

Banking in Hungarian Economic Development, 1867-1919

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The year 1867 saw not only the creation of the dual monarchy of Austria-Hungary, but also marked the beginning of a half century of remarkable economic progress, especially for Hungary. The economic terms of the compromise agreement established a customs and commercial union between Austria and Hungary with free movement of labor, goods, and capital within a vast area of central and eastern Europe--an area crisscrossed today by all manner of artificial economic barriers. Financial stability was to be assured by the creation of a joint ministry of finance (though both partners also maintained their own finance ministries), a common currency, and a common bank of issue.

The latter, the Austrian National Bank founded in 1816, had been the Habsburg monarchy's central bank ever since, though not without rumbles of protest from the Hungarian Diet and nationalist politicians. Despite the agitation, the compromise maintained the issuing privileges of the bank for a further ten years. Finally, in 1878, the Austrian and Hungarian parliaments approved the creation of the Austro-Hungarian National Bank with principal offices in both Vienna and Budapest. The new statutes obliged the bank to open branches on an equitable basis in both halves of the monarchy and stipulated that the Hungarian minister of finance, together with his Austrian counterpart, would nominate the bank's governor. In return the Hungarian government undertook to respect the bank's privileges as the sole bank of issue in Austria-Hungary. This action seemingly laid the politically controversial "bank question" to rest. However, nationalist politicians within the opposition Independence party were to wage a relentless--though ultimately unsuccessful--campaign during the next fifty years for the establishment of an independent Hungarian bank of issue [7].

Though the Hungarian government was thus obliged to share responsibility for the overall fiscal policy of the monarchy with its Austrian partner, it retained considerable freedom in the field of domestic economic policy. Despite occasional conflict between agrarian and industrial interests, successive Hungarian governments were remarkably successful in speeding up the modernization of the country by creating an efficient transportation system and by encouraging industrial development.

Thanks to generous tax incentives and outright subsidies, the railway network grew into one of the most extensive in east-central Europe. The railway boom of the 1860s and 1870s encouraged in turn the growth of ancillary industries in wagon, locomotive, and machine construction. A series of laws passed in 1881, 1890, 1907, and 1909 provided tax exemption or direct government aid to those prepared to expand existing industrial enterprises or create new ones. Special incentives were provided for those who introduced the latest technologies to their factories [21]. Thanks partly to government help and the dynamism of local and foreign entrepreneurs, Hungarian industrial production increased fourteen-fold between 1867 and 1913. During the same period the average annual growth rate of Hungarian industry was one of the highest in Europe [6, p. 910].

Perhaps the most spectacular symbol of the country's economic progress was the emergence of Budapest as a major European capital. One of the fastest growing cities on the continent, it quadrupled its population between 1868 and 1914. On the eve of World War I, the erstwhile provincial town had become, with over a million inhabitants, the seventh largest city in Europe.

Much of Budapest's wealth was based on the milling industry, which had developed by leaps and bounds from the 1850s to 1900. Budapest was the largest milling center in the world until 1900, when it was gradually overtaken by Minneapolis. Despite this decline, Hungary remained the world's second largest exporter of milled flour (after the United States), until the outbreak of the First World War [9; 12, p. 367].

In 1867, however, much of this was still in the future. As far as Hungary's financial structure was concerned, the picture then was a fairly bleak one. The country had a total of four banks, one land credit institute, and fifty eight (mostly small), local savings banks. Among these, only the First Pest Domestic Savings Bank (founded in 1839) and the Pest Hungarian Commercial Bank (founded in 1841) could be considered genuinely Hungarian financial institutions of any importance. Apart from these two, most significant banking operations were in the hands of the Austrian National Bank and the Pest branch of the Vienna Creditanstalt which had been opened in 1857 [18, p. 19].

The economic and political optimism generated by the compromise agreement was to usher in a five-year period of rapid, occasionally frenzied expansion in the Hungarian banking system. Between 1867 and 1873, 120 new banks were established, as well as 206 savings institutions of various descriptions. Only ten of these mushrooming "banks," however, were of any financial importance. The majority of the rest were speculative ventures destined to go to the wall during the great economic crisis of 1873 [18, p. 21].

Until that sobering moment, however, the country went on a heedless spending spree. In the words of one observer writing in the 1890s, "It seemed as if the whole of society was consumed by a feverish desire for quick and easy profits and the mass of people blindly followed every audacious schemer, impostor or crook" [19, p. 216].

Hungarians were not the only ones caught up by the excitement of the moment. Foreign capitalists also rushed in to take advantage of seemingly

limitless opportunities. This new interest in Hungary led to the establishment of two initially powerful banks, neither of which was to survive more than a decade. The first, the Anglo-Hungarian Bank, was founded in 1868 by a consortium of Austrian and British capitalists with local Hungarian investors. Despite a board bristling with illustrious names--Prince Sapieha, Count Szechenyi, and Budapest's leading private banker, Maurice Wahrmann--the bank made a number of poor investments and was wound up in 1879 [8]. The Franco-Hungarian Bank, established by the Franco-Austrian Bank and the Erlanger Banking House, suffered a similar fate--despite an initial share capital of 80 million francs [19, p. 215].

When the crash came, in 1873 it came with a vengeance. The total share capital of the five major Budapest banks--which had stood at 59.1 million florins--plummeted to 16.7 million florins by the end of the following year [1, p. 54]. The institutions that managed to survive the storm, however, proved to be permanent. Foremost among them was the Hungarian General Credit Bank, founded in 1867. The "Creditbank," as it was to be generally known until its nationalization after World War II, was an outgrowth of the Pest branch of the Creditanstalt. Two-thirds of the bank's shares were in the hands of the Creditanstalt and thus, indirectly, in those of the house of Rothschild and other foreign investors [18, pp. 20-21; 1, pp. 54-55]. These powerful backers saved the Creditbank from the fate of the Anglo-Hungarian and the Franco-Hungarian banks. With the demise of its two principal rivals, Creditbank became the largest bank in Hungary. Much of its prosperity was based on its standing as banker to the government. According to one estimate, in a single decade--from 1880 to 1889--the bank participated in the raising of over 1.3 million florins in loans for the Hungarian state [18, p. 332]. Unfortunately, the Creditbank was at this time no more than a subsidiary of the Creditanstalt--and fully 40 % of its huge profits went to enrich the mother institution [17, p. 5].

The bank's dependence on Vienna was to lessen gradually with the arrival from Prague of Sigmund Kornfeld, the new and energetic general manager. Kornfeld was to remain the bank's leading light from his arrival in 1878 until his death in 1909. "It was his aim," writes one of his biographers, "to create a powerful institution which would act as guardian of Hungary's external credit and as a support for commerce and a pioneer of industrialization at home" [17, p. 63].

During his thirty years as managing director and president, Kornfeld was able to achieve this. By 1899, the Creditbank had become a completely independent institution, though it was still associated with the Creditanstalt and other banks of the Rothschild group. In 1913, it had total assets of nearly 553 million crowns (\$111 million U.S.), which put it in fourth place among Hungary's major banks. In terms of profit for that year, however, the Creditbank occupied second place [15, pp. 142-53].

The Creditbank's principal rival during this period was the Pest Hungarian Commercial Bank. This institution, established in 1841 with native capital, pursued a prudent and conservative policy that had saved it during the boom years and the crash that followed. But this also meant that the bank had hardly grown at all. A change came about in 1881 when the Parisian

banking house of Bontoux decided to invest in the Pest Hungarian Commercial Bank through its Austrian affiliate, the Oesterreichische Landerbank. Although the Bontoux bank was to collapse the following year, the Commercial Bank was not affected and continued to maintain its relationship with the Oesterreichische Landerbank, which had managed to free itself from the Bontoux interests in the nick of time [1, p. 54].

It was at this time that Leo Lanczy entered the bank's service as general manager. Like Kornfeld, he too was to stay at the helm for over a generation, serving as president from 1896 to 1921. Again like Kornfeld, Lanczy was a man of vision and energy who knew how to take advantage of the opportunities presented by Hungary's increasingly rapid economic development. By the outbreak of World War I, the Pest Hungarian Commercial Bank had become the largest bank in the country. Its total assets of over 1.2 billion crowns (\$242 million U.S.) made it an institution of considerable central European importance [15, pp. 117-43].

Two formerly modest banks also grew remarkably during the 1880s, thanks to generous infusions of foreign capital. The Hungarian Mortgage and Credit Bank was founded in 1869 but remained relatively inactive until 1881, when the Vienna Union Bank, the Banque de Paris et des Pays-Bas, as well as the Société Générale raised its share capital from 1.4 million florins to 10 million florins [19]. The bank was fortunate in having as its president Kalman Szell, who had been Hungarian minister of finance from 1875 to 1878 and prime minister from 1899 to 1903. Szell's political position and widespread influence over Hungarian economic life undoubtedly gave the bank certain advantages in attracting business.

Day-to-day affairs, however, were in the hands of Julius Madarassy-Beck, one of the few Hungarians at the time with foreign banking experience. By 1913, with assets of more than 834 million crowns (\$167 million U.S.), the Hungarian Mortgage and Credit Bank was the third largest financial institution in the country [15, pp. 154-64].

The Hungarian Discount and Exchange Bank was also formed in 1869 when the Niederoesterreichische Escomptegesellschaft took over the old Pest private banking house of C. J. Malvieux. [2, p. 76]. In 1881, the same group of French and Austrian banks that had invested in the Hungarian Mortgage and Credit Bank also raised the capital of the Discount and Exchange Bank. The two thus became sister institutions, a fact that was underlined by the presence of two further members of the Madarassy-Beck clan, Maximilian and Marcel, among the bank's leading executives. The Hungarian Discount and Exchange Bank was fifth in size among the six major Hungarian banks. In 1913, it had total assets of 423 million crowns (\$84.8 million U.S.) [15, pp. 165-84].

The newest and smallest of the Hungarian "big six" was the Hungarian Bank and Commercial Company. It was founded in 1890 by Hungarian, Belgian, and French capital. The Credit Anversoise and the Banque Francaise Pour le Commerce et L'Industrie were the principal shareholders. Business-minded aristocrat Count Imre Karolyi acted as president, but it was the flamboyant managing director Simon Krausz who was primarily responsible for the bank's financial success. With total assets of 295 million

crowns (\$59 million U.S.) in 1913, the Hungarian Bank was the smallest of the six but held third place in terms of profit. [15, pp. 185-92].

The country's oldest major financial institution, the Pest Domestic Saving Bank, was different in several respects from the other major banks. Its founder, Andrew Fay, had originally intended it to operate on non-profit principles to provide credit for small merchants and craftsmen who could not obtain it from the private banks. Despite Fay's altruistic intentions, the bank became a joint stock company in 1844 and increasingly participated in conventional banking operations. The shares of the Pest Domestic Savings Bank were almost entirely in the hands of Hungarian investors, and the bank received no infusions of foreign capital [5]. In 1895, it did join with an Austrian bank, the *Niederösterreichische Escompte-gesellschaft*, to found the Home Bank (Hazai Bank) which acted principally as an investment bank. The Pest Domestic Savings Bank was the second largest financial institution in the country with total assets of 902 million crowns (\$180 million U.S.) in 1913 [15, pp. 109-16].

The six major banks were all established in Budapest and, until the late 1870s, did little to extend their operations beyond the capital. In the following decade, things were to change radically. First of all, the major banks--especially the Commercial Bank--began to establish branches in the larger provincial cities. If this proved bothersome or potentially unprofitable, the Budapest banks would either enter into partnership with a local bank--or buy the minimum number of shares required to control it. Another way of spreading the major bank's influence was to establish a new bank with local investors. Using these techniques, the major banks continued to extend their economic influence [1; p. 18].

By 1900, the Commercial Bank had six provincial banks in its orbit from Transylvania to Pozsony (also known as Pressburg or Bratislava) on the Austrian border. The Creditbank controlled three banks: the prestigious Hungarian Land Credit Institute, the Fiume Credit Bank, and (as of 1911) the Croatian General Creditbank--91% of whose shares remained in its hands until 1945. The Hungarian Mortgage and Credit Bank and the Discount and Exchange Bank extended their influence over the Hungarian Agrarian and Rent Bank and the Hungarian General Savings Bank. The First Pest Domestic Savings Bank was a shareholder in the Home Bank and in the Kolozsvár (Cluj) Savings Bank, one of the oldest financial institutions in Transylvania. The expansion of the major Budapest banks created four major financial groups in the country. The largest was the Mortgage and Discount Bank group, followed by the Creditbank group, the Commercial Bank group, and the Pest Domestic Savings Bank group. While these four banking groups made up only .08% of the total number of financial institutions in the country, they controlled 46.9% of its capital [1; 18, p. 322].

By the 1880s, Hungarian bank executives, led by Leo Lanczy of the Commercial Bank, realized there was money to be made in the Balkan states, which had only recently freed themselves from Turkish rule. Lanczy believed that Hungarian banks could do three things in the region: help finance Hungarian industrial exports, establish a strong Hungarian banking presence in the various Balkan states, and prepare the groundwork for the inevitable

inflow of western capital. Lanczy's own bank began this process by entering into partnership with an established Belgrade bank, Andreevits et Cie. The bank successfully handled a number of Serbian state loans and, in 1908, was turned into a joint stock bank with the participation of the Berliner Handelsgesellschaft [1, p.116].

Much the same occurred in Romania, where the Commercial Bank at first entered into partnership with Marmorosch Blank and Co. in Bucharest. By 1903, that partnership too had turned into a limited company. Romanian investors--together with the Berliner Handelsgesellschaft, The Banque de Paris et des Pays-Bas, and the Commercial Bank--put up the capital. The latter retained 20% of the shares [25, p. 82]. The Banque Marmorosch Blank et Cie. handled several Bucharest city loans, financed railways, breweries, and oil refineries, and was active in the grain trade.

The Banque de Commerce de Sofia, established by the Commercial Bank in 1898, was the first bank in Bulgaria to be founded by foreign capital. It too followed the pattern set by Hungarian investments in Serbian and Romanian banks by becoming a joint stock bank, the Banque Generale de Bulgarie, with the Banque de Paris et des Pays-Bas as the principal shareholders together with the Commercial Bank [1, p.119].

Apart from their interests in the Balkans, the major Hungarian banks also hoped to establish a foothold in the American market. Some two million Hungarian subjects had settled in the United States, and the Budapest government was anxious that the money they were sending back home should be handled by Hungarian banks. In 1912, the Trans-Atlantic Trust Co. was established in New York by the Commercial Bank, the Creditbank, and the Discount Bank with this aim in mind [11, p. 230]. Despite a hefty government subsidy, the project did not live up to expectations, largely because the outbreak of World War I eventually made its operations impossible.

From the 1890s on, the major Hungarian banks increasingly played the role of investment banks by either founding new industrial enterprises or acquiring shares in established ones. The Creditbank began the process in 1882 by forming the Fiume (Rijeka) First Hungarian Rice Mill and Starch Co. This was followed by the Fiume Petroleum Refinery Co., and by the Brasso (Brasov, Kronstadt) Cellulose Co. in 1888. By 1913, the first two companies had total assets of some 40 million crowns (\$8 million U.S.) [14].

The Hungarian government wished to speed up the process of industrial investment. In 1890 it began negotiations with the Wiener Bankverein to found a new bank whose purpose would be "to improve and expand existing plants and factories through the infusion of new capital, to establish new branches of industry, to enter into partnership with existing firms...and thereby assure their more effective management, and to make credit available to industrial concerns and to individual industrialists" [18, p. 364]. In return, the Viennese bank was assured--among other things--that any profits it made below 6% would not be taxed for thirty years, and that the government would not grant more advantageous benefits to any rival banking group.

Law XIV of 1890 set up the Hungarian Bank of Industry and Commerce with a share capital of 5 million florins (\$2 million U.S.). The

president was to be Stephen Tisza, son of Prime Minister Kalman Tisza, and soon to be prime minister himself. On the board of directors was the prominent politician Count Julius Andrássy as well as Eugene Guttman, who represented the Dresdner Bank of Germany. Although the bank remained in existence for only ten years, it made numerous investments in industrial and commercial enterprises, and also aroused the attention of the outside world to the opportunities existing in Hungary by mailing some 15,000 brochures and letters to industrialists in France and Germany [18, p. 365; p. 16, p.46].

What the Hungarian Bank of Industry and Commerce did above all was to spur other banks to invest in industry. By the 1890s the rush was on. It would be tedious to list here every enterprise in which a major Hungarian bank had a financial interest. But one or two cases do deserve mention. During the twenty years before World War I, the Commercial Bank acquired a controlling interest in one of Hungary's largest iron and steel works, The Rimamurány Iron Works. It also had interests in the Salgotarján Coal Mines--with 1913 assets of over 63 million crowns (\$12.7 million U.S.); in the "Adria" Shipping Company--with 1913 assets of 46.3 million crowns (\$9.2 million U.S.); and in the First Budapest Steam Mill Company, which controlled four other major mills. Also within the control of the bank was the United Incandescent and Electrical Company, which was one of Europe's largest producers of light bulbs during the first ten years of the twentieth century [14; 1, pp. 133-39].

The Creditbank, together with the Discount Bank, managed to get one of Hungary's largest and oldest engineering works, Ganz and Partner, Danubius, within its sphere of influence. The company, with total assets of over 58 million crowns in 1913, was an important manufacturer of machinery and locomotives, as well as a shipbuilder. The Ganz Electrical Company, also controlled by these two banks, was one of the pioneers of railway electrification in Europe and worked through Austrian, Italian, and Turkish subsidiaries. Its assets in 1913 stood at 28 million crowns (\$5.6 million U.S.) [14].

Even the smaller banks participated in the rush. The Home Bank--controlled by the First Pest Domestic Savings Bank--acquired the majority of the shares in Samuel Goldberger and Son, one of Hungary's oldest textile firms. The upstart Magyar Bank founded the Hungaria General Insurance Company and the Chinoin Pharmaceutical Company, which flourishes even today [15, pp. 185-92].

These random examples can only hint at the scope of banking involvement in trade and industry. The big Budapest banks naturally took a leading role in this process. Of a total of 362 Hungarian firms with outside investors, some 270 had investments from Budapest banks. In 1900, only 17% of shares in Hungarian industry were in the hands of the big banks; by 1913, that figure had risen to 47% [19, p. 241]. Though this process led to a certain degree of concentration of industrial shareholding, it also paved the way for greater Hungarian ownership of domestic industry. As Budapest banks and other native investors gradually began to acquire increasingly more industrial shares, the proportion held by foreigners fell dramatically. While in 1900 over

60% of capital invested in Hungarian industry was in foreign hands, by 1914 that figure had fallen to 36% [19, p. 244].

Between 1867 and 1914, the big Budapest banks had grown spectacularly. As "universal" banks on the German model, they had a hand in every aspect of the country's financial life. They acted as savings banks, mortgage lending institutions, providers of short term finance for commerce, and finally as merchant or investment banks. Their wealth had increased impressively--as had that of the Hungarian economy as a whole. In 1913, the six major Budapest banks had total assets of over 4.2 billion crowns (\$847 million U.S.) [15, pp. 109-92].

What of the men who controlled this wealth? Many have already been mentioned--Sigismund Kornfeld of the Creditbank and Leo Lanczy, the all-powerful president of the Commercial Bank. But there were others as well: Julius Madarassy-Beck of the Mortgage Credit Bank, Maximilian and Marcel Madarassy-Beck of the Discount and Exchange Bank, Simon Krausz of the Magyar Bank, whose flash and dash were immortalized in many Budapest cabaret songs of the era. Adolf Ullmann, a rising star at the Creditbank, was a relative newcomer to the group. Though all of them ended their lives as wealthy men, most came from comparatively humble beginnings. The Madarassy-Becks and Ullmann were children of provincial merchants. Lanczy's father was a minor wholesaler in Pest. Kornfeld's parents were middle-class, while Krausz's were downright poor [13; 10].

All of the above came from Jewish backgrounds, though some later converted either to Catholicism or to the Reformed church. Others, like Kornfeld, retained their ancient faith and played a leading role in Budapest's large Jewish community. With the exception of Kornfeld, all came from families that had been established in Hungary for several generations. All were patriots but tended to avoid the noisier kind of patriotism favored by the opposition Independence party. The bankers, on the whole, tended to be government supporters through and through and stood by the governing Liberal party of Kalman Tisza and its successor, the Party of Work, led by Tisza's son. This made perfect sense from a business as well as a political point of view. The Liberals supported the compromise with Austria, were inclined to ignore nationalist demands for an independent Hungarian bank of issue and customs territory, and had a clear policy of encouraging the development of both finance and industry.

As far as the bankers were concerned, the rewards for their political loyalty and--to be fair--for their contribution to the country's economic development were considerable. Kornfeld, the Madarassy-Becks, and Adolf Ullman were given baronies; Lanczy and Krausz were ennobled. Kornfeld, Ullmann, and Lanczy were life members of the House of Lords. Orders, decorations and honorific titles were showered upon them by a grateful sovereign [13].

The titles and honors were but a reflection of the wealth these men had accumulated. Their great houses at the fashionable top end of Andrassy Boulevard were filled with antique furniture, bronzes, and fine porcelain. They probably also owned country estates with a manor, horses, and suitably overawed servants. When contemplating all of this, such a banker could be

excused for being filled with pride at the thought, "that his father, grandfather or, at best, his great-grandfather had been a poor, despised, struggling man" [24, p. 142].

But this wealth certainly did not come from the salaries bank presidents and managing directors officially received. Kornfeld's salary at the Creditbank was only 35,000 crowns (\$7000 U.S.), but he also touched a percentage of the bank's profits, was on the board of directors of several major companies, and probably owned some shares in them as well [17, pp. 60-61].

We have a better idea of Leo Lanczy's income. He was generally regarded as one of the richest men in Hungary and probably rightly so. In 1910 his salary at the Commercial Bank was twice that of Kornfeld; in addition, he took 6% of the bank's profits as member of the board of directors, another 5% as managing director, and received a further 20,000 crowns as member of the executive committee. He also held the directorships of sixteen industrial, mining, and transportation companies. In all, Lanczy's published income that year stood at 428,688 crowns (\$85,907 U.S.) [21, pp. 99-100]. But this was most certainly not his whole income. He was a shareholder in a number of major companies; the 14.5% of the shares he owned in the Rimamurany Ironworks alone would have netted him a tidy dividend [3, p. 114]. According to one estimate, his total income in 1915 was over 1.3 million crowns (\$272,545 U.S.) [13].

Lanczy's great wealth was, in a way, the symbol of the banks' success. It would be tedious to repeat once more that their development during the life of the Dual Monarchy was nothing short of remarkable. The figures speak for themselves. But the achievements of the half dozen or so major banks are just one part of the picture. On the eve of World War I, Hungary had over 5000 banks, savings associations, and credit cooperatives. Most were poor, struggling, undercapitalized ventures of no more than local importance. Some constantly teetered on the brink of bankruptcy. Not a few were the domain of dreamers or swindlers. At the top, however, the Hungarians had managed to establish a powerful, reliable, and imaginatively led banking system. Despite the dislocation caused by World War I and the peace treaties that followed, the major Budapest banks managed to survive until the mid-twentieth century. It was only then that political dogmatism and economic foolishness were to bring about their demise.

References

1. *A Pesti Magyar Kereskedelmi Bank Százéves Története 1841-1941* (Budapest, 1941) (*The One Hundred Year History of the Pest Hungarian Commercial Bank*).
2. Vera Bácskai, *A Vállalkozók Előfutárai, Nagykereskedők a Reformkori Pesten* (Budapest, 1989) (*Pioneer Entrepreneurs, Wholesalers in Pest during the Age of Reform*).
3. Ivan Berend, *Az Ozdi Kohászati Üzemek Története* (Ozd, 1980) (*History of the Ozd Metallurgical Works*).
4. Ivan Berend and George Ranki, *Hungary, A Century of Economic Development* (New York, 1974).

5. Adolf Fenyvessy, *Die Fünfzigjährige Geschichte des Pester Ersten Vaterländischen Sparcassa-Vereins 1840-1889* (Budapest, 1890).
6. Peter Hanak, "Magyarország az Osztrák-Magyar Monarchiában, Tulsuly vagy Függettség?" *Századok*, 105 (1971), 903-29 ("Hungary in the Austro-Hungarian Monarchy, Dominance or Dependence?").
7. Miksa Havas, *Az Osztrák-Magyar Bank es a Pénzpiac* (Budapest, 1902) (The Austro-Hungarian Bank and the Financial Market).
8. Gyúrgy Kővér, "A Brit tőkepiac és Magyarország: Az Angol-Magyar Bank 1868-1879," *Századok*, 118 (1984), 486-509 ("The British Capital Market and Hungary: the Anglo-Hungarian Bank 1868-1879").
9. _____, *Iparosodás Agarországban. Magyarország Gazdaságtörténete, 1848-1914*, (Budapest, 1982) (*Industrialization in an Agrarian Land: Economic History of Hungary 1848-1914*).
10. Gyorgy Lengyel *Vállalkozók, Bankárok, Kereskedők. A Magyar Gazdasági Elit a 19 százdban és a 20 század Első Felében*, (Budapest, 1989) (*Entrepreneurs, bankers, merchants. The Hungarian Economic Elite in the 19th Century and the First Half of the 20th Century*).
11. Magyar Országos Levéltár, *Magyar Minisztertanacsi Jegyzőkönyvek az Első Vilagháboru Korából 1914-1918*, (Budapest, 1960) (*Hungarian Cabinet Minutes from the Period of the First World War 1914-1918*).
12. *Magyarország Története 1890-1918*, ed. Peter Hanak, Vol. II, (Budapest, 1983) (*History of Hungary, 1890-1918*).
13. *Magyarországi Zsido es Zsido Eredetű Családok*, ed. Béla Kempelen, Vols. I, II and III, (Budapest, 1937) (*Jewish families and families of Jewish origin in Hungary*).
14. Nagy Magyar Kompas, *Pénzügyi es Kereskedelmi Évkönyv*, vol. 40 (1912-1913), Part II, (Budapest, 1913) (*Great Hungarian Compass, financial and commercial yearbook*).
15. Nagy Magyar Kompas, *Pénzügyi es Kereskedelmi Évkönyv*, vol. 42, (1914-1915), Part I, (Budapest, 1914).
16. Pölöskei Ferenc, *Tisza Istvan*, (Budapest, 1982) (Stephen Tisza).
17. Jozsef Radnoti, *Kornfeld Zsigmond*, (Budapest, n.d.) (Sigmund Kornfeld).
18. Vilmos Sándor, *Nagyipari Fejlődés Magyarországon 1867-1900*, (Budapest, 1954) (*The Development of Heavy Industry in Hungary 1867-1900*).
20. Jenő Varga, *Magyar Kartellek*, (Budapest, 1912) (*Hungarian Cartels*) in Jenő Varga: *A Proletárdiktatura Gazdaságpolitikája, Válogatott írások 1912-1922* (Budapest, 1976) (*Economic Policy of the Dictatorship of the Proletariat, Selected Writings 1912-1922*).
21. Laszlo Varga, "Állami Ipartámogatás a Dualizmus Időszakában," *Századok*, 112 (1978), 662-701 ("State Support for Industry during the Age of Dualism").
22. Károly Vörös, *Budapest Legnagyobb Adófizetői 1873-1917* (Budapest, 1979) (*Budapest's Largest Taxpayers, 1878-1917*).
23. Istvan Weis, *A Mai Magyar Társadalom*, (Budapest, 1930) (Hungarian society today)
24. P.B. Whale, *Joint Stock Banking in Germany, A Study of the Creditbanks Before and After the War* (London, 1968).