Review of Evolutionary Political Economy
https://doi.org/10.1007/s43253-022-00069-4

ORIGINAL PAPER

Do modern stock exchanges emerge from competition? Evidence from the "Belgian Big Bang"

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Received: 21 September 2021 / Accepted: 17 January 2022
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Abstract

The emergence of modern stock exchanges — computerised, globalised and in competition — is rarely questioned by mainstream economics, which considers this evolution as the necessary result of the "technological shock" or of the competition between exchanges. Based on the Evolutionary Political Economy approach applied to the Belgian case, this article proposes to evaluate the role that competition played in the institutional convergence experienced by European stock exchanges in the late 1980s. It will first appear, at the end of the historical survey, that the argument of "international competition" played a major role in the debates around the "Belgian Big Bang", but was in fact not based on any reliable support: no capital flight occurred and the documents attesting to the "Belgian delay" were erroneous. We will then develop alternative explanations for the liberalisation of European stock exchanges from the perspective of economic sociology. Certain social norms — the authority of expertise, technophobia-philia, nationalism — favoured this institutional shift, more than the foreign threat. This article thus affirms the interest of a study of economic evolutions that does justice to the heterogeneity of agents, to power (especially cognitive power) and to social norms.

Keywords Financial institution · Competition · Big Bang · Economic sociology · Performativity

JEL Classification A14: Sociology of Economics · F32: Short-Term Capital Movements · F38: International Financial Policy · G15: International Financial Markets · G28: Government Policy and Regulation · N24: Europe: 1913– · N44: Europe: 1913–

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Published online: 25 January 2022

1 Introduction

The question of the emergence of stock exchanges as we know them today — computerised, globalised and in competition — is rarely asked by mainstream economics, which is not very inclined to historicise its object of study. And when it does pay attention, the answer is brief and scathing, governed by one of two complicit determinisms: sometimes the "technological revolution" forced the stock exchanges to modernise; sometimes the "liberalisation of capital movements" put the exchanges in competition with each other, forcing them to converge on the most efficient model. Thus, a representative of this perspective can state that "until recently, exchanges have been considered part of the national identity and, therefore, 'untouchable' monopolies with a mutualised structure. This situation was untenable given the increasing international competition arising from new technology and regulatory reforms" (Slimane 2012, p. 50). From an analytical point of view, it follows that the comparative studies of European stock exchanges, mainly carried out by works on "market microstructure", could be reduced to the usual model of competition; indeed, "exchanges operating in a competitive environment can be analyzed as firms" (Domowitz and Steil 1999, p. 34). From a political point of view, the liberalisation of financial markets appeared to be a natural and necessary evolution.

More surprisingly, historical studies of European stock exchanges have also often taken up the postulate of competition as a force for convergence towards the Anglo-Saxon model (introduced in Europe by the 1986 reform of the London Stock Exchange). Thus, at the end of their investigation of the determinants of the Big Bang, Bellringer and Michie (2014) conclude without elaboration that this reform made London "globally competitive". The effect of the Big Bang on other exchanges seems to constitute an unquestioned "backdrop", the "context" within which one investigates… but not *on which*. For example, in the case of the reform of the Paris Stock Exchange, both Cerny (1989) and Lagneau-Ymonet and Riva (2010) treat foreign competition as a backdrop to study, respectively, the originality of a socialist deregulation and the conflict between bankers and stockbrokers. The same is true of Posner's (2005) cross-cutting work on "new stock markets, created in the *context* of lively competition among Europe's stock exchanges" (*Ibid*, p. 12).

In contrast to these two approaches, this article proposes to problematise the role of competition in the emergence of modern stock exchanges from the Evolutionary Political Economy point of view. For this issue is not self-evident and deserves to be problematised: in what cases, and under what conditions, has competition from a foreign exchange in general, and the London Stock Exchange in particular, forced stock market modernisation? As White's (2013) study of the NYSE in the 1920s illustrates, the forces of competition between stock exchanges are plural, of varying intensity and dependent on institutional factors that deserve analysis. Moreover, the dynamics of cooperation and complementarity between financial centres can just as easily be fostered by globalisation (Schenk 2020). In other words, the decisive impact of foreign competition in the reform process

of a national stock exchange is a hypothesis that needs to be tested, rather than a trivial element of context. This article proposes a reassessment of this hypothesis based on a historical study of the reform of the Brussels Stock Exchange.

The Evolutionary Political Economy (EPE) approach is particularly suited to this undertaking. Contrary to mainstream economics, it addresses power issues in the evolution of the economic system, thus breaking with any determinism — technological or economic (Hanappi and Scholz-Wäckerle 2021). Contrary to traditional financial history, it opens up to the contribution of many disciplines, including economic sociology — which makes it possible to grasp the weight of social norms and conventions in the evolution of an institution (Cincotti et al. 2020). In addition to its historical contribution, this article offers a first mobilisation of the framework of EPE to the themes of the emergence of modern stock exchanges. On a more theoretical level, it proposes on the one hand to broaden the conceptualisation of power — generally confined to the economic (market power) and political (balance of power) dimensions — in order to embrace *cognitive* power: we believe that the notion of "performativity of economics", already well established in other fields such as the Social Studies of Finance (e.g. MacKenzie 2006; Muniesa and Callon 2013), can enrich the framework of EPE. On the other hand, it intends to assert the contribution of economic sociology to EPE: through the concept of "tropes" (Borch 2016), we will grasp the importance of social norms in the emergence of the modern stock exchanges.

This article therefore proposes a socio-historical perspective on stock markets. More broadly, it also feeds into the political economy debate on financialisation, understood here as the increase in the power of the financial sector over the rest of the economy (exemplified by shareholder value, tax dumping, etc.). Indeed, the reform of the stock exchanges represents a key step in the advent of finance-led capitalism (Guttmann 2008). In particular, the introduction of competition between financial intermediaries — coupled with incentives for stock market savings — profoundly reshaped the logic of capital allocation: from an elitist investment governed by a relationship of proximity between the saver and the expert and therefore mainly oriented towards national issuers, we have evolved towards a "popular" investment dictated by impersonal diversification strategies and therefore much less focused on national securities. This was a necessary condition for the emergence of a transnational community of investors capable of putting both companies and states in competition. Yet, while the characteristics and consequences of this side of financialisation have been documented in different regional contexts (e.g. Storm, 2018), its causes have been less explored locally. The Belgian case study thus offers a fine-grained view of financialisation "in the making" — which has been pointed as a blind spot in historical approaches to this topic (Beck & Knafo, 2020).

The rest of this article is structured as follows. First, we will retrace the main stages of the reform of the Belgian stock exchange, which has so far been poorly documented.[1] Semi-structured interviews with its main (living) actors, as well as an

[1] For a history of Belgian stock exchange regulation before this reform, see Vanthemsche (1992a, 1992b).

analysis of the documents that guided this reform, will allow us to grasp the omnipresence of the argument of "international competition" in the debates (Sect. 2.1). Then, we will problematise the argument, using data and analysis that has since become available (Sect. 2.2). The latter will greatly relativise the threat of capital flight to London; it will therefore be necessary to investigate the foundations of the reformers' argument (origin of the figures, author of the reports…), in order to account for this divergence (Sect. 2.3). It will appear that some minor, even erroneous, documents were brought to the centre of the debates, overshadowing other publications that would probably have oriented the Brussels Stock Exchange differently. Finally, we will identify the roots of this powerful argument (Sect. 3); in this way, we will be able to provide an alternative and more faithful answer to our research question, by assessing — all in all — the economic and rhetorical impact of competition on the emergence of modern stock exchanges.

2 The London Big Bang, source of all liberalisations?

The London Stock Exchange (LSE) was the first European financial centre to be hit by the wave of reforms that affected most stock exchanges on the Old continent. In October 1986, the Big Bang marked the abdication — after years of resistance — of the private club at the head of the LSE: its members conceded the end of the "single capacity" (jobber/broker distinction), the liberalisation of commissions and the full participation of foreign firms (Michie 1999). As we pointed out in the introduction, this institutional change had profound repercussions on the economic system. But one condition for this reform to be so effective is its diffusion. We know today that it has spread to most European countries. From the Belgian case, we will question the driving force of this phenomenon of contagion. It will appear that the presumed suspect (competition) has not occupied the place attributed to it by the botched trial of mainstream economics.

2.1 "A condition of survival"

The project of transformation of the Brussels Stock Exchange took shape between 9 May 1988 (the Minister bearing the bill took office) and 4 December 1990 (final adoption), and was divided into three stages: the delivery of an expert report, the drafting of the bill by a commission and the debate and vote in both chambers. Throughout these three moments, important actors supported their point of view by referring to the new LSE and the danger it represented for the Belgian situation.

Charles Goldfinger was the main architect of the new Brussels financial centre. His name no longer means much to most of us, but this French consultant had his moment of glory on the Belgian media scene in the late 1980s. In his first book *La Géofinance. Pour comprendre la mutation financière*, Goldfinger depicted the new financial system, propelled by "three fundamental forces" (technology, globalisation and deregulation) and now governed by its own laws. While his analysis may seem worrying, the author advocates instead to "get on the train", by learning from the

system in order to adapt to it — the British case was already the example to follow: “London offers a unique combination of tradition and innovation. It has become the model of an international financial centre; a model that others seek to imitate rather than improve” (Goldfinger 1986, p. 175). While this book gave him a certain media visibility, it was other, more informal, factors that enabled him to gain access to political power.

In his book as in his chronicles, Goldfinger invents concepts to grasp a reality that is considered to be new, or even just emerging: *géofinance*, *monnaie informationnelle*, *foire aux risques*… If these innovations have not survived him and therefore seem original at best, crazy at worst, they may have legitimately fascinated some of his contemporaries. Bernard Snoy was one of them. Both former *World Bank* employees, Snoy and Goldfinger saw each other by chance on the train between Brussels and Paris and began to discuss. So much so that when Snoy entered the office of the new Minister of Finance, Philippe Maystadt, in May 1986, “I said: ‘this is the man we need’” (interview with B. Snoy [henceforth IBS]). On Snoy’s proposal, the Social-Christian Minister Maystadt commissioned a report from Charles Goldfinger, who presented him with a first version less than a month later. Its tone was grave:

> The modernisation of the Brussels Stock Exchange is an absolute necessity. Indeed, the Brussels Stock Exchange lags considerably behind other European stock exchanges (…). This delay puts it in a weak position compared to the alternative solutions, the off-exchange market or the London Stock Exchange (note of 29 July 1988, 1[2]).

In the final version of the report, it appears that nine Belgian companies are listed on the Stock Exchange Automated Quotation International (SEAQI), the new London platform for foreign companies. Even more alarming, “for some countries (Holland, Belgium, France), transactions on SEAQI can represent between 20 and 50% of the daily volume” (Goldfinger report 1988, p. 78). But it was above all the end of the report, presenting the advantages and handicaps of the Brussels Stock Exchange, that made the London danger visible by comparing the differential in transaction costs between the two places: Brussels appeared to be more expensive, both for shares and bonds (cf. Figure 2 and Fig. 3).

“This report was decisive” (IBS). Indeed, in his introductory speech to the commission which was set up in September 1988 to draft the bill and settle the conflict between stockbrokers (*agents de change*) and bankers, the Minister took up Goldfinger’s main prescriptions (liberalisation of access to the stock exchange and of brokerage), based on his report and on the argument of competition from the LSE: ‘as Charles Goldfinger has brilliantly demonstrated (…) the geofinance exposes us to the danger of relocation of financial activities from the Brussels financial centre to more competitive centres, [to such an extent that] the modernisation of the entire Brussels financial centre becomes a *condition of survival*’ (introductory speech to

[2] The archives mobilised in this article are mostly part of Bernard Snoy’s personal collection. We take this opportunity to thank him greatly.

the Commission, 7). When, at the end of his speech, Maystadt discusses the handicaps and advantages of the Brussels Stock Exchange, he focuses on the amounts of transaction costs, which we will analyse in the second part of this article: “It must be recognised, as shown in the tables on pages 159 and 160 of M. Goldfinger’s report [see Fig. 2 and Fig. 3 below], that the Brussels Stock Exchange is not competitive” (*Ibid*, 10). To get a glimpse of the impact of this argument, let the Minister continue:

> I am fully aware of the negative role that the tax on stock exchange operations plays in this respect and I am willing to consider its abolition (…). But the analysis of the components of stock exchange intermediation costs clearly shows that it is not taxation but the level of brokerage commissions that is mainly responsible for our low competitiveness and therefore for the exodus of these transactions to other markets (*Ibid*, 10–11).

The argument, quantified and supported by the expert and the Minister, is being dropped in the arena of the commission and is not about to come out of it.

Essentially composed of representatives of stockbrokers (wishing to maintain a privileged status) and bankers (wishing to have more direct access to the stock market), this commission gave birth in December 1988 to a reform project very close to the Minister’s initial proposals. Although the latter were quickly perceived as largely unfavourable to the stockbrokers (by ending their monopoly), they were maintained, notably thanks to the interventions of Léo Goldschmidt, the main representative of the bankers who were in a position of strength. Faced with proposals to moderate or postpone the reform, Goldschmidt played the same powerful card — the threat of international competition: “our financial intermediaries are already lagging far behind foreigners; it is urgent to get the system up and running” (report of the meeting of 3 Oct. 1988, 7). This expression was used several times in the course of the discussions: “a too substantial [regulation of transactions] would *chase away* securities transactions abroad” (report of the meeting of 10 Oct. 1988, 4[3]). Finally, when it comes to the sensitive issue of brokerage, the Minister announces that “all means must be implemented to prevent securities transactions from being drained abroad” (*Ibid*, 3). Any obstacle to liberalisation was stigmatised by bankers’ representatives as an “incentive to create companies that would operate in London” (*Ibid*, 16), that is as a threat to the survival of the Belgian financial centre.

The third and last moment of this reform involves the debates and votes of both Belgian chambers. As early as the explanatory memorandum, it is recalled that “the major advances in information technology and telecommunications have made capital flows highly mobile and there is a need to be very aware of the danger of a possible relocation of financial activities from our country to other more competitive financial centres”; consequently, “the modernisation of the Belgian stock exchange and financial markets in general is not only desirable but even *vitally necessary*” (explanatory memorandum of 18 Apr. 1990, 4–5). The handicaps pointed out and quantified by Goldfinger are then taken up again to justify tax relief and the

[3] We find again this expression in pp. 6 and 8, as well as in the report of the meeting of 17 Oct. 1988, pp. 15 and 17.

progressive liberalisation of brokerage: “the competitiveness of a stock exchange is increasingly measured by the costs of transactions involving high amounts. European Commission [actually, Goldfinger’s] statistics have shown that the Brussels Stock Exchange is not currently competitive for these transactions” (*Ibid*, 9).

During the work in the parliamentary committee, Minister Maystadt is even more explicit: “one of the most important objectives is to bring back to the Brussels Stock Exchange the transactions in Belgian shares that tend to move to London” (report of the parliamentary committee of 12 June 1990, 6). Here again, during their hearing before the committee, the bankers’ representatives supported their wish for deregulation with the argument of international competition: the director of a big Belgian bank went so far as to argue that “because of the archaic structure of the Belgian financial centre, the majority of the Belgian equity market is already located in London today” (*Ibid*, 49). During the discussions, references to the LSE continued to flow in, without any figures being mentioned or demanded — the Minister merely referred to the conclusions of the Goldfinger report: “brokerage rates in the Brussels market, for example, are significantly higher than in London. This is why some important transactions are carried out in London and not in Brussels” (*Ibid*, 143).

Surprisingly enough, the fiercest opponent of this bill was the young Guy Verhofstadt of the Flemish Liberal Party, then nicknamed ‘Baby Thatcher’, who strongly condemned Minister Maystadt’s dirigiste orientation: “the total over-regulation [implies] (…) a great danger that some activities will be moved abroad”. As proof of the Anglo-Saxon dynamism, he also points out that “the most important transactions of the Belgian star companies (*steraaridelen*) are still done in London and not in Belgium” (plenary session of 19 June 90, 3001). The argument of international competition was therefore not contested, but its conclusions radicalised. However, the opposition was not threatening: Verhofstadt was marginalised, while only one ecologist MP gently warned against the “consequences of the speculative excesses” (*Ibid*, 3012). The climate was favourable to the Minister, with MPs from all sides praising his both “urgent” and “reasonable” approach. Liberal MP Poswick even made the following observation: “in 25 years of parliamentary life, I have never seen a technical document examined in such serenity” (*Ibid*, 2998).

Things were not much different in the Senate. One of the most debated issues, the degree of liberalisation of brokerage, was the subject of many proposed amendments fed into the argument of international threat. Similarly, one member proposed the total abolition (rather than a sharp reduction) of the tax on stock exchange transactions, stating that, in this way, “transactions that are currently carried out either in London, Germany or other countries will return to Belgium” (Senate committee report of 30 Oct. 1990, 155). During the plenary debates, the tone was relaxed, with the vast majority admitting that this modernisation was necessary — although some considered that it came too late: “we have lagged a little behind, for example, compared to the ‘big bang’ of four years ago” (plenary of 07 Nov. 1990, 185). In the final vote, the bill was passed by a rare majority: only nine members of parliament voted against it, while 108 were in favour (plenary session of 29 Nov. 90, 879). A few seconds before this vote, socialist MP Defosset reiterated for the umpteenth but last time that “the danger of relocation of financial activities to other, more attractive financial centres made it necessary to modernise the Belgian stock exchange and

financial markets" (*Ibidem*). It is time to assess more carefully what this argument covers.

2.2 What forces behind "international competition"?

At this stage, it is clear that the argument of international competition has been under-problematised, despite its weight in the three stages of the reform project. Not only have no serious estimates documented the debates, but the concrete drivers of the dangers of relocation have never been made explicit. What do we mean when we talk about the risk of Belgian savings fleeing to the LSE? This phenomenon — whose importance for Belgium's economic stability is not in question — can in fact take two forms. Firstly, a company that finances itself via the stock exchange may withdraw from Brussels to be listed in London, in order to benefit from greater liquidity (more accessible and cheaper capital) or lighter regulations (in terms of information to be published in particular). Savers — both Belgian and foreign — wishing to put this stock in their portfolio will then have to use the services of an intermediary in London, rather than in Brussels. Secondly, the investor may, on his own initiative or on the advice of his broker, direct his buy or sell orders to London rather than Brussels, in order to incur lower transaction costs. This second movement is all the more likely since the companies coveted by Belgians are listed in London, and vice versa — the two forms are therefore distinct, but interdependent.

In hindsight, what do we know about the first risk, that of capital flight through the listing of Belgian companies in London? First of all, let us notice that all the companies in question are listed *both* in London and in Brussels. This double listing does not mean that no capital flight is to be feared, but that capital flight will occur if and only if listing in London causes a drop in transactions in Brussels. To capture the effect of the Big Bang on this first aspect, it is necessary, as Goldfinger has done, to look at the SEAQI, the platform born during the reform in order to attract foreign companies to the London organised market. It should be noted that before the Big Bang, the phenomenon of double listing was not absent: moreover, it seemed to turn in favour of the Brussels Stock Exchange, which in 1981 listed 16 British companies and still 14 in 1986 (compared to only 2 Belgian companies listed on the LSE for both periods) (Biddle and Saudagaran 1989; Pagano et al. 2002). As far as SEAQI is concerned, no reliable data was in fact available when the Belgian reform was drawn up: "Accurate data on foreign equity trading in London only became available in February 1990 with the full introduction of SEQUAL, the London Stock Exchange's trade reporting and confirmation system for stocks quoted on SEAQ International" (Worthington 1991, p. 247). This partly explains the discretion of figures supporting the argument during the debates…

How, then, did Goldfinger manage to assert in its report to the Minister in July 1988 that nine Belgian companies are listed on SEAQI, and that this would represent "between 20 and 50% of the daily volume"? Goldfinger was close to the financial world and probably relayed, without sufficient precautions, market rumours. The problem is that subsequent studies have invalidated these rumours. Anderson and Tychon (1993), two economists from the Catholic University of Louvain, were the

first to look into companies listed both on the SEAQI and on the Brussels Stock Exchange: the first one was the *Kredietbank* (the forerunner of *KBC*), which was introduced on the SEAQI in… January 1990, that is two years after the Goldfinger report. However, some of the data in this article seem to confirm the danger of this first form of capital flight: the number of Belgian companies listed on the SEAQI does indeed rise, reaching a total of 12 in December 1992. There were even 14 in June 1994 (Degryse 1999). Certainly, Goldfinger anticipated the trend, but wasn't he visionary? Two lessons from the literature invalidate this conclusion.

Firstly, as we have noted, for this double listing of Belgian companies to reflect a capital flight, one must observe a fall in the volume of transactions made in Brussels on these companies. However, this is not the case. According to the econometric study by Anderson and Tychon (1993), we would even rather see the opposite phenomenon: "there is evidence that the fact that a stock is traded on SEAQ International has helped to promote trading of that share on the Brussels market" (*Ibid*, 368). We could, however, object that this increase in the volume of transactions in Brussels is due to the general increase in demand for financial products, and that it would have been greater without competition from SEAQI. Admittedly, one could no longer speak of capital flight, but at least of a deprivation of growth — equivalent, in 1992, to almost 30 per cent of the volume of transactions in these shares (Bank of England 1993, p. 355). Again, this would be wrong.

The second lesson from the literature allows us to rationalise, but also to radicalise Anderson and Tychon's observation. It comes from a little-known article by Jacquillat et al. (1998), which scrutinises the production of the official statistics of the SEAQI and the Brussels Stock Exchange. The SEAQI is a price-driven market: at any given time, market makers offer a range of prices for all the securities for which they are responsible. In the data recording system, if investor A wants to sell an amount M of shares and counterpart B wants to buy the same amount, the transaction will be encoded a first time when buying from A, a second time when selling to B, or even a third time if the market maker transfers the securities to another market maker. Conversely, the Brussels Stock Exchange is order-driven: in the same situation, A's sell order will meet B's buy order, so that the total volume encoded will be worth M, that is two or three times less than on the SEAQI for the same transaction. "Taking these differences into account to correct volume statistics, SEAQI's share in Belgian stock transactions falls to 19.15%" (*Ibid*, 382). But there is more. On the basis of a questionnaire survey of the main London market makers of Belgian stocks, the authors estimate that the vast majority of transactions received on SEAQI are offset by a symmetrical order in Brussels (which is itself encoded in the registration system)! This hypothesis is corroborated by a very strong correlation between the daily volume of a share on the SEAQI and that on the Brussels Stock Exchange. The dominance relationship seems to be the opposite of the one assumed in the debates: "SEAQI may be viewed as a non-independent satellite market" (*Ibidem*).

If the London market makers felt the need to offset each transaction with a symmetrical order on the Brussels Stock Exchange, it was firstly because they did not want to tie up their assets in too many illiquid shares (or, conversely, to replenish their minimum stock of Belgian shares which they quoted), and secondly because they probably had advantageous partnerships with some Brussels brokers. The latter

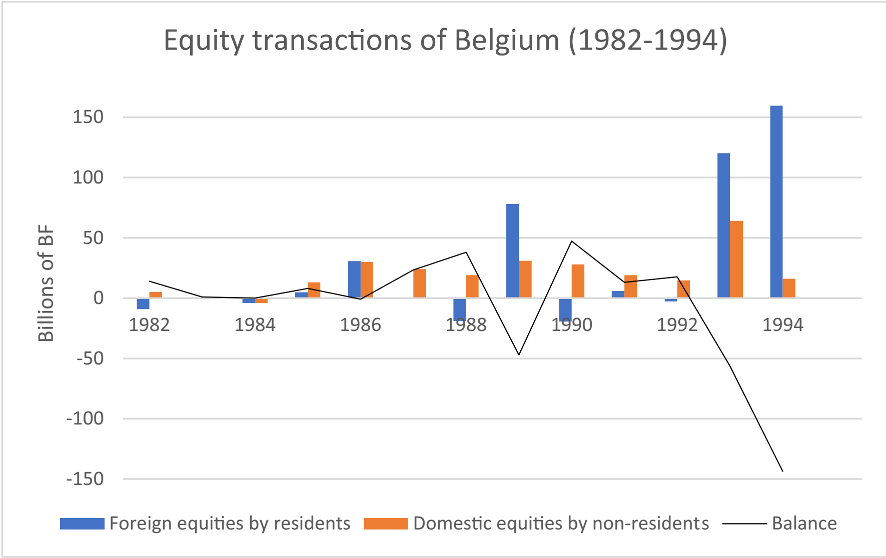

Fig. 1 Equity transactions of Belgium (from National Bank annual reports)

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BRUXELLES - LONDRES
COUTS DE TRANSACTIONS

COMPARAISON DES COUTS D'INTERMEDIATION BOURSIERE EN %, POUR UNE TRANSACTION DE £ 70 000 (SOURCE: BENOIT MELOT, MEMOIRE, NAMUR 1988).

	ACTIONS		OBLIGATIONS		FONDS D'ETAT	
	I.S.E.	BRUX.	I.S.E.	BRUX.	I.S.E.	BRUX.
BROKER/ AGENT DE CHANGE	0,30%	0,80	0,38	0,80	0	0,4
TVA (ISE) 15% COMM	0,05	/	0,06	/	0	/
MARKET MAKER	0,35	/	0,13	/	0,02	/
DROIT DE TIMBRE	(0,5)	0,15	/	0,14	/	0,07
DROIT COMPLEMENTAIRE	/	0,07	/	0,07	/	0,03
TOTAL	0,7	1,2	0,57	1,01	0,02	0,5
POUR UN INVESTISSEUR INSTITUTIONNEL:						
LE TOTAL EST DE	0,35	1,02	0,13	1,01	0,02	0,5*

* AVEC 0,07% EN PLUS POUR LES OBLIGATIONS PARA-ETATIQUES

MINISTRE DES FINANCES Bruxelles, le 31 aout 1988

Fig. 2 Slide 160 of the Goldfinger report

also had a lot to gain, so much so that when Olivier Lefebvre, director of the Brussels Stock Exchange from 1995 to 2007, went to London to offer direct access to market makers active in Belgian stocks, some of them reacted violently: “when I

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ACTIONS INTERNATIONALES

COUTS DE TRANSACTION POUR LES BLOCS, OCTOBRE 1987: (SOURCE EUROMONEY)

PAYS	TRANSACTION	COUT (% MONTANT)
BELGIQUE	>10 MILLIONS BFR	0,9
FRANCE	>2,2 MILLIONS FRF	0,365
RFA		0,725
ITALIE		0,96
JAPON	50 A 100 MILLIONS JPY 100 A 1000 MILLIONS JPY + DE 1 MILLIARD JPY	1,02-0,47 0,80-0,25 -
HOLLANDE		0,3
SUISSE	DE 1 A 2 MILLIONS SWF PLUS DE 2 MILLIONS SWF	0,29 -
GRANDE BRETAGNE (NEGOTIABLE)		0,7-0,2

MINISTRE DES FINANCES Bruxelles, le 31 aout 1988

Fig. 3 Slide 159 of the Goldfinger report

came back from London, I was insulted by the head of *Kredietbank* because I was stealing his clients" (interview with O. Lefebvre). Indeed, at the time, "the *Kredietbank* probably channelled 30 per cent of the orders coming from London on Belgian stocks" (*Ibidem*) and therefore lost a lot if London market makers had direct access to the Brussels trading platform. In the end, the London market represent for the Brussels Stock Exchange less a competitor than a (very irregular) provider of liquidity on cross-listed shares, as well as an undeniable marketing promoter.

Is the second form of capital flight to London more verified? At the end of the 1980s, did savers redirect their orders to the City rather than to Brussels? We know that even if the investor wants to buy a Belgian share in London, the transaction will very often be executed, at the end of the chain, on the Brussels Stock Exchange. Our investigation should therefore focus on the redirection of orders on non-Belgian stocks, that is, for example, on the decision of a Belgian resident to sell his *Petrofina* shares to acquire *Tesco* shares in order to incur lower transaction costs. Unsurprisingly, data filtered in this way was not available at the time. However, the *National Bank of Belgium* (the Belgian Central Bank) regularly published the balance of amounts invested by residents in shares abroad (purchases—sales), as well as the balance of shares acquired by non-residents in Belgium — two valuable indicators of the attractiveness of the Brussels Stock Exchange, which were surprisingly absent from the debates on the reform. These figures have been included in Fig. 1.

It is clear that from 1986 to 1988, the period between the Big Bang and the beginning of the reflections on the Brussels reform, no capital flight was recorded on shares. Admittedly, in 1986, the *National Bank* noticed an explosion in the purchase of shares abroad by residents; however, it does not think of associating this event

with a lack of competitiveness of the Belgian financial centre, but rather with a legitimate desire for diversification: "this development can undoubtedly be explained by the fact that Belgian investors, after having discovered Belgian shares in previous years, wanted to further diversify their portfolios in this area as well" (annual report 1986, p. 161). In 1987, the balance became largely positive, with Belgian residents reducing their purchases of foreign shares. The year 1988, the reference year for Goldfinger's work, will not provide more arguments to the reformers: Belgians repatriate their capital to Brussels without foreigners moving away from it. According to the *National Bank*, "this relative disinterest of residents in investing in foreign equities can probably be interpreted as a consequence of the stock market crisis of October 1987, which, by abruptly interrupting the rise in prices observed since the beginning of the 1980s, led savers to reassess the risks inherent in investing in shares" (annual report 1988, p. 115).

At this stage, it should already be noted that the argument of capital flight to the new LSE, so powerful from the early stages of the reform, is not supported by any facts between 1986 (year of the Big Bang) and 1988. We will see later why the weakness of this second form of capital flight is not so surprising. In 1989, however, a first deficit appears, largely attributable to purchases by residents of shares abroad. How can we account for this evolution? The argument that the Brussels Stock Exchange was not very competitive appears weak, given that neither the London nor the Brussels Stock Exchange changed their structure profoundly in that year. As the *National Bank* notes, it is more likely that this initial deficit was due to the advent of a new technique for managing shares: "residents made – mainly through collective investment schemes – large purchases of shares in foreign companies, particularly French and British ones" (annual report 1989, p. 71). It is this delegation of decision-making power to mega-investors in charge of asset diversification that explains these capital movements, much more than the institutional structure of the various stock exchanges. The same applies to the swing back in 1990: "the fall in stock market prices, particularly in the United States and Japan, led residents and, above all, collective investment schemes, to which the latter had entrusted the management of their assets to an increasing extent in recent years, to liquidate a large proportion of their foreign shares" (annual report 1990, p. 82).

Less patriotic than the Belgians whose assets they manage, mutual fund managers are certainly more inclined to sacrifice Belgian shares for foreign securities. More unstable, their allocation of these collective saving does not, however, seem particularly unfavourable to the Brussels Stock Exchange before the reform (cf. above) … and even less particularly favourable afterwards! This is evidenced by the unprecedented capital flight of the following years: these "institutional investors", whose establishment in Belgium was favoured by the reform of the Stock Exchange which offered them a privileged fiscal status, seem to be more influenced by their "anticipations of exchange rate and interest rate evolutions" (annual report 1993, p. 100) than by the institutional nature of the stock market. Thus, would the reform of the Brussels Stock Exchange have created the danger that it thought it was fighting against? Faced with such an accusing observation, Bernard Snoy retorts: "it is true that mutual funds have made savings more mobile, but in any case, savings were going to be more mobile, and above all it was clear that Europe was going to impose

the free circulation of capital on us" (IBS). This is an argument of a completely different nature, probably more relevant, but whose assessment goes beyond the scope of this article.

2.3 The mystery of transaction costs

We have seen that the flight of capital from Brussels to London — the *manifestation* of international competition — has not taken place. However, the transaction costs put forward by Goldfinger — the *basis* of international competition — are much lower in London, apparently thanks to the computerisation and liberalisation of brokerage that took place during the Big Bang. To resolve this paradox, let us take a closer look at the figures. It should be remembered that these statistics, taken up several times by Minister Maystadt, were the main database documenting the reform. They are taken from two slides of the Goldfinger report. The first one, shown below (see Fig. 2), compares the transaction costs for an order worth 70,000 pounds (about 4,600,000 Belgian francs), for three different securities (shares, bonds and government securities). As in our previous analyses, we will focus on equities — a focus justified by the increasing weight of this category of securities (especially in the portfolio of institutional investors), its independence from public borrowing (allowing the institutional structure of the stock exchange to be isolated) and its importance in the economic justification of the reform ("enabling companies to access cheap financing"). The source mobilised by Goldfinger is surprising. It is a master's thesis, namely the work of a student at the end of his university programme.

The master's thesis from which this table is taken was written by Benoît Mélot, a student from Namur who had the opportunity to complete a two-month internship at the LSE thanks to his uncle who worked for a major Belgian bank. Impressed by the discrepancy between the modernity of the English financiers he had met and the archaism of the 'provincial stock exchange (*Bourse de province*) … full of dust [with] the old stockbrokers, and the chalk…' (interview with B. Mélot), Mélot mobilises this table to case for a liberalisation of the Brussels Stock Exchange. First of all, let us note the arithmetical error (or lucky misprint) of Goldfinger: the first total of the transaction costs for shares in Brussels indicates 1.2, whereas the sum of the components is 1.02.

But, more fundamentally, three methodological options can explain the difference between Mélot's unequivocal conclusion — "transaction costs are significantly lower in London" (Mélot 1988, p. 86) — and the more nuanced results of subsequent studies (Anderson & Tychon 1993; Degryse 1999). Firstly, Mélot puts himself in the perspective of a Belgian investor and therefore integrates the exemption from stamp duty that London grants to foreigners (the 0.5 per cent is therefore not included in the London total). Secondly, the cost that Mélot associates with the market maker will generally be lower than that faced by the Belgian investor. This cost — referred to as an "indirect cost" in the literature — represents the price range offered for a given share: if a market maker is the only one to quote a share, he will be able to afford a large spread between the buying and selling prices he offers (this spread being the implicit commission paid by the

Global Equity Transaction Costs (October 1987)

Euromoney, with the help of a number of securities houses, has compiled this table of transaction costs in 16 of the world's major exchanges at the time of the Crash. It includes commission rates and taxes, to present the most complete picture yet published.

Country	Commissions (%)	Taxes (%)	Total (%)
Australia (Negotiable)	0.50-0.60 Agency	0.30 Stamp	0.8-9%
Austria			1.0%
Belgium	0.80-Bfr1-5million 0.60-Bfr5-10m 0.50-Bfr10m +	0.40 Stamp	1.2% 1.0% 0.9%
Denmark	0.50	0.50 Transfer	1.00

Fig. 4 Transaction costs of the different places, by Euromoney magazine (Barrett 1988, p. 98)

investor to the market maker); if, on the other hand, many market makers compete with each other, they will be forced to narrow their range to be more attractive. Generally, the indirect cost also includes the impact of the investor's order on the price: in an illiquid market, a large buy order cannot be fully absorbed by the first sell order and will have to resort to the second or even third sell order (at a higher price, by definition). In the two studies already cited comparing the transaction costs of the two exchanges, these indirect costs were higher in London than in Brussels and well above 0.35 per cent (0.98 per cent for a transaction of the same amount at Anderson & Tychon).

The origin of this major difference is simple: Mélot took over the spread of "alpha shares", that is the most liquid shares on the LSE, whereas subsequent studies were based on cross-listed shares, which are of course much less liquid. Mélot's choice appears difficult to justify: it seems logical to select shares that are listed on both stock exchanges, that is shares on which these exchanges compete, if the objective is to measure the competitiveness of each of them. All the more so since, as indicated in the *Bank of England* study mobilised by Mélot, alpha shares represented at the end of 1986 barely 3.5 per cent of the shares listed in London (Ingram 1987, p. 58), and we know that Belgian stocks were not among them. For less liquid shares ("beta" and "gamma"), the costs associated with the spread were close to Anderson and Tychon's estimates, ranging from 0.7 to 1.6 per cent (*Ibid*, 59).

And thirdly, the last reason for the difference in results is that transaction amount used by Mélot to represent the individual investor (as opposed to the institutional investor) is very high: it is about 4.6 million francs, whereas the average transaction on the Brussels Stock Exchange was about 0.9 million (Degryse 1999, 1339). Again, this choice has serious consequences, since subsequent studies estimate that the total transaction cost (direct + indirect) is lower in Brussels for transactions of *less* than 1.5 million (*Ibid*, 1350). It would therefore appear that, prior to the Brussels reform, the pricing structures of the two exchanges were compatible with the division of tasks that was subsequently established: small orders are directed to Brussels, while large orders — often from abroad — arrive in London (before finally being executed in Brussels).

Table 1 Summary of findings

Form of capital flight to London	Conclusions
Listing to *London Stock Exchange*	-Only cross-listings (12 in 1992) -Cross-listing increases transaction volumes in Brussels -The SEAQI volume is overestimated -Most SEAQI orders for Belgian shares are executed in Brussels
Redirection of orders	-Positive equity balance from 1982 to 1988 -Sharp movements caused by the institutionalisation of savings -Transaction cost differentials too small to impact institutional investor allocation

Finally, let us briefly look at the second slide presented by Goldfinger (see Fig. 3), which called for similar conclusions on the competitiveness of the Brussels Stock Exchange for a larger transaction (above 10 million francs). The magazine behind these pioneering calculations, *Euromoney*, was founded in 1969 by and for investors active in the flourishing Euro-currency market. It is therefore not surprising that their original table (see Fig. 4) is based on statements by London market participants, who were too uninformed about Belgian legislation to know that the stamp duty was 0.15 per cent and not 0.4.

In contrast, the brokerage rates, published by the Brussels Stock Exchange Commission, were known to all and are therefore those effectively demanded by stockbrokers. It is easy to imagine why the London securities houses overestimated Belgian stamp duty: without direct access to the Brussels Stock Exchange, they were forced to go through a Belgian intermediary who had every interest in exploiting the asymmetry of information on transaction costs inherent in Belgian legislation. But Goldfinger knew all this. And Minister Maystadt, to whom he presented this report, also knew that the stamp duty was not worth 0.4 per cent. It is therefore difficult not to see behind the merging of the two columns (hiding the division of the cost between commission and taxes) an intellectual dishonesty on the part of Goldfinger. At the same time, let us note that the *Euromoney* table ignores the indirect costs mentioned above, which were favourable to the Belgian position, and that the 0.2–0.7 range shown for London reflects the possible exemption, already mentioned by Mélot, of British stamp duty of 0.5 per cent for foreign investors.

It is likely that, as two subsequent studies have shown (Anderson & Tychon, 1993; Degryse, 1999), transaction costs for large volumes are lower in London than in Brussels. But, contrary to what the Goldfinger report suggests, this difference was not very significant. Yet for institutional investors to cause a capital flight from Belgium to the City, Belgian shares must either be listed in London, or the gain in terms of transaction costs must compensate for the loss of diversification caused by the abandonment of Belgian stocks. But this was not the case at the end of the 1980s. On the one hand, we saw that orders on cross-listed shares were finally executed in Brussels. On the other hand, where they existed, the differences in transaction costs were smaller than those found in the documents used in the Goldfinger report and insufficient to dictate the allocation policy of mutual funds. Table 1 summarises these key findings.

3 The other causes of Big Bangs

Our analysis leads us to greatly relativise the importance generally admitted in economics of competition as a factor of institutional convergence, at least for the Belgian case. But the study by Gresse and Jacquillat (1998) suggests that the same was true for the "competition argument" between the LSE and the Paris Stock Exchange. To conclude, we shall put forward another explanatory factor, of a sociological nature, which makes it possible to account for the contagion of the London Big Bang and for the *rhetorical* importance of the argument of international competition. The reform of the European stock exchanges was fuelled by the power of three tropes[4]: the authority of economics, the mixture of fear and attraction to new technologies and nationalism.

3.1 Goldfinger, the expert of markets

Some authors have rightly argued that EPE can be enriched by Michel Foucault's power-resistance duality (Hanappi and Scholz-Wäckerle 2021). We would like to add his concept of "power-knowledge". This reading allows us to broaden our conception of power by integrating issues of cognitive space creation and scientific authority. Certain alternative disciplines in economics, such as the Social Studies of Finance, have already been able to reap the benefits of such a perspective by studying the impact of a theory on its object (Muniesa and Callon 2013): certain financial models, for example, have only become true because they were used by traders (MacKenzie 2006). With respect to the financial liberalisation of the 1980s, several works have traced the influence of the Chicago School economics (Mirowski 2014; Blyth 2002; Chwieroth 2010). This scientific discourse is said to have provided world leaders with decisive arguments for, among other things, lowering barriers to capital movements or letting exchange rates float. In the same spirit, but using the approach of the "sociology of translation" (Latour 2005), Cornel Ban (2016) has highlighted the impact of local relays of neoliberal precepts: depending on their insertion in certain professional networks, national experts reformulate, much more than they apply, American economic theories. In our case study, this last perspective seems particularly appropriate for understanding the influence exerted by Charles Goldfinger. Indeed, if he was the main relay of American economics in Belgium for thinking about the reform of the financial markets, it is a very particular version — "translated" — that he transmitted to us.

With a degree in architecture from Paris and a doctorate from the *Berkeley Institute of Urban and Regional Development*, Goldfinger was nevertheless received by the Minister as a "doctor of economics from the University of Berkeley" and listened to as an expert on markets. If Belgian economics, already "Americanised" since the late 1960s (Maes and Buyst 2005), has learned little from Goldfinger, it is

[4] We take this notion from Borch (2016) who mobilises it to capture the power of the technological fear in the "eventalisation" of another financial episode (the Flash Crash of May 2010), compensating the weakness of other — more traditional — arguments such as the economic importance of the Crash.

nevertheless thanks to him that the concept of “transaction cost”, which was born less than 20 years earlier in the United States (Ketokivi and Mahoney 2017) and which constituted a fundamental component of the argument of international competition, has been imported into the political debate. But, as can be seen from his book *La géofinance*, Goldfinger’s economics is a singular version of the Chicago School. Fascinated by recent economic-technological developments, Goldfinger introduced, for example, as a survival imperative with respect to London, the latest products of financial economics that had only been introduced in the United States a few years earlier (Millo 2007) and that were not yet established throughout Europe (McLean 1991), such as index-based derivatives. Thus, as early as March 1991, the BEL 20 index appeared for this purpose: “the main purpose of this index is to (…) serve as an underlying product for options and futures contracts” (brochure “The Indices of the Brussels Stock Exchange” 1995, p. 37[5]). This first trope therefore appears convincing: certain economic theories from the American universities have exerted, through the very particular relay of Charles Goldfinger, an influence on Belgian financial liberalisation by supporting the argument of international competition and the urgency of reform.[6]

3.2 The technophobia-philia

A second trope explaining the power of the argument of international competition is its ambivalent modernist resonance, both technophile and technophobic. On the one hand, an anxious fascination with the new communication technologies, fuelled by Goldfinger’s reading, further dramatised the image of a small Belgium stripped of all its resources in a fraction of a second. During the debates in both chambers, this second point was particularly striking: “the great advances in computing and telecommunications have made the flow of capital very mobile and there is reason to be very aware of the *danger* of relocation” (explanatory memorandum of 18 Apr. 1990, 4). But on the other hand, this modernism was also technophile. The London Big Bang represented an opening towards the future, in the face of which the corporation of stockbrokers could only symbolise, in Brussels as in Paris (Lagneau-Ymonet and Riva 2010), a retreat into the past. In his book, Goldfinger was already of the opinion that “[the Big Bang] should lead to the transformation of what is still largely a rather artisanal and closed club into a modern and open market” (Goldfinger 1986, p. 361). The reformers at work shared this conception:

> The technological revolution allowed the computerisation of transactions (…) and the *modus operandi* of the stockbrokers (*agents de change*) appeared very old-fashioned (…) the example, obviously, of the London Big Bang, is the

[5] On the history of the Belgian index, see Duterme (2021).

[6] This can be qualified as “performative”, provided that the concept is extended beyond “Barnesian performativity” (restricted by MacKenzie to the self-fulfilling effects of a theory) to include all the effects of economics on the economy (as initially proposed by Callon, 1998). Indeed, if Goldfinger’s concepts did not make the transaction cost differential “truer” (Barnesian performativity), they did influence the shaping of the new Belgian stock market.

> arrival of banks on the financial markets (…). But the stockbrokers lived like the corporations of the old regime (*laughs*) (IBS).

As for the other tropes, the Belgian press contributed to this feeling: "the auction, the chalk, the small notebooks, all this has an indisputable charm which will be, if we are not careful, that of a provincial stock exchange" (Coenjaerts 1988, p. 3). Often attached to the Napoleonic Code of 1801 which established their monopoly, or, which is not much better, to the last important stock exchange legislation of 1935, stockbrokers obviously did not enjoy the same power of attraction as that of the LSE. In addition to the conceptual support of Goldfinger-style economics, the liberalisation of the stock exchange was thus also based on the attraction of British modernity — perceived as opposed to '*the fundamental archaisms of the Belgian financial world*' (Vanempten 1992, p. 426).

3.3 The "Poor Little Belgium"

The last trope refers to the national dimension of the argument of international competition. The image of a nation powerlessly noticing that its financial resources are running away at the speed of light has undeniably a power of interpellation. The dramaturgy of the lexicon — "flight", "drainage", "exodus"… — is still prominent in the memories of Bernard Snoy, Maystadt's chief of staff:

> You have this mass of capital floating around that you can't prevent from coming in or going out (…); as soon as the liberalisation of the capital markets appears inevitable, well… savings will be sucked up (*aspirée*) where the transaction costs are the lowest… And so, the Belgian financial centre can deflate (*se dégonfler*) (IBS).

The interest of the whole nation was at stake: "if you let your financial activities slip away, as we did, you lose your sovereignty" (*Ibidem*). In this respect, a major player was again the press: many journalists have rushed wholeheartedly into this eloquent register. For example, the editorialist Tony Coenjaerts wrote at the beginning of the reform: "More fundamentally, why should foreigners be interested in a stock exchange that our *dentists* are fleeing by full trains (*fuient par trains entiers*)?" (Coenjaerts 1988, p. 3). At the end of the year, the main Flemish financial newspaper entitled an article "Capital exports reach dramatic levels this year" (JV 1988, p. 30). This was enough to make the Belgians anxious… and convince by the necessity of a radical reform.

4 Conclusion

EPE aims to break with traditional economics by taking a different approach to the evolution of the economic system — integrating the plurality of agents involved, power issues and the weight of social norms. Our analysis of the role of competition between stock exchanges in the institutional convergence of the 1980s has highlighted the heuristic and political interest of such an approach. On the heuristic

level, rather than postulating a situation of competition by modeling the exchanges as classical firms, we have mobilised historical, sociological and economic methods that have led us to put the importance of international competition into perspective. The power relations between heterogeneous agents — bankers and stockbrokers during the commission, experts and MPs during the debates in the Chambers… — and certain social norms (nationalism, technophobia-philia…) favoured the Big Bang more than the threat of London. But once the institutional changeover has taken place, a "threshold of irreversibility" has been reached, and what was uncertain and contingent yesterday now appears obvious and indispensable. On the political level, through its effort to denaturalise competition and demystify expertise, this article invites us to beware, in a context of institutional instability, of experts reducing the range of possibilities: they often bet on their performativity.

The field of explanations of the mutation of the European stock exchanges has been locked by the technological and economic determinisms presented in the introduction. By exposing the fragility of their foundations in the Belgian case, this article aims to reopen this field, but not to exhaust it.[7] The tropes we have put forward need to be complemented by other factors, relating among other things to the positions of the actors in power at the time. In particular, the proximity between the Minister of Finance (Philippe Maystadt), the new head of the Brussels stock exchange (Jean Peterbroeck, one of the few stockbrokers in favour of "modernisation") and the Governor of the Central Bank (Fons Verplaetse) increased the weight of these arguments (for a critical contextualisation, see Maissin, 1997). The nature of the power mobilised by these different actors — economic, cognitive, infrastructural… (Braun, 2020; Pinzur, 2021) — would deserve to be brought to light to enrich the analysis. Beyond the Belgian case, this article therefore invites us to rediscover the plurality of explanatory regimes for this side of financialisation, which had been overshadowed by the "sledgehammer argument" of competition.

Funding Grant from the Fonds national de la recherche scientifique (FNRS).

Data availability All materials were mobilised with the consent of the informants and are now freely available.

Code availability Not applicable.

Declarations

Conflict of interest The author declares no competing interests.

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[7] For a discussion, based on Margaret Archer's model, of other elements (including the horizon of the single European market and financial computerisation), see Duterme (2022).

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