

Stock exchange regulation and the official price lists of the stock exchanges of Brussels and Antwerp, 1801–1935

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To fully understand and exploit the contents of stock exchange official price lists, an in-depth knowledge of local stock exchange regulations and practices is required. This article offers a comparative perspective on price discovery and quotation on the two most important Belgian stock exchanges, Brussels and Antwerp, from their establishment in 1801 up to the reform of 1935.

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I

Stock exchange official price lists are a first choice for collecting long-term data on securities, prices in particular (Annaert *et al.* 2016). Since price formation and quotation were regarded as the principal *raison d'être* of stock exchanges, the publication of official price lists generally goes back as far as the earliest days of a stock exchange.¹

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¹ '... un des objets principaux de la Bourse était la constatation officielle des cours des transactions dont elle est le centre' (Limaugé 1864, vol. 1, p. 17).

Regular publication of prices of securities admitted to trading on an exchange by an officially recognised body served two purposes: verification and information. It was a means for principals to check the execution of their order by an intermediary (Limaige 1864, p. 7; Bastiné 1876, pp. 40–1). It also informed investors about the state of the market. Over time, stock exchanges therefore began including additional information in their price lists. The official price list of the Brussels Stock Exchange was regarded by contemporary observers as one of the most complete in this respect (Thiebauld 1905, p. 16). Securities were organised by type and by industry in this list. For bonds, details about the interest rate and *ex coupon* date were included from the beginning. By 1905, the list included not only prices, but also details on the last dividend and the initial and outstanding amount of an issue. Later, individual tax rates for corporate bonds and a flag for the existence of multiple voting shares were included (see Table 1). The official price list of Antwerp, Belgium's second and less comprehensive market, offered similar additional information. Other data, such as traded volumes or corporate actions (for instance, stock splits and reverse splits), were not published in the price lists but can be found in secondary sources.

By publishing all those data the Brussels and Antwerp stock exchanges exhibited a high degree of *ex-post* transparency. Annaert *et al.* (2012, 2015) collected high-quality micro-data from these price lists to produce homogeneous long-term time series of returns on Belgian stocks. Little is known, however, about the process of price discovery and *ex-ante* transparency in these markets. How were buy and sell orders matched? How was information about orders disseminated? Who quoted prices? And how did this affect the publication of price quotes in the official list? We investigate these topics against the background of changes in regulation, differentiating between a regulated and an unregulated period separated by the liberal reform of 1867. Moreover, we contrast Brussels with Antwerp, because the market dynamics of these two exchanges diverged in terms of the importance of the securities trade vis-à-vis commercial transactions and the types of securities listed.

The remainder of this article is structured as follows. The second section describes Belgium's legal framework for the organisation of exchanges. Price discovery and the quotation and publication of prices before and after the reform of 1867 up to the next reform of 1935 are the subject of the third and fourth sections respectively. The final section concludes.

II

The discovery and quotation of prices and the contents of the official list cannot be understood without understanding how exchanges were organised in Belgium during the period under study. Initially they resembled very much the French exchanges' organisation. In 1801, Napoleon introduced the first legislation on the organisation of exchanges (*bourses de commerce*) in the French Empire. The Napoleonic legislation was partly based on earlier regulations which were directed exclusively at the Paris *Bourse*, but it also introduced new elements. Bearing in

Table 1. Overview of the contents of the official lists of the Brussels and Antwerp stock exchanges

Label	Description	Included from	
		Brussels	Antwerp
Prices and quotes			
<i>Cours (faits)</i>	Prices of transactions (includes bid and ask quotes until 1868)	****	****
<i>Argent</i>	Bid quote	1868–89	1881
<i>Papier</i>	Ask quote	1868–89	1881
<i>Cours précédents</i>	Previous price	1878	1882
Interest (bonds only)			
<i>Intérêts</i>	Interest rate	****	****
<i>Echéance des intérêts</i>	Coupon date	> 1839 < 1846	1850
<i>Impôts</i>	Coupon tax rate	1920	–
Dividends (shares only)			
<i>Coupons – Dernier paiement</i>	Payment date of the last dividend	1873	1880
<i>Coupons – Montant et spécification</i>	Amount, fiscal year and coupon number of the last dividend paid	1873	1880
Issue size			
<i>Titres admis</i>	Number or amount of securities admitted to trade	1878	1900
<i>Titres en circulation</i>	Number or amount of securities outstanding	1878	1900
Other			
<i>Valeur nominale</i>	Par value	> 1839 < 1846	1850
<i>Dates des tirages</i>	Draw dates	1878	1891
–	An asterisk (*) after the name of a security indicates the existence of multiple voting shares	1930–4	–

Note: Asterisks (****) indicate columns already present in the earliest preserved copies of the official lists, 1832 for Brussels and 1814 for Antwerp. The *Studiecentrum voor Onderneming en Beurs* (SCOB, University of Antwerp) holds complete series from 1853 and 1844 respectively. For earlier years, SCOB has complete volumes for Brussels for 1832, 1834, 1839 and 1846–7. The Rothschild Archives in London preserves full volumes for Antwerp from 1822 until 1844 and some earlier years.

mind the collapse of John Law's system in 1720 and the more recent speculative boom of the 1780s, successive French governments regarded regulation of exchanges as an appropriate reaction to wanton speculation or *agiotage*. These regulations were consolidated in Title V of the 1807 *Code de Commerce* which came into effect in the French Empire, including the Belgian *départements*, on 1 January 1808. Together, the

following principles would regulate exchanges and securities transactions in Belgium until the 1867 reform: exchanges could only be established by the government, brokers could only be appointed by the government and stockbrokers had a monopoly on securities transactions.

The law of 28 *Ventôse* year IX (19 March 1801) had left it up to the government to decide by decree where exchanges would be established (Bastiné 1876, pp. 280–1). The exchanges of Brussels and Antwerp were established by the decrees of 15 and 19 *Messidor* year IX (2 and 8 July 1801) respectively (Mollot 1841, pp. 9–10). However, the implementation of the aforementioned law by the decree of 29 *Germinal* year IX (19 April 1801) left the keeping of the order at the exchange to the local authorities who could, subject to the *préfet's* approval, issue policing regulations. A special police commissioner and the representative organisation of stockbrokers (*Chambre syndicale*), composed of a president (*syndic*) and six deputies (*adjoints*) elected by and from the ranks of the brokers, were charged with overseeing the observance of the law and regulations (Bastiné 1876, pp. 281–4). Article 71 of the *Code de Commerce* confirmed that exchanges could only function with government consent and under government supervision (Bastiné 1876, pp. 288–90). During the Dutch King William I's rule over the Belgian territories (1815–30), the government temporarily retreated from its supervisory task. The appointment of brokers, for instance, was left to the local authorities (Willems and Buelens 2011, pp. 40–1). After gaining its independence in 1830, the young Belgian state again asserted its control over the exchanges. During the first 27 years of Belgium's existence, the Catholic and Liberal parties, united in their opposition against William I since 1828, frequently governed in coalition. Notwithstanding the liberal constitution of 1831, the economic policy of these so-called unionist governments was rather conservative. Barthélemy de Theux de Meylandt, for instance, Interior Minister for the Catholic Party between 1834 and 1837, drafted the legal framework in which the Belgian exchanges would function until 1867. As a representative of the landed elite, he was a firm opponent of financial capitalism and advocate of firm controls. The royal decree of 22 April 1836 instructed the local authorities to draft policing regulations for their respective exchanges and have them approved by the government (Mollot 1841, pp. 11–12). De Theux's Liberal successor Charles Liedts (1840–1) continued in a similar vein. During his tenure, the government invoked its supervisory authority to regulate the admission of securities to the official list. Whereas the French government entrusted the *Chambres syndicales* to decide which securities could be quoted, the royal decree of 13 November 1840 subjected the official listing of securities to government approval. This measure formed part of a comprehensive policy, including a more stringent regulation for joint-stock company incorporation in February 1841, which aimed to increase investor protection (Mollot 1841, pp. 36–7; Stevens 1994; Willems and Buelens 2011, pp. 64–7, 72–3).

Brokers had long held a monopoly on intermediating transactions. Both the law of 1801 and the decree of 1801 had already distinguished between commercial brokers (*courtiers de commerce*) and stockbrokers (*agents de change*), however, without describing

their respective competences in detail. This was clarified in the decree of 27 *Prairial* year X (16 June 1802). Article 4 stipulated that it was forbidden to buy or sell securities without the intermediation of a stockbroker. Moreover, all securities transactions had to be effected inside the exchange building and during exchange hours. It hence put those transactions within the exclusive competence of stockbrokers and within the confines of the exchange (Bastiné 1876, pp. 284–8). The stockbroker's monopoly was confirmed by the *Code de Commerce*, which also described extensively which activities the commercial brokers could engage in. The monopoly enjoyed by the stockbrokers was more comprehensive than that of their colleagues. Whereas merchants could trade bills in their own name or to bearer as well as trade their own goods amongst themselves directly, no securities could legally change hands without stockbroker intervention.

In return for the privileges they enjoyed, brokers had long since had to meet a series of strict requirements. They had to have experience in trade or finance, for instance, and could not engage in the securities trade or in any other kind of commercial or banking operation on their own account, nor in any business firm. Brokers also had to put up a large sum of money as surety against default. These old requirements were confirmed by the law of 1801 and the decree of 1802. The law of 1801 further added in article 6 that only government-appointed brokers could exercise the profession. Their numbers were fixed by decree. In Antwerp, there could be no more than 20 *agents de change* and up to 30 *courtiers de commerce*. In Brussels, 18 brokers could combine both functions (Mollet 1841, pp. 9–10). This was confirmed by the *Code de Commerce* (art. 75). During the Dutch era, the appointment of brokers was temporarily left to the local authorities. With the aforementioned royal decree of 22 April 1836, the young Belgian government again seized the prerogative to appoint brokers and subject candidates to a test. From 1840, 20 stockbrokers were permitted to be active in Brussels; this was raised to 28 in 1863 (Willems and Buelens 2011, pp. 124, 131).

The law of 30 December 1867 completely broke with these principles and liberalised the Belgian exchanges (Bastiné 1876, pp. 298–9; Willems and Buelens 2011, pp. 193–255; Buelens *et al.* 2014). This law was part of a series of reforms by the Liberal governments of Charles Rogier (1857–68) and Walthère Frère-Orban (1868–70) to strengthen economic liberalism in Belgium. Under their tenure, *laissez faire* replaced interventionism in economic policy: the liberalisation of exchanges was preceded by the abolition of municipal excise duties in 1860, free-trade agreements with France (1861), the United Kingdom (1862) and the German *Zollverein* (1865), and the removal of interest rate caps in 1865. In 1873, moreover, government approval for the incorporation of joint-stock companies was scrapped. Prefiguring this policy change, the last Unionist government had responded to increasing complaints from the local authorities in Antwerp and Brussels about the inadequacy of the regulation of exchanges by appointing, in 1855, a parliamentary commission to prepare a reform (Vanthemsche 1992a, pp. 217–20; Willems and Buelens 2011, pp. 193–213).

By then the regulation of the stockbrokers' profession and admission of securities to the official list was circumvented by moonlighting brokers who traded popular but

not officially listed securities in coffeehouses such as the *Lloyd bruxellois* (Willems and Buelens 2011, pp. 135–6). However, the principle that exchanges could only be established and function with permission and under supervision of the government was also deemed at odds with the constitutional liberty of association and therefore abandoned, opening the establishment of exchanges to private initiative. Everybody could freely and without intervention from the authorities set up an exchange. The government also no longer decided which securities could be admitted to the official list. The municipal authorities, however, remained in charge of keeping order on the exchange. Since the Brussels and Antwerp exchanges were accommodated in municipal buildings, the local authorities by rights intervened in the organisation of the exchange too. Until the reform of 1935, the Brussels and Antwerp municipal councils would continue to issue organisational regulations, including listing requirements and instructions on how prices were to be quoted.

The profession of broker was also liberalised. Appointment by the government or the local authorities was no longer necessary. Payment of the trade tax (*droit de patente*) was the only remaining requisite for exercising the profession. In Antwerp and Brussels, this tax ranged from 20 to 323 BEF, depending on the importance of the business. The local authorities in Brussels, however, also subjected entry to the official trading floor (*parquet*) to an annual tax of 50 BEF in 1868 (raised to 250 BEF in 1872). Antwerp introduced a similar annual tax of 100 BEF for entry to the *parquet* after the securities trade moved into its own building in 1893 (*Gemeentebled* 1893, p. 404).

The stockbrokers' monopoly on trading securities was also abolished. Everybody could freely trade securities inside or outside the exchange. In turn, stockbrokers were also allowed to trade on their own account. The *Chambres syndicales*, finally, were replaced by Exchange Commissions. These commissions consisted of 6 to 15 members appointed for three years by the local authorities, after consulting the Chamber of Commerce and the Commercial Court. Each year, one-third of the commission was renewed and former members could only be reappointed after an interval of one year. After the Chambers of Commerce had been abolished in 1875, the Commercial Courts continued to appoint the Exchange Commissions together with the stockbrokers. This practice was legalised by the law of 11 June 1882 adopted during the second Frère-Orban government (1878–84).

Faithful to its liberal principles, his government did not respond to demands by a group of stockbrokers to reinstate stringent requirements for exercising the profession (Vanthemsche 1992a, pp. 224–8; Willems and Buelens 2011, pp. 258–60). These demands resurfaced during the crises of the early 1890s and resulted in the appointment of a commission by the Catholic government in 1893. In its final report, published in 1897, the commission recommended reregulation, but its recommendations went unheeded, close ties with the financial elite preventing the conservative Catholic Party from intervening in the stock exchange. A continuing series of financial scandals and a new generation of more progressive Catholics by 1913 revived the appetite for regulation. The first regulation of prospectuses and accounting by joint-stock companies was introduced in 1913, but stock exchange reform was thwarted by

the outbreak of World War I. In 1919, the national unity government of Liberals, Catholics and Socialists finally passed a bill that put the stock exchanges under the supervision of the Minister of Finance.

The law of 4 March 1919, amongst other things, subjected the listing of foreign securities to preliminary approval. It was meant to herald more comprehensive regulation, but the fall of the last national unity government prevented a bill introduced to this end in 1921 from being adopted. In subsequent governments, consisting of Catholics and Liberals, the position of Minister of Finance was without interruption occupied by men with very close ties to banks, who left the liberal principles of the law of 1867 in place until the reform of 1935 (Vanthemsche 1992b, pp. 293–6; Matheve 2017, pp. 312–13).

III

With regard to quoting securities' prices, the French legislator had vested extensive powers in the brokers and their organisations. The aforementioned law of 28 *Ventôse* year IX stipulated that only commercial brokers and stockbrokers appointed by the government could quote exchange rates and the price of securities, commodities, and gold and silver (art. 7). The decree of 27 *Prairial* year X contained more detailed provisions on the price discovery system for securities at the Paris *Bourse* (art. 23–26). It reinstated the open outcry (*criée*) which guaranteed both *ex-ante* and *ex-post* transparency. Stockbrokers gathered on the *parquet*, an enclosure in the centre of the exchange accessible only by stockbrokers, to shout bid and ask prices for securities (*effets publics et particuliers*). If orders matched, they announced the price to the caller (*crieur*), who immediately called it out loud if the transaction involved sovereign bonds (*effets publics*). Prices of corporate shares (*actions de commerce*) and bills of exchange were collected by the *Chambre syndicale* and quoted on the price list after the closing of trade (Locré 1811, vol. 1, pp. 367–70; Mollot 1841, pp. 62–3).

The earliest regulations of the Brussels and Antwerp exchanges were far less detailed in this respect, however. At the time, both were principally commercial exchanges. Financial transactions mainly involved trading bills of exchange. A limited securities trade existed only in Antwerp (Locré 1811, vol. 1, pp. 536–7; Willems and Buelens 2011, pp. 26–7, 32–3). An extensive regulation of price discovery, as in Paris, was therefore superfluous and the legislator also considered trading bills of exchange to require less public scrutiny than securities transactions. The regulations laid down by the aforementioned decree of 27 *Prairial* year X for the Paris *Bourse* were very explicit in this respect: the negotiation of bills of exchange required deliberation and consideration and could not be effected in a loud voice. Their prices were collected after the exchange, by the *Chambre syndicale*, and quoted in the price lists (Locré 1811, pp. 367–70).

The regulations for Brussels and Antwerp also stipulated that the brokers were jointly responsible for quoting prices after trading had ended (Mollot 1841, p. 204; Willems and Buelens 2011, pp. 20–1). The *Code de Commerce* confirmed the role of

brokers and added that the quoted prices should reflect the negotiations and transactions in the exchange (Limaugé 1864, vol. 1, p. 371; Willems and Buelens 2011, pp. 114–17). Later regulations for the Antwerp and Brussels exchanges, approved at the end of the French era and the beginning of the Dutch era, made the *Chambres syndicales* responsible for making the price lists public by affixing them at the entrance of the exchange and, if need be, through publication (Limaugé 1864, pp. 285–9; Willems and Buelens 2011, pp. 20–1).

In Brussels, from 1816, the *syndic* and his two *adjoints* quoted the exchange rates on Tuesday and Friday. They had to affix these rates the next day before noon at the exchange and could also distribute them in printed form. The price of securities, commercial paper, precious metals and commodities were jointly quoted by the *Chambre syndicale* and the brokers (Limaugé 1864, pp. 285–9).² This was also the case in Antwerp. The regulation of 1819 dictated that the stockbrokers gathered in their usual place at the exchange at 14:00 on Monday, Thursday and Saturday for quoting exchange rates and the prices of securities. All stockbrokers who visited the exchange on a day when quotations were fixed were obliged to participate and absence was fined. Quotations were determined by majority vote, annotated in a special register, signed by the *syndic* and printed (*Règlement général et particulier* 1819, pp. 9, 18–19).³

Following the aforementioned royal decree of 1836, new exchange regulations were approved by royal decree on 27 December 1839 with effect from 1 February 1840. For the first time the regulations regarding price discovery and quotations showed a divergence between the Brussels and Antwerp exchanges, reflecting incipient differences in the relative importance of the securities trade and the type of securities traded there. Following Belgian independence, Brussels firmly established itself as the primary market for securities. During the 1830s, Brussels-based universal banks floated industrial securities from Walloon industrial enterprises under their control on the Brussels exchange (Chlepner 1930, pp. 35–41; Willems and Buelens 2011, pp. 130–2; Ugolini 2019). In 1840, after the first industrial boom (1834–8) had ended, 41 out of 60 securities on the Brussels official list were *actions industrielles et commerciales* (Mollot 1841, p. 38).⁴ The Antwerp exchange remained primarily a commercial exchange with a secondary market for sovereign bonds. In 1840 its official list counted 48 listings, of which 32 were foreign debt issues and only 8 corporate securities (Mollot 1841, p. 37).⁵

² *Ordonnance concernant les agents de change et les courtiers de commerce de la ville de Bruxelles*, 15 Jun. 1816.

³ *Règlement pour le corps des courtiers de la ville d'Anvers*, 11 Sep. 1817 (art. 26) and *Règlement particulier pour la Chambre syndicale des courtiers près de la Bourse d'Anvers*, 13 Jul. 1819 (art. 60–65).

⁴ *Liste des fonds publics admis à la cote officielle près la bourse de Bruxelles, publiée en exécution de l'arrêté royal du 13 novembre 1840*.

⁵ *Liste des fonds publics admis à la cote officielle près la bourse de Anvers, publiée en exécution de l'arrêté royal du 13 novembre 1840*.

In Brussels, the new organisational regulations of the 1839 decree introduced *ex-ante* and *ex-post* transparency (Mollot 1841, pp. 18–23; Limaugue 1864, vol. 1, pp. 17–20, 366–7; Willems and Buelens 2011, pp. 127–30). This began with the installation of the *parquet*, a central enclosure accessible only to official stockbrokers so that they would not be confused in the crowd that flocked to the exchange and individuals could find them more easily.⁶ The 1839 regulations also stipulated call auction trading. At 13:45, the stockbrokers entered the *parquet* for trading and quoting the prices of securities. A stock exchange official, the *crieur public*, called out the securities on the official list one by one. When a security was called, the stockbrokers could shout their buy and sell orders. If this resulted in a transaction, the *crieur* immediately called the price and marked it in a special register. If supply and demand failed to meet, bid and ask offers (*cours papier* and *cours argent*) were quoted. The proposed price quotes were not finalised until after a sufficiently long break to allow the public present to give a *parquet* member divergent buy or sell orders. At 14:15, the stockbrokers left the *parquet* and the quotations were affixed in the exchange. No fundamental changes were introduced in this field before the deregulation of 1867 (Limaugue 1864, vol. 1, pp. 203–14, 373–4, 390–1).

By contrast, Antwerp more or less continued the old method of quoting prices. The 1839 decree made the *Chambre syndicale* responsible (Mollot 1841, pp. 12–15; Ministère des Finances 1903, p. 159). Together with four stockbrokers rotating on a monthly schedule, the chamber met after the closing of the exchange to fix exchange rates and securities prices. As per the *Code de Commerce*, they could only fix prices according to the transactions made in the exchange during hours and it was explicitly forbidden to effect transactions within the chamber. The price list was to be affixed in the exchange building and delivered to various authorities. According to Limaugue (1864, vol. 1, p. 20), Antwerp's non-transparent method of quoting prices privately by the *Chambre syndicale* often gave rise to errors and complaints. The government also repeatedly protested against the lack of order and price transparency inherent to Antwerp's hushed voice trade. The *criée* was regarded as beneficial and essential for the protection of investors, but the Chamber of Commerce defended the Antwerp custom in the interest of the commodities trade. Later requests by the stockbrokers to improve *ex-ante* and *ex-post* transparency by installing a *parquet* in the exchange were also blocked by the commercial brokers who called the shots at the exchange and had the Chamber of Commerce's backing. The latter's argument was that open outcry would disturb and disrupt commercial dealings. Only in 1893 did the Antwerp exchange dedicate an enclosure (*corbeille*) to trading securities (Willems and Buelens 2011, pp. 114–17, 238).

⁶ The nineteenth-century *parquet* is not to be confused with the later 'floor market' (*Parquetmarkt* in Dutch).

IV

The law of 30 December 1867 reaffirmed the principle that quotations ought to be the outcome of negotiations and transactions effected at the exchange (art. 62). Prices were no longer jointly quoted by the stockbrokers, however, but by the aforementioned Exchange Commissions. Local regulations were to set the process of price discovery and quotation by the Exchange Commissions. Hence, the authority to draw regulations for the official list was delegated to the local authorities (Bastiné 1876, pp. 39–40, 56–7). As owners of the exchange buildings, the municipal authorities of Brussels and Antwerp drew new organisational regulations for their exchanges.

In Brussels, provisional regulations for the Exchange Commission of 9 January 1868 (*L'Indépendance belge*, 10 Jan. 1868, p. 1) abolished the call auction. Stockbrokers could now trade continuously. Between 13:15 and 14:45, they could declare the prices of their transactions. At 14:45, three Exchange Commission members drew up the official list based on these declarations. They could investigate and, if need be, dismiss spurious prices, as well as quote undeclared prices *ex officio*. Then, the price list (*cote*) was affixed in the exchange building in clear public view. Only *cours faits* were quoted on the price list, however. The quotation of bid and ask prices was discontinued, albeit temporarily.

In the ensuing municipal council debate the liberal mayor Jules Anspach showed himself to be in favour of deregulation. He defended the abolition of the call auction (*criée*) by the bench of aldermen. According to the mayor, the *criée*, whereby securities were called up one by one in the order of the official list and stockbrokers announced their orders in a loud voice, slowed down business, whereas the new system offered full liberty to effect transactions in all securities at any time. The mayor's opponents, however, argued that the *criée* offered better guarantees to the public and presented buyers and sellers with an easy way of assuring themselves of the sincerity of the prices quoted. Their arguments notwithstanding, the abolition of the *criée* was definitive, but the publication of bid and ask quotes was reintroduced on 25 February 1868 to allow the public to avail itself of the state of the market in securities for which no *cours faits* were quoted (*Bulletin communal* 1868, pp. 43–7, 73–4; Willems and Buelens 2011, pp. 217–19). The updated regulations stipulated that, during the aforementioned period, stockbrokers could also declare prices for current buy and sell orders in securities that had already been traded. From 14:30, stockbrokers could post bid and ask prices for securities that had not been traded. Bid and ask prices were displayed publicly in the exchange until 14:45 and included in the price list alongside the *cours faits*.

By contrast, in Antwerp the 1867 reform did not significantly alter the way in which quotations were fixed. After the exchange had moved to its new building in 1872, three Exchange Commission members quoted prices jointly with stockbrokers

paying the municipal tax for visiting the exchange.⁷ For securities, the lowest, highest and closing prices were published in the official price list. If the latter was a bid or an ask price, this was indicated with the letters *A* or *P* (Bozérien 1887, p. 590).

After the Brussels Exchange had moved to the new *Bourse* Palace, the organisational regulations of 4 May 1874 came into effect (*Bulletin communal* 1874, pp. 355–9; Bastiné 1876, pp. 47–8; Guillard 1877, pp. 312–14). The principle was maintained that only prices of cash transactions (*au comptant*) were quoted when effected by the intervention of stockbrokers between certain hours on the *parquet*. However, no price could be quoted for small transactions involving less than ten securities with a par value below 1,000 BEF or less than five securities with a par value of at least 1,000 BEF, unless the Exchange Commission decided otherwise. All prices of transactions involving at least 5,000 BEF were quoted regardless.⁸ Internal regulations set further modalities for price discovery. By 1874 the effects of the 1867 liberalisation were already apparent, the number of stockbrokers and securities on the official list having risen from 28 to 224 and 142 to 400 respectively. To facilitate finding a counterparty, the Exchange Commission deposited special sheets with pre-printed names of securities flanked by columns for bid and ask prices on desks on the *parquet* at 13:00. Until 14:10, stockbrokers could record their buy and sell orders in the designated columns. Until 14:15, they could also submit prices of transactions at fixed limits by means of index cards to an exchange employee (*coteur*) who would enter them in a special register. At 14:30, two Exchange Commission members verified the *cours faits*, quoted prices that had not been submitted, rejected spurious prices, and quoted bid and ask prices. Immediately afterwards, the price list was affixed in the exchange and printed.⁹ To further inform the public about the state of the market in a security, a column with the last quoted price, which could be a bid or an ask price, was added to the official price list in 1878.

In 1891, controversy emerged over the publication of bid and ask prices in Brussels' official list. The Exchange Commission had abolished their publication in November 1889 and at the same time substituted the aforementioned last quoted price with the last *cours moyen*, the arithmetic average between the lowest and highest *cours faits* (Colinet 1913, pp. 328–9). Their suppression was confirmed in the new organisational regulations of 7 December 1891. During the discussion in the municipal council, supporters of the proposal argued that the publication of bid and ask prices presented room for fraud and errors, whereas its opponents countered that their absence deprived investors of knowing the potential value of their securities and of the

⁷ The list of stockbrokers subject to this tax was made up annually by a commission composed of representatives from the municipal council and the Exchange Commission (Willems and Buelens 2011, p. 236).

⁸ These limits were raised, after World War I, to 25 securities and 10,000 BEF respectively (François 1929, pp. 155–6; François-Marsal 1931, p. 584).

⁹ These principles were unaltered by the organisational regulations of 26 Nov. 1883, 7 Dec. 1891 and 28 Mar. 1914.

possibility to check the execution of their orders by the stockbrokers (*Bulletin communal* 1891, pp. 812–13; Ministère des Finances 1903, pp. 166–70; de Reynrode 1903, pp. 58–9; Tienrien 1922, pp. 84–5, 1933, p. 235). The abolition of bid and ask prices remained controversial for many years to come. In August 1901 councilman Wauwermans argued that the absence of bid and ask prices enabled shrewd stockbrokers to abuse previous prices published to sell securities to unsuspecting provincial investors at inflated prices (*Bulletin communal* 1901, pp. 21–3). Similar concerns were voiced by Colinet (1913, pp. 328–31), who judged that the Exchange Commission's answer to these unscrupulous practices, resolved in November 1901, was half-baked. Their solution consisted of allowing stockbrokers to propose in the price list a price at which they would buy or sell between sessions (a so-called *cours modifié*). If a counterparty presented itself before the start of the next session, this price was included in the last price column. The price lists did not explicitly mention that the *cours modifié* was a bid or an ask offer, however, so inexperienced investors could, according to Colinet, still mistake it for a *cours fait*.

Detailed price discovery regulations for the Antwerp exchange were issued only after the growth of the securities trade during the last quarter of the nineteenth century had warranted the establishment of a separate stock exchange in 1893 (*Gemeentebled* 1893, pp. 401–9). By then Antwerp had firmly established itself as the principal Belgian market for foreign government bonds. This necessitated better regulation of price discovery and quotations and the organisational regulations of 1896 provided exactly that (Ministère des Finances 1903, pp. 182–202). These mirrored the aforementioned regulations introduced in Brussels in 1874. The organisational regulations of 9 March 1914 subsequently transformed the sheets for recording buy and sell orders into a limit order book as it introduced rules for price priority. Prices which were lower than a bid price (*cours argent*) or higher than an ask price (*cours papier*) previously recorded on the aforementioned sheets could not be quoted. The use of the order book was strongly encouraged by the rule that complaints from stockbrokers against a price quoted by another stockbroker were only admissible if their order was duly recorded. Penalties for not reporting *cours faits* were also introduced (*Règlement d'ordre intérieur* 1914, pp. 5–8). No such obligation existed in Brussels, however (de Reynrode 1903, p. 9).

After World War I, price formation on the Brussels Stock Exchange was deeply affected by liquidity constraints consequent on the number of listed securities growing. In 1897, the official list contained 669 securities; in 1913, 1,498 and by 1933, 2,230 (François-Marsal 1931, p. 590; Lamal 1934, pp. 159–62). The situation was aggravated further by the practice of settling orders outside the exchange. In 1911, two judgements by the Commercial Court in Brussels and the Court of Appeal in Liège had confirmed settling orders '*par application*' (literally 'by employment') was legal. Hence, stockbrokers who received opposing buy and sell orders from clients could match them outside the exchange. By the interwar period, banks would also typically try to clear stock market orders received internally. To this end the *Société Générale*, for instance, centralised all stock market orders from its

16 branches. This further reduced the number of orders taken to the exchange (Colinet 1913, pp. 312–17; Tienrien 1932, pp. 333–4; van der Valk 1932, p. 111; Brassine 1938, p. 13; Vanthemsche 1992b, pp. 299–302). Hence, Lamal (1934 pp. 159–62) estimated in 1933 that ‘a broad, vivid and regular market’ existed for only 145 out of 1,647 domestic securities on the official list. Another 380 were ‘more or less actively traded’. Together, these securities totalled 90 per cent of the market capitalisation and an estimated 95 per cent of transactions.

During the interwar period, a dual method of price formation based on liquidity developed in Brussels. Actively traded securities were traded in small groups (*en groupe*) of stockbrokers who flocked together to execute their orders at fixed prices (*à cours fixe*). Stockbrokers noted the price at which a transaction was effected on a slip of paper. These prices (*cours faits*) were quoted by a stock exchange employee and published in the official list. Hence, the official lists could contain multiple prices for these securities each day. Whether securities were traded *en groupe* depended solely on the state of the market. There was no fixed list of securities which were traded *en groupe*.¹⁰ For filling orders in less actively traded securities, stockbrokers had to approach a so-called *teneur du marché* or market maker. This was an unofficial function taken up by a broker in name only who was often affiliated with industrial or financial groups and specialised in trading a limited number of securities on his own account. During exchange sessions, *teneurs du marché* collected all buy and sell orders from stockbrokers. At the end of a session, after they had received all orders, the *teneurs du marché* balanced the orders and fixed the single price (*cours unique*) at which the highest number of orders could be fulfilled. This price was then quoted by a stock exchange official and published in the official list (François 1929, p. 156; François-Marsal 1931, pp. 583–4; Lamal 1931, p. 322, 1934, pp. 123–4; Tienrien 1932, pp. 277–8). It should be noted that, unlike jobbers on the London Stock Exchange, *teneurs du marché* could arbitrarily reduce orders or abstain from quoting a price. Hence the *teneurs du marché* wielded an extraordinary market power, which they could abuse for their own advantage. After availing themselves of the available information on the tendency of the market, these market makers were able to set the price that best suited their own interests. Naturally, this distortion of the market provoked a lot of criticism from contemporaries, including the Antwerp Exchange Commission. It was argued, for instance, that the quoted prices did not reflect the fair competition of supply and demand (*Documents parlementaires* no. 211, pp. 50–4 [16 July 1931]; Tienrien 1932, p. 279; Lamal 1934, pp. 125–8; Brassine 1938, p. 13). The reform initiated by the royal decree of 30 January 1935 therefore tried to remedy these abuses by reintroducing a more stringent regulation of Belgian exchanges. It made compensation of orders by banks impossible by again requiring

¹⁰ Orders *au cours moyen* for securities traded *en groupe* were settled at the arithmetic mean between the highest and lowest quoted price.

that all securities transactions be effected in the exchange (Buelens *et al.* 2014, p. 19; Vanthemsche 1992b, pp. 303–6).

V

Our discussion of price discovery and quotation on Belgium's principal stock exchanges during subsequent periods of regulation (1802–67) and deregulation (1867–1935) has revealed a trade-off between immediacy, liquidity and transparency. Stringent rules imposed by the government, pursuing a conservative and interventionist economic policy, kept the market small prior to 1867: a limited number of stockbrokers who were strictly intermediaries could trade in a narrow list of securities that were approved by the government. The open outcry, at least in Brussels, ensured the *ex-ante* and *ex-post* transparency of price formation, but at the expense of immediacy. A stockbroker could only execute an order when this security was called. If he missed it, he had to wait for the next call auction. All prices at which transactions were effected, as well as bid and ask prices, were called out loud and published in the official price list. The government favoured the transparency offered by the open outcry because it benefitted investor protection, but local interest groups favouring the commodities trade over financial transactions in Antwerp successfully blocked it. While Brussels' official lists at the latest from 1839 offer a true and complete overview of prices and quotes, Antwerp's were less complete. Multiple low-voice bids, offers or trades could be made at different prices during a session, but only the price or quote that won the majority vote was printed in the official list.

After the deregulation of 1867, the number of securities on the official list as well as the number of brokers increased strongly. This paradoxically reduced on the one hand the necessity of opaque, unofficial markets such as the *Lloyd bruxellois*, but, on the other hand, also increased the opacity of price formation on the official markets. Securities transactions could now legally be effected outside the exchange and without the intervention of stockbrokers. The prices of these trades were of course not printed in the official list, which remained a record of transactions inside the exchange. But prices and quotes made by stockbrokers inside the exchange too could remain unpublished because they did not exceed certain thresholds or because stockbrokers simply decided not to inform the stock exchange authorities. In 1889 the Brussels Stock Exchange Commission contributed further to obscuring market-trends by no longer publishing bid and ask quotes in its official price list. The regulations and official price list of the Antwerp Stock Exchange seem to have offered better guarantees for transparency from the end of the nineteenth century in this respect. After the securities trade at the Antwerp Exchange had long been overshadowed by the commodities trade, a revival during the last quarter of the century led to the securities trade moving to a separate building and detailed regulations for price discovery and quotation. The introduction of a limit order book in 1914 and the continued publication of bid and ask quotes offered order transparency; the obligation to report all *cours faits* to the Exchange Commission provided price

transparency. In Brussels, less scrupulous stockbrokers could use the less stringent regulations to their personal advantage. It should be noted, however, that this was frowned upon by a large group of stockbrokers who shortly after the reform of 1867 already pleaded for firmer regulation that would drive the former out of the profession – regulation that was finally instated with the reform of 1935.

We expect that the higher level of transparency in Antwerp during this period was a consequence of its specialisation in trading government debt. These ‘investment securities’ (*valeurs de placement*), as one contemporary observer argued, traded with much smaller margins and therefore presented fewer opportunities for manipulation of prices by self-serving stockbrokers than speculative investments such as mining and industrial shares in which the Brussels Stock Exchange specialised (de Reynrode 1903, p. 10). To provide liquidity in often small issues, market makers necessitated a degree of opacity. Excesses such as those reported for Brussels, where stockbrokers working as market makers would unilaterally set prices in their own interest or simply refuse to set prices, were unknown in Antwerp, although minor complaints about price manipulation in Antwerp were not unknown (*Documents parlementaires* no. 211, pp. 50–4 [16 July 1931]).

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