has experienced takeovers and activism from these activist investors (see above), the Dutch political elite has so far refrained from riding the waves of left wing populism these experiences have unleashed. In our view, that is easily explained by the huge

stake that Dutch institutional investors and their contributors, that is: the overwhelming majority (+ 90 percent) of Dutch workers, have in the further expansion of lucrative investment opportunities that financial internationalization offers. In other words, in a very true sense the Dutch economy is becoming a rentier economy, which is in a deep sense indifferent to the nationality of the owners of its property titles or the location of the production of its value added as long as a substantial part of that value is repatriated to Dutch households.

4. Conclusion

We started this paper with two goals in mind. First, we wanted to add to the gradually growing literature on IFCs with a description of a case of IFC decline. Since most of the literature on IFCs is about their rise or their reproduction over time, we surmise that the case study of Amsterdam offered in this paper is a worthwhile addition to the literature. While we have tried to present the case with as much empirical detail as possible, we do acknowledge that there is some uncharted territory left. For instance, we were unable to find more recent data on the origin of trade conducted on the Amsterdam order book. Another grey area is the extent of the redistribution of interorganizational resources facilitating financial innovation from Amsterdam to London. To analyze this, more detailed information is required on the spatial redistribution of employees, staff support, ICT investment over the different offices of Dutch banks. As far as we have been able to observe annual reports do not provide us with the required data, for the slicing up of a bank in terms of Business Units covering different jurisdictions is unable to satisfy our territorial interests.⁵ Finally, more information is required about the underlying causal mechanisms. What motives did traders, managers and bankers have to shift their activities from Amsterdam to London? How did the changes in the regulatory, institutional and technological environment affect their spaces of action? To what extent were they aware of these changes? Did they merely respond to or were they able to craft some of these changes? A more extensive set of interviews with agents coming from different links of the overall investment chain is required to shed light on their motives, perceptions and preferences.

⁵ Moreover, the high degree of organizational turbulence,

The second goal of the paper was theoretical. The aim was to assess to what extent two widely used but highly dissimilar theoretical approaches — NEG and CPE — could account for the empirical material presented here. We identified three areas where NEG was seen to be in need of complementary hypotheses. First, NEG was seen to start from pre-given preferences instead of problematizing the motives, perceptions and preferences of agents. Here, CPE could fill a conceptual gap in the sense that it allows for a more empirically based conceptualization of the motives of agents by focusing on the institutionally determined nature of the perceptions and actions of agents. Of course, this leaves the empirical lacuna mentioned above unaddressed. Second, NEG was seen to postulate the development in the direction of a world free from friction, resulting in an equal distribution of activities over an abstract space. Instead we observed a shift from Amsterdam to London, raising the question why in some instances centripetal forces exceeded centrifugal ones (for instance in London) while in others centrifugal forces dominate over centripetal ones. Here too, CPE provided a possible answer by pointing to the long standing internationalization of Dutch finance and its strong linkages with London. Because of that pre-existing 'pipeline' the liberalization of Dutch finance because of technological changes resulted in a shift to London as the hothouse of 21st financial innovation. Finally, NEG was deemed to be too monocausal to be able to account for the empirical observations presented in this case study. Instead we used insights from CPE to pinpoint the crucial importance of institutional characteristics of the Dutch political economy, especially its prefunded pension system, and a number of related regulatory changes to understand the recent fate of Amsterdam.

Finally, we want to stress that this study cries out for comparisons with other financial centres, especially with IFCs such as Frankfurt which, according to CPE literature, ought to have been built on different moorings as the Amsterdam IFC. While there are some indications that Frankfurt is currently undergoing a similar fate as Amsterdam, a combination of NEG and CPE should be able to make theoretically interesting comparisons between the different make ups of the two centers, the causal mechanisms behind the respective declines, as well as the final destinations of the flows, stocks and people deserting these European cities.

6. Literature

- Barbour, Violet. 1976 [1950]. *Capitalism in Amsterdam in the 17th Century*. Ann Arbor: The University of Michigan Press.
- Bathelt, H., A Malmberg & P. Maskell. 2003. "Clusters and Knowledge. Local Buzz, Global Pipelines and the Process of Knowledge Creation." *Progress in Human Geography* 28:35-56.
- Boschma, R.A. & R.C. Kloosterman. 2005. *Learning from Clusters. A Critical Assessment from an Economic Geographical Perspective*. Dordrecht: Springer.
- Cairncross, F. 1998. *The Death of Distance. How the Communications Revolution will Change our Lives*. London: Orion Business Books.
- Cassis, Y. 2007. *Capitals of Capital A History of International Financial Centres, 1780-2005*. Cambridge: Cambridge University Press.
- CBS. 2007. "Beleggingen Institutionele Beleggers met 7 Procent Toegenomen", 10 October 2007, 8 p.
- Clark, G. 2000. *Pension Fund Capitalism*. Oxford: Oxford University Press.
- Clark, G. & P. Bennett. 2001. "Dutch Sector-Wide Supplementary Pensions. Fund Governance, European Competition Policy, and the Geography of Finance." *Environment & Planning A* 33:27-48.
- Clark, G. L. 2003. *European Pensions and Global Finance*. Oxford: Oxford University Press.
- Coase, R.H. 1990 [1937]. "The Nature of the Firm." Pp. 33-56 in *The Firm, the Market and the Law*. Chicago: The University of Chicago Press.
- Cohen, B.J. 1998. *The Geography of Money*. Ithaca/London: Cornell University Press.
- Coleman, J. 1986. "Social Theory, Social Research and a Theory of Action." *American Journal of Sociology* 91:1309-1335.
- DNB. 2002. *Jaarverslag 2002*. Amsterdam: DNB.
- Engelen, E. 2003. "The Logic of Funding. European Pension Restructuring and the Dangers of Financialisation." *Environment & Planning A* 35:1357-1372.
- Engelen, E., M. Konings & R. Fernandez. 2007. "Financialization and Institutions. Lessons from the Dutch Case", AFCR Working Paper 1, 43 p.

- Froud, J., Haslam, C., Johal, K. & K. Williams. 2000. "Shareholder Value and Financialisation. Consultancy Promises, Management Moves." *Economy & Society* 29:80-110.
- Fujita, M. & J.-F. Thisse. 1996. "Economics of Agglomeration." *Journal of Japanese and International Economics and Philosophy* 10:339-378.
- Fujita, M., P.Krugman & A.J. Venables. 1999. *The Spatial Economy - Cities, Regions, and International Trade*. Cambridge/London: MIT Press.
- G10. 2001. "Consolidation in the Financial Sector." Pp. 463. Geneva: Bank for International Settlements.
- Goede, M. de. 2005. *Virtue, Fortune and Faith. A Genealogy of Finance*. Minneapolis: The University of Minnesota Press.
- Grabher, G. 2002. "The Project Ecology of Advertising: Tasks, Talents and Teams." *Regional studies* 36:245-262.
- . 2004. "Temporary Architectures of Learning : Knowledge Governance in Project Ecologies." *Organization studies* 25:1491-1514.
- Grote, M.H. 2007. "Foreign Banks' Attraction to the Financial Centre Frankfurt. An inverted 'U'-shaped Relationship." *Journal of Economic Geography*, forthcoming, 45 p.
- Hall, P. & D. Soskice. 2001. *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.
- Helleiner, E. 1994. *States and the reemergence of global finance : from Bretton Woods to the 1990s*. Ithaca, NY: Cornell University Press.
- . 2003. "The making of national money : territorial currencies in historical perspective." Ithaca: Cornell University Press.
- Hirst, P. & G. Thompson. 1999. *Globalization in Question. The International Economy and the Possibilities of Governance*. Oxford: Polity Press.
- Jonker, J. 2003. "Competing in Tandem. Securities Markets and Commercial Banking Patterns in Europe during the Nineteenth Century." Pp. 64-86 in *The Origins of National Financial Systems. Alexander Gerschenkron Reconsidered*, edited by D. Verdier & J. D. Forsyth. London and New York: Routledge.
- Kindleberger, C. P. 1974. "The Formation of Financial Centres: A Study in Comparative Economic History." in *Princeton Studies in International Finance*. Princeton.

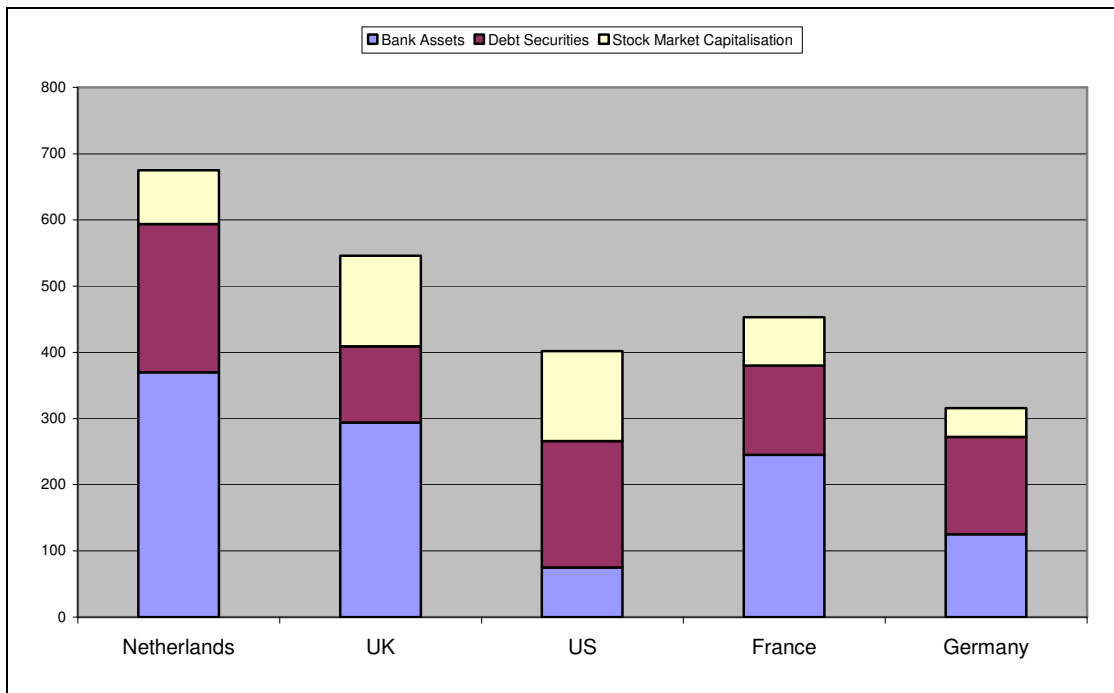
- Kloosterman, R.C. 2007. "Walls and Bridges. Knowledge Spillover Between 'Superdutch' Architectural Firms." *Journal of Economic Geography*, forthcoming, 22 p.
- Krugman, P. 1991. *Geography and Trade*. Cambridge: MIT Press.
- Langley, P. 2006. "The Making of Investor Subjects in Anglo-American Pensions." *Environment & Planning D* 24:919-934.
- Lieshout, H. van. 1996. *Duaal Monopolie. Een analyse van het Duits duale stelsel van Beroepsonderwijs vanuit Nederlands Perspectief*. Amsterdam: Max Goote Kenniscentrum voor BVE.
- Lütz, S. 2002. *Der Staat und die Globalisierung von Finanzmärkten. Regulative Politik in Deutschland, Grossbritannien und den USA*. Frankfurt/New York: Campus Verlag.
- Mooij, J. & H.M. Prast. 2002. "A Brief History of the Institutional Design of Banking Supervision in the Netherlands." Pp. 25. Amsterdam: DNB.
- Neal, Larry. 1990. *The Rise of Financial Capitalism. International Capital Markets in the Age of Reason*. Cambridge: Cambridge University Press.
- Neary, P. J. 2001. "Of Hype and Hyperbolas: Introducing the New Economic Geography." *Journal of Economic Literature* 39:536-561.
- O'Brien, R. 1992. *Global Financial Integration. International Capital Markets in the Age of Reason*. London: The Royal Institute of International Affairs.
- Prast, H. & I. van Lelyveld. 2004. "New Architectures in the Regulation and Supervision of Financial Markets and Institutions: The Netherlands." Pp. 29 in *DNB Working Paper*. Amsterdam.
- Ruggie, J. 1982. "International regimes, transactions, and change: embedded liberalism in the postwar economic order." *International organization* 36:379 ff.
- Sassen, S. 2001. *The Global City. New York, London, Tokyo*. Princeton, NJ: Princeton University Press.
- Schram, T. 2004. "The Amsterdam Equity Market, 1986-2003. From an Open Outcry Specialist System to Order-Driven Screen Trading." Report AEX/Euronext/VDM, 23 p.
- Scott, A. 2004. "A Perspective of Economic Geography." *Journal of Economic Geography* 4:479-499.
- Sinclair, T.J. 2005. *The New Masters of Capital. American Bond Rating Agencies and the Politics of Creditworthiness*. Ithaca: Cornell University Press.

- Storper, M. & A. J. Venables. 2004. "Buzz: face-to-face contact and the urban economy." *Journal of Economic Geography* 4:351-370.
- Thrift, N. 1994. "On the Social and Cultural Determinants of International Financial Centres. The Case of the City of London." in *Money, Power and Space*, edited by R. M. N. T. S. Corbridge. Oxford: Blackwell.
- Underhill, G. & Zhang, X. 2003. *International Financial Governance Under Stress. Global Structures versus National Interests*. Cambridge: Cambridge University Press.
- Venables, A. J. 1996. "Equilibrium Locations of Vertically Linked Industries." *International Economic Review* 37:341-359.
- Verdier, D. 2002. *Moving Money. Banking and Finance in the Industrialized World*. Cambridge: Cambridge University Press.
- Visser, J. & A. Hemerijck. 1997. 'A Dutch Miracle'. *Job Growth, Welfare Reform, and Corporatism in the Netherlands*. Amsterdam: Amsterdam University Press.
- Visser, J. & Ebbinghaus, B. 1996. "Een halve eeuw verandering. Verklaringen voor convergentie en diversiteit van werknemersorganisaties in West-Europa." Pp. 20-53 in *De vakbeweging op de eeuwgrens. Vijf sociologische studies over de vakbeweging*, edited by J. Visser. Amsterdam: Amsterdam University Press.
- Waarden, F. van. 2001. "Market Institutions as Communicating Vessels. Changes between Economic Coordination Principles as a Consequence of Deregulation Policies." Pp. 171-212 in *Advancing Socio-Economics. An Institutional Perspective*, edited by J. R. Hollingsworth, K. Müller & E. Hollingsworth. Lanham: Rowman & Littlefield.
- Williamson, O.E. 1975. *Market and Hierarchies: Analysis and Antitrust Implications. A Study in the Economics of Internal Organization*. New York: The Free Press.
- Wojcik, D. 2006. "Convergence in corporate governance. Evidence from Europe and the challenge for economic geography." *Journal of Economic Geography* 6:639-660.

7. List of interviewees

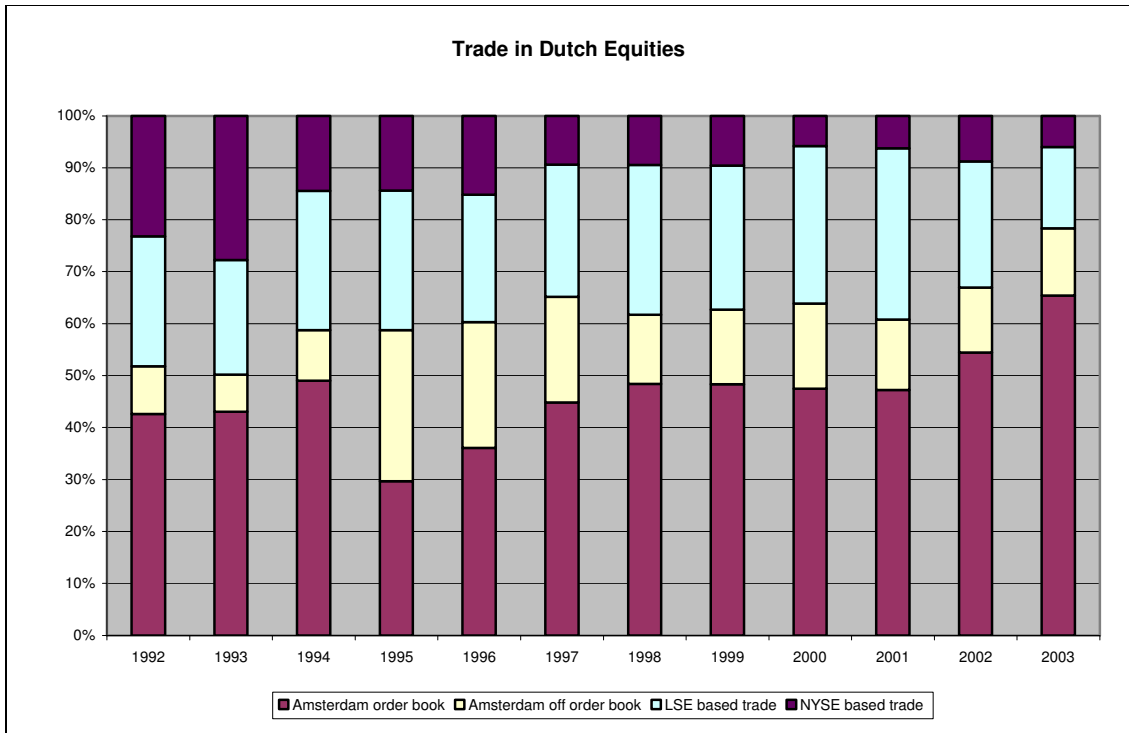
- Interviewee 1.: Corporate Lawyer, Corporate Law Firm, Amsterdam, 24 October 2007.
- Interviewee 2.: Location Manager, Accountancy Firm, Rotterdam, 20 September 2007.
- Interviewee 3.: CEO, Private Bank, Amsterdam, 29 October 2007.

Figure 1.: Size of Capital Markets in US Dollars relative to GDP in 2005



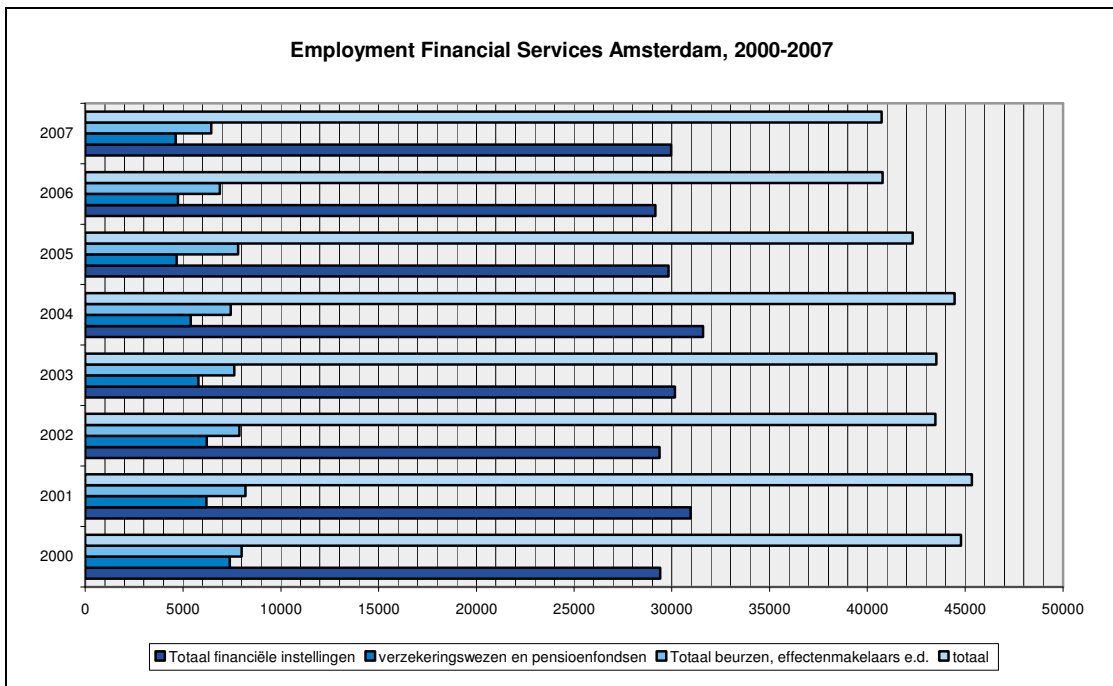
Source: IMF 2006: 95

Figure 2.: Trade in Amsterdam based Equities, 1992-2003



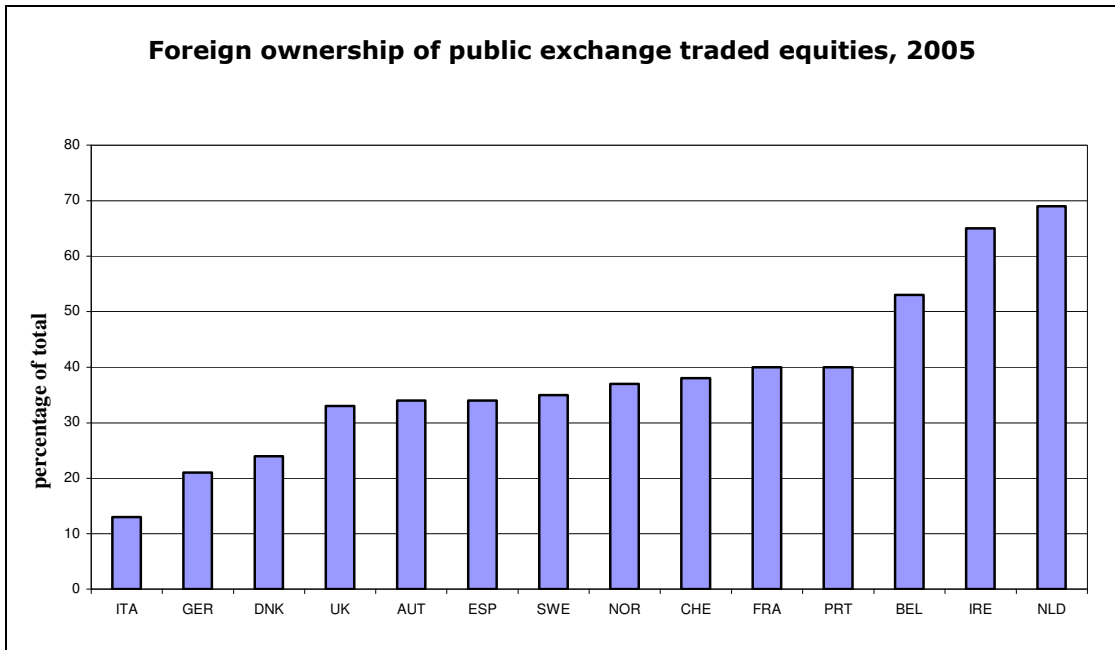
Source: AEX Exchanges/Euronext, LSE, NYSE (adapted from Schram 2004)

Figure 3.: Employment in the Financial Services in Amsterdam, 2000-2007



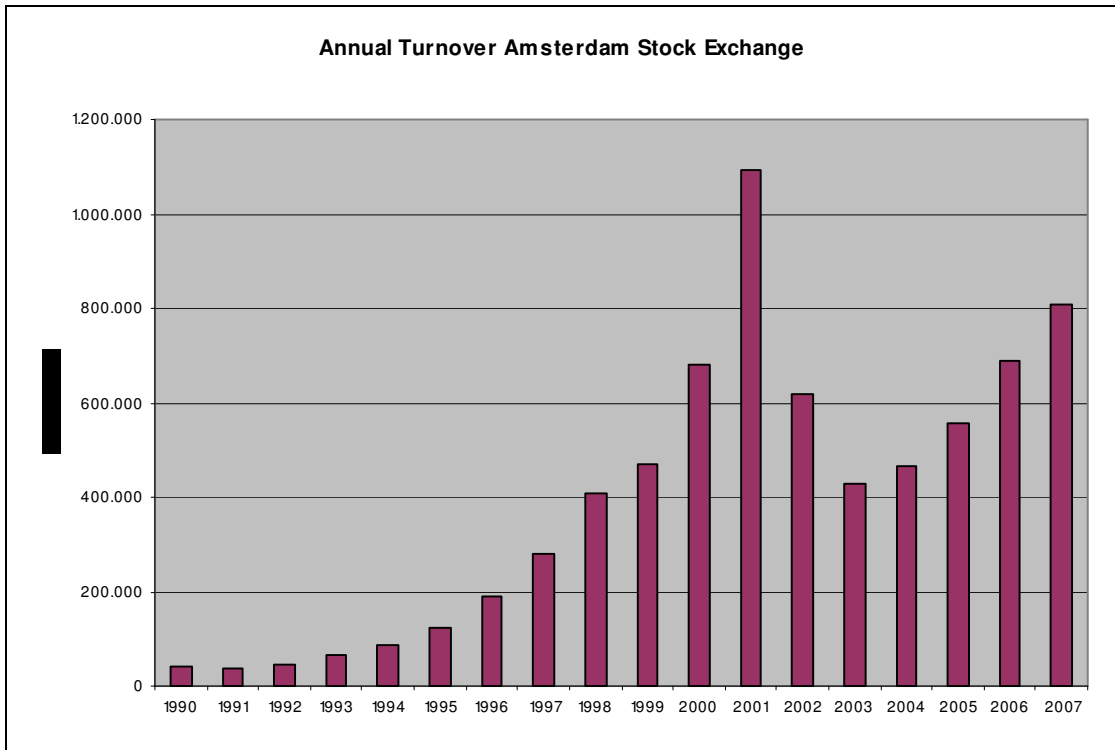
Source: O+S 2007

Figure 4.: Foreign Ownership of Public Exchange Traded Equities, 2005



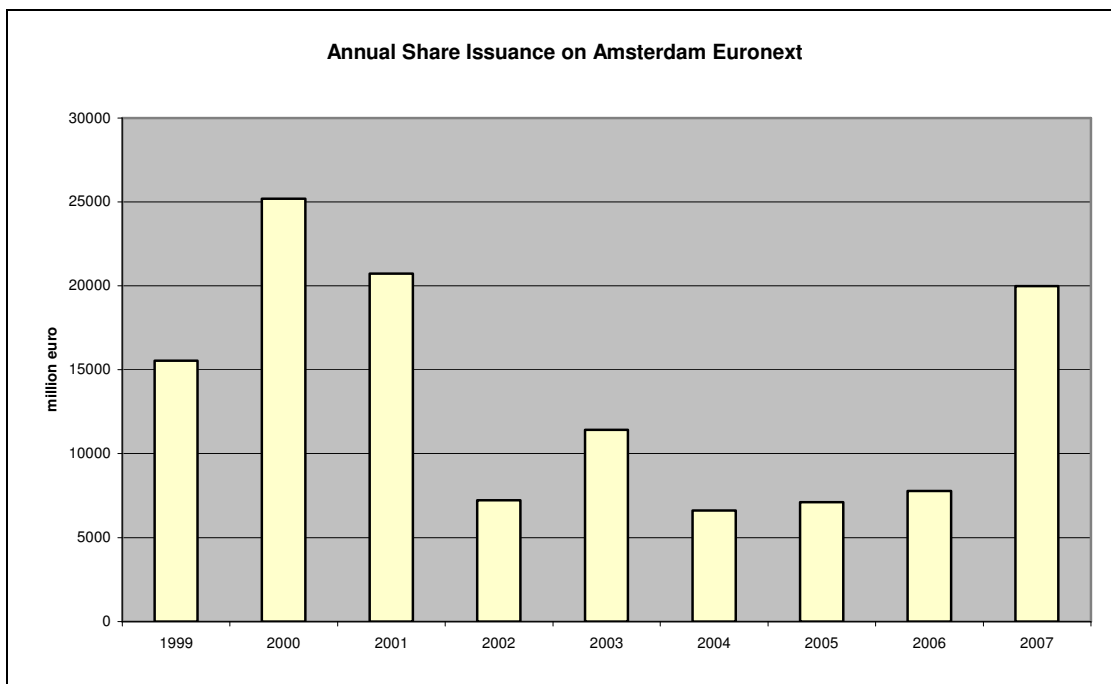
Source: FESE 2007

Figure 5.: Annual Turnover on the Amsterdam Stock Exchange, 1990-2007



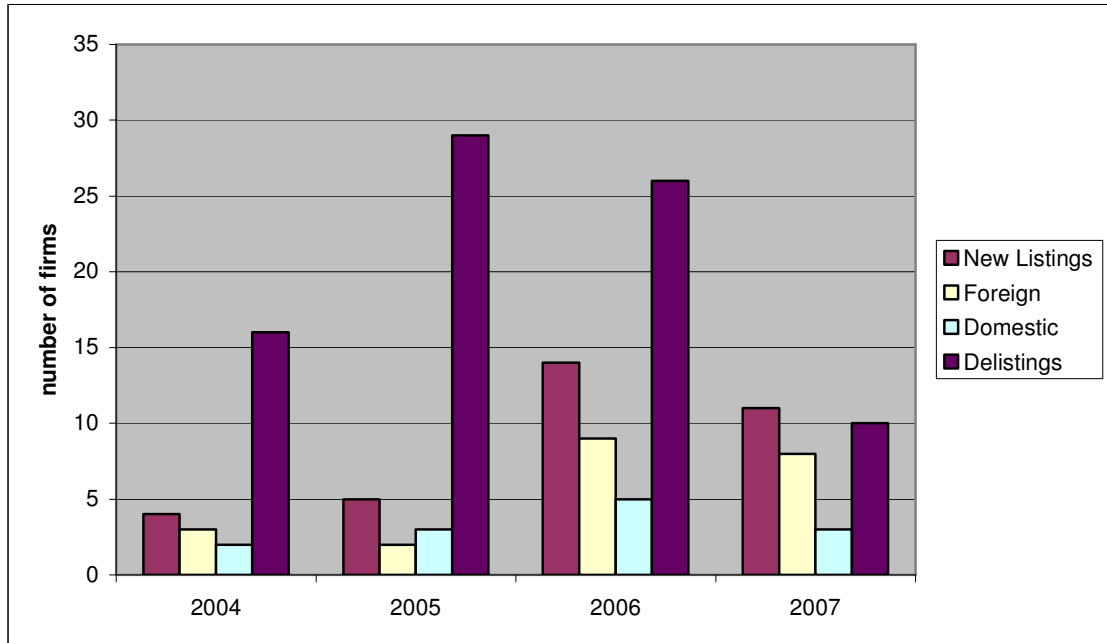
Source: Euronext and CBS Statline

Figure 6.: Annual Share Issuance on Amsterdam Euronext, 1999-2007



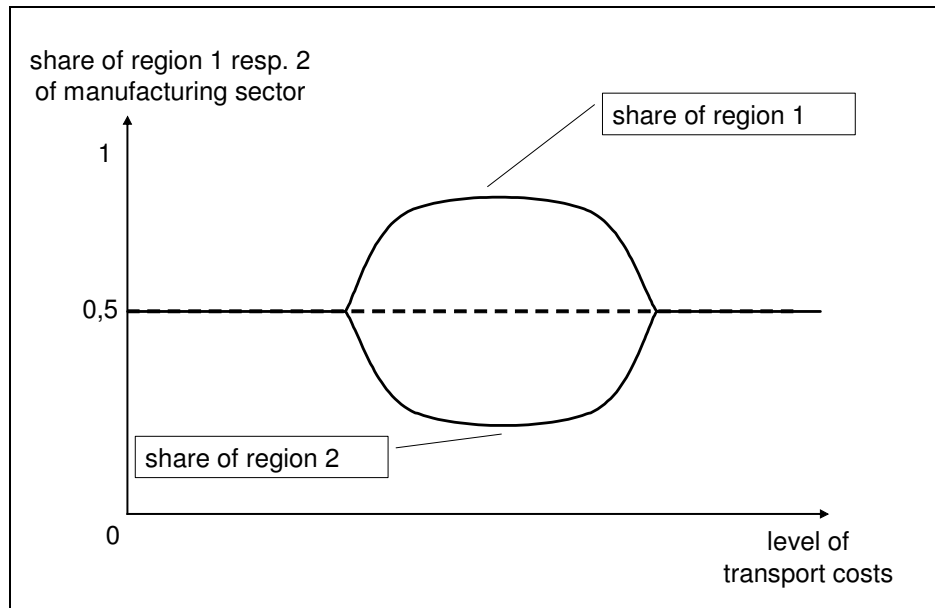
Source: DNB

Figure 7.: Listings and Delistings on the Amsterdam Stock Exchange, 2004-2007



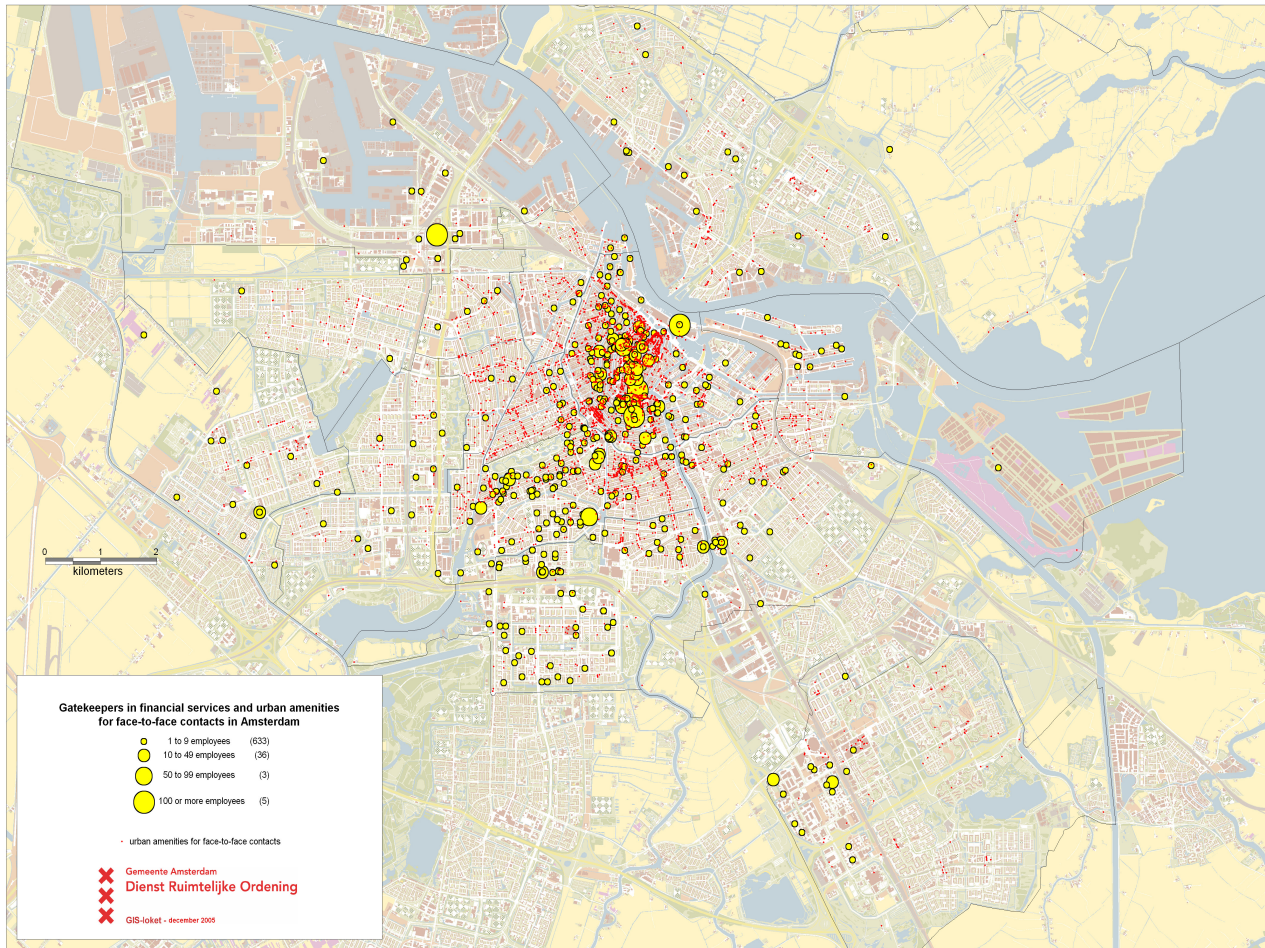
Source: Euronext factbook

Figure 8.: Distribution of manufacturing over two regions in a context of increasing transportation costs



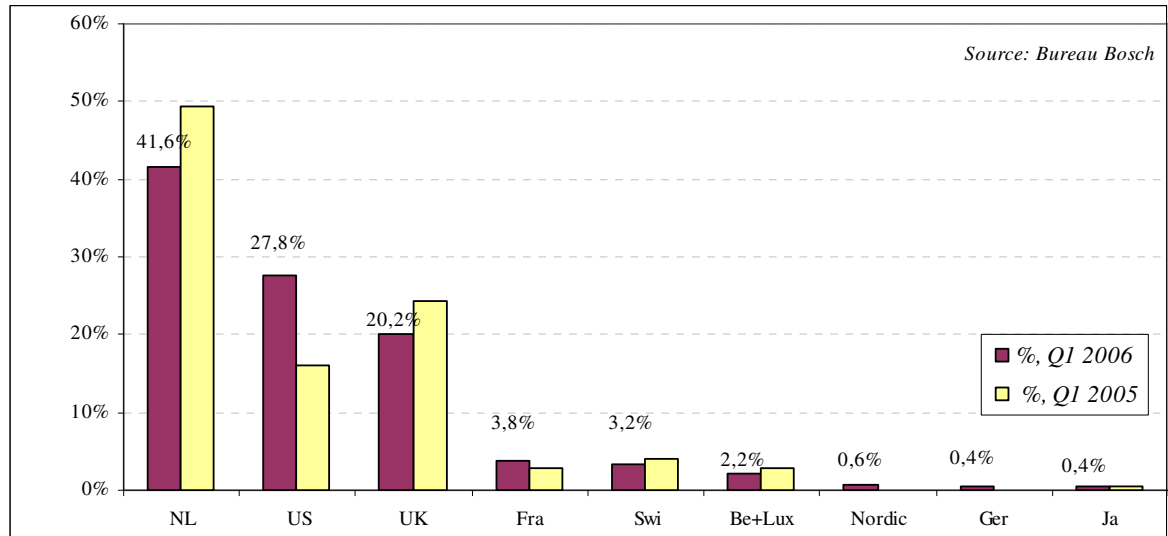
Source: Fujita et al. 1999: 257

Map 1.: Financial Firms and Urban Amenities, 2005



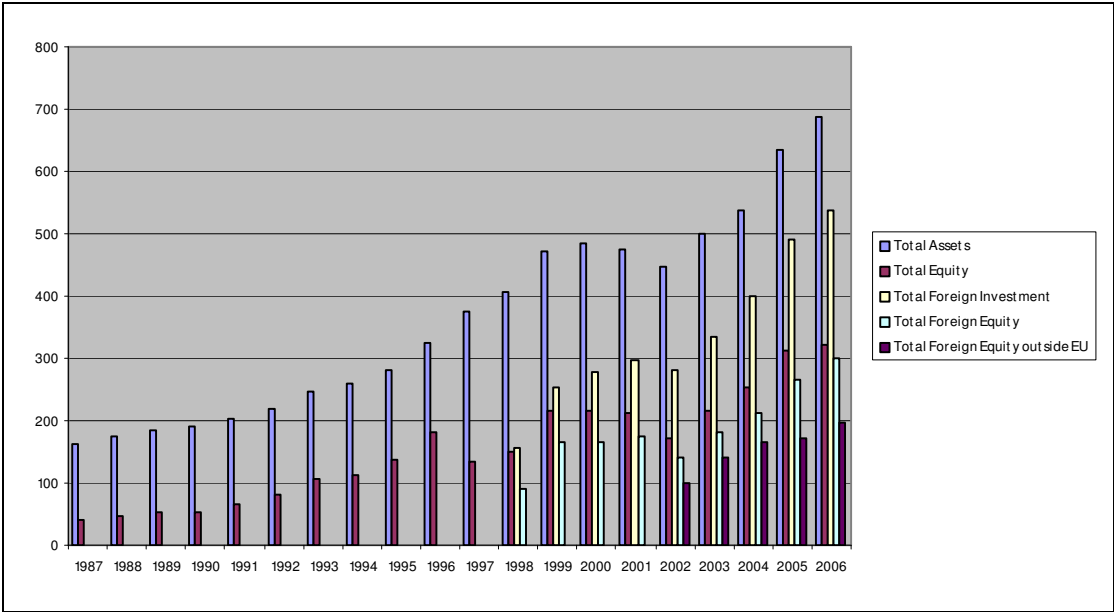
Source: Dienst Ruimtelijke Ordening Amsterdam

Figure 9.: National Shares of External Management of Dutch Pension Assets, 2005-2006



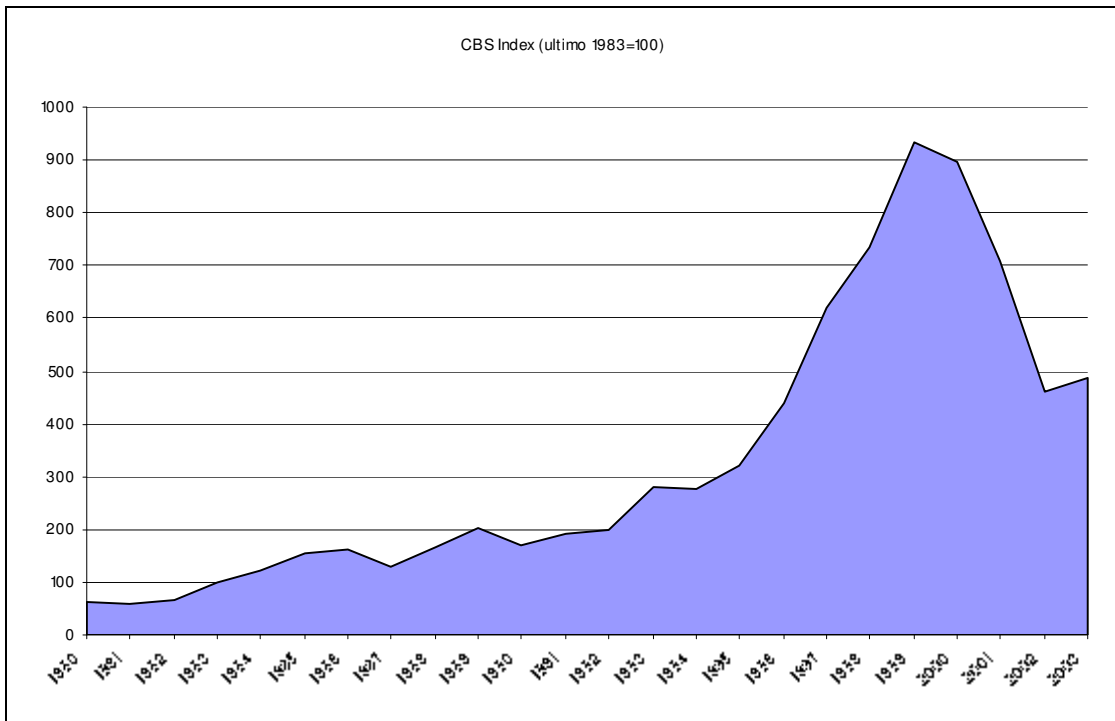
Source: Bureau Bosch 2007

Figure 10.: Total Dutch Pension Assets and Distribution over Asset Classes,
 1987-2006
 (x billion euro)



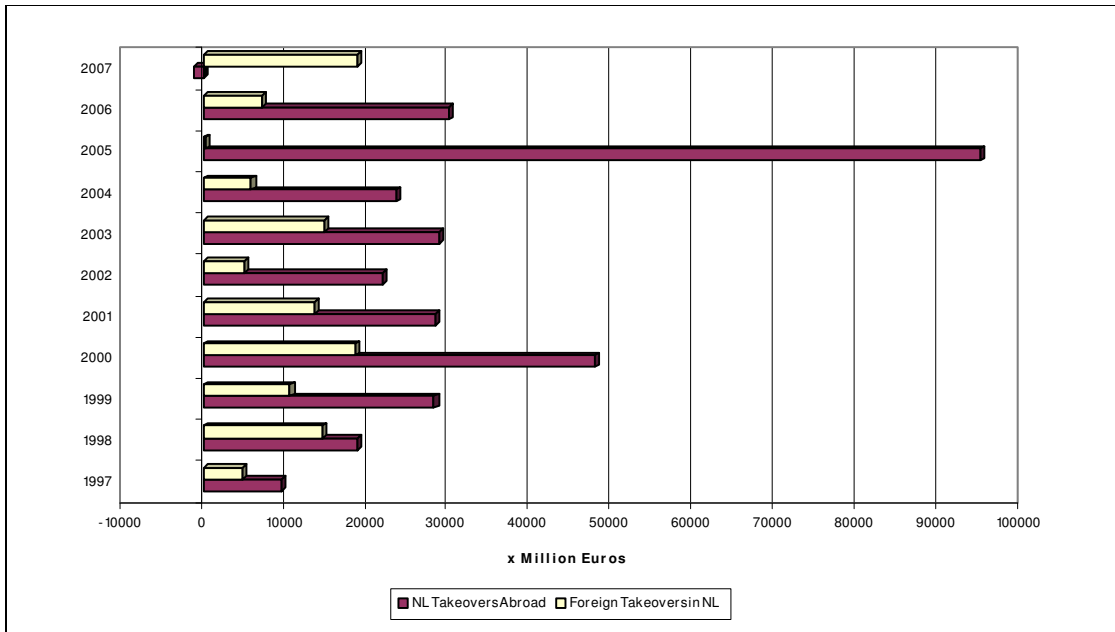
Source: CBS/DNB

Figure 11.: Developments in the Value of the Amsterdam Stock Exchange, 1980-2003



Source: CBS Statline

Figure 12.: Cross Border Takeovers in the Netherlands, 1997-2007



Source: DNB, Statistical Bulletin